

Special Education Teacher Shortages: Characteristics Separating States with Low and
High Shortages

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Abstract

Special education teaching positions have historically been difficult to fill (Boe & Cook, 2006; Cook & Boe, 2007; Sutchter, Darling-Hammond, & Carver-Thomas, 2016). Frequently, researchers have examined the problem using a global lens looking at national trends (Boe & Cook, 2006; Cook & Boe, 2007; Sutchter, Darling-Hammond, & Carver-Thomas, 2016); however, state context and individual state policies impact special education teacher shortages differentially. To examine how these differences might impact the availability of special education teachers, we compared states experiencing persistently higher levels of shortages of special education teachers, with states with persistently lower levels of shortages using teacher labor market principles (Lovenheim & Turner, 2018). In this brief, we summarize our findings and provide recommendations for state policymakers and state education agencies as next steps to address special education teacher shortages.

Keywords: special education, teacher shortages, supply, demand, demographics

Special Education Teacher Shortages: Characteristics Separating States with Low and High Shortages

Providing qualified special educators to all students with disabilities continues to be a challenge in the United States (Boe & Cook, 2006; Cook & Boe, 2007; Sutchter, Darling-Hammond, & Carver-Thomas, 2016). In 2015, every state experienced a shortage of special education teachers (Sutchter, Darling-Hammond, & Carver-Thomas, 2016). Further, shortages impact schools unevenly, as schools with high levels of student poverty tend to employ special educators who hold fewer qualifications (Mason-Williams, 2015). The same holds true in specialized schools for students with disabilities, where content area teachers may not hold the same types of preparation or qualifications as their colleagues in neighborhood schools (Mason-Williams & Gagnon, 2017; Mason-Williams, Bettini, & Gagnon, 2017). The apparent relationship qualified special educators have on the academic achievement of students with disabilities makes the shortages especially problematic (Feng & Sass, 2013; Nougaret, Scruggs, & Mastropieri, 2005; Sindelar, Daunic, & Rennells, 2004).

To date, most investigations of special educator shortages focused on differences broadly and in terms of characteristics of the national supply, overlooking potentially informative state-level differences. For instance, investigations reported higher rates of attrition among special educators compared with general educators used the Schools and Staffing Survey (SASS; Boe & Cook, 2006; Boe, Cook, & Sunderland, 2008). Similarly, Boe (2006) also used the SASS to investigate supply and demand needs of special educators. Within a state, education agencies may report on within-state or regional differences in the supply of special education teachers using data collected for state reporting purposes on the fulfillment of IDEA and Title II of the Every Student Succeeds Act (ESSA). However, limited research exists in the special education literature that identifies how supply and demand may vary across states. As many education

policies related to recruitment, retention, and selection are driven by state-level policies and reforms, such an investigation may be beneficial (Goff, Carl, & Yang, 2018).

In this investigation, we compared differences between states with persistently high levels of special educator shortages with states with persistently low shortages. To do this, we took advantage of publicly available, state-level data to describe contextual and demographic factors that may influence the shortage of special educators. Further, we demonstrate how these variations may drive demand, potentially worsening shortages. Throughout the investigation, we define shortages as the absence of holding state-certification in special education, following the definition used in other investigations of supply and demand (Boe & Cook, 2006; Boe, Cook, & Sunderland, 2008; Boe, 2006; Mason-Williams, 2014).

Grouping High Versus Low Shortage States

Annually, states report on the number of full-time special educators considered fully¹ qualified to the OSEP to meet the annual reporting requirements of IDEA providing a source of data on the supply of special educators. First, we combined data from 2006-2015 to classify states with persistently high shortages (proportion of qualified special educators above the national average by 3% for at least two years or more) or as persistently low shortages (proportion of qualified special educators below the national average by 3% for at least two years or more). Next, we excluded states if there were significant changes of which we could not account for. Thus, we identified the seven most extreme cases for both groups. States with persistently lower shortages of uncertified special education teachers included: New Hampshire (NH), Connecticut (CT), Pennsylvania (PA), Michigan (MI), Kentucky (KY), Illinois (IL), and North Dakota (ND). States with persistently higher shortages of uncertified special education

¹ For over thirty years OSEP has annually collected and reported data on special education teachers, differentiating between those who are highly qualified and those who are not (until 2006 and the passage of No Child Left Behind, *fully certified* and *not fully certified* were used).

teachers included: West Virginia (WV), Maryland (MD), Kansas (KS), Utah (UT), Nevada (NV), Alaska (AK), and Hawaii (HI).

Demographics

To help us determine state level supply and demand drivers, we looked at data on state demographics. According to our analysis, the only statistically significant demographic variable was the proportion of school aged children who were white, with low shortage states having higher proportions of white, school-aged children (Figure 1). Although other demographic variables were not statistically significant, low shortage states tended to be more populous and have more students with disabilities, and thus required more special education teachers. High shortage states also had higher proportions of individuals living in urban areas and urban clusters, and smaller proportions of individuals living in rural areas. Low and high shortage states did not statistically differ in terms of overall economic wealth [i.e., gross domestic product (GDP), unemployment rates, and percent of children receiving public assistance], however there was a \$3,600 per capita GDP difference favoring low shortage states. This difference, while not statistically significant is substantial and may have implications for availability of state funding pools for schools (Allegretto & Mishel, 2018; Baker, 2017).

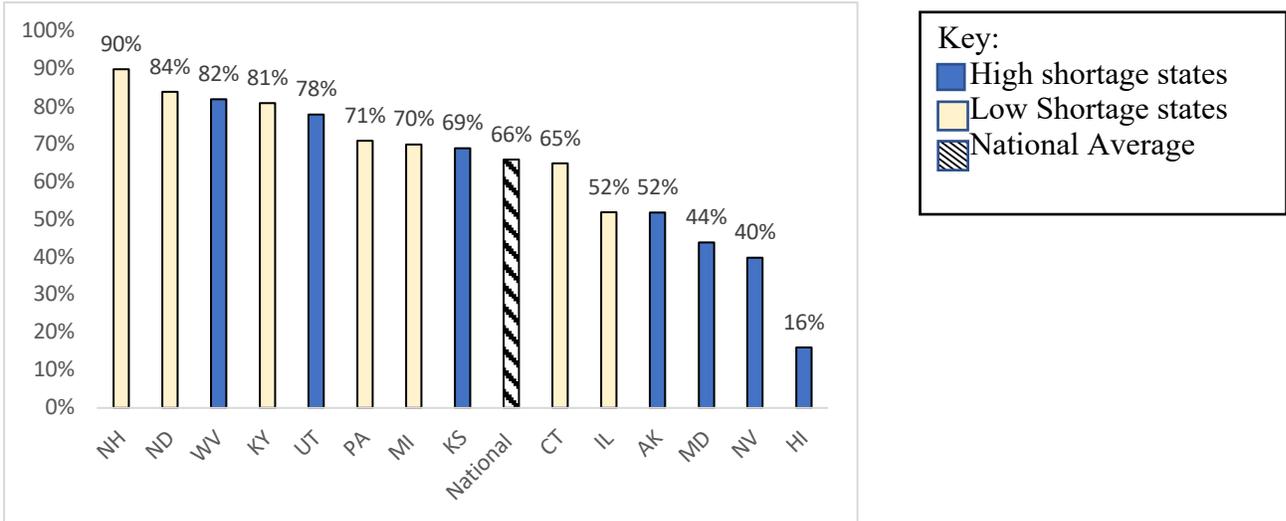


Figure 1. Proportion of students within a state who identify as white.

Demand

As mentioned, low shortage states tended to have greater numbers of students qualifying for special education, attributed to higher population rates. However, comparisons of the prevalence of students with disabilities and the ratio of students with disabilities to special education teacher revealed no statistically significant differences. However, we found high shortage states appeared to have two more students with disabilities per every special educator, as shown in Figure 2. While perhaps not statistically significant, two additional students with disabilities can increase caseload and paperwork demands in *practically* significant ways.

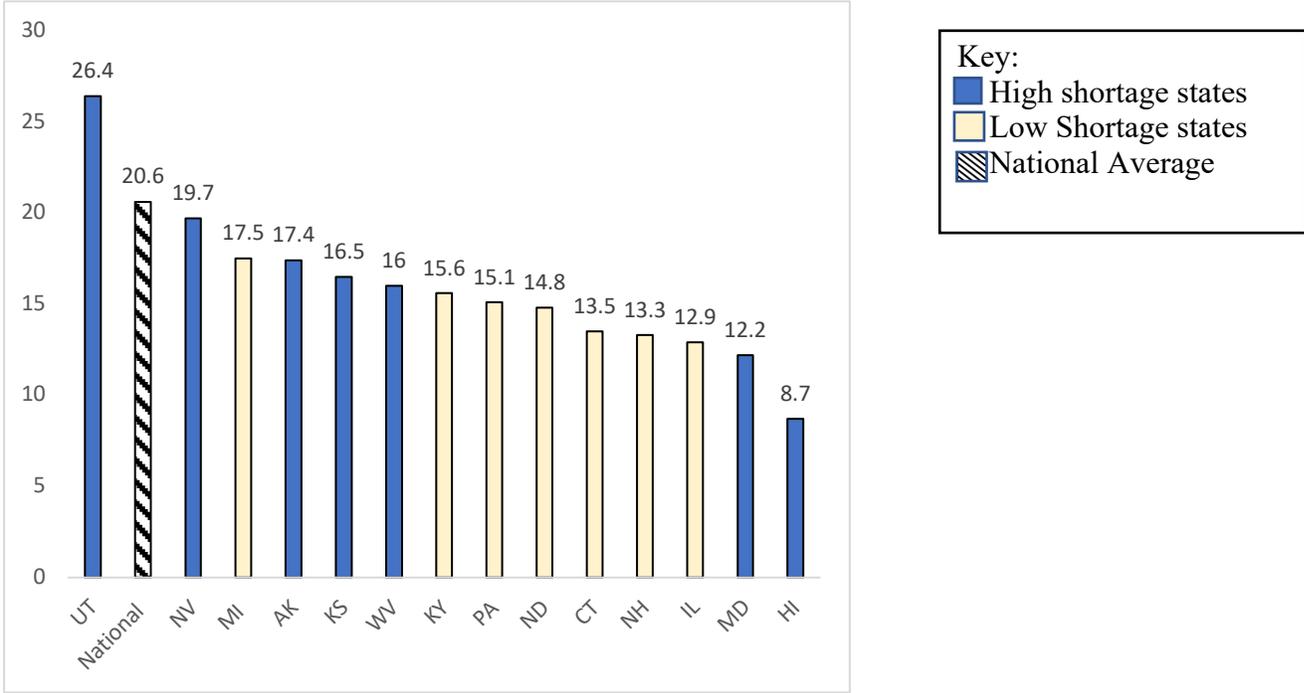


Figure 2. Ratio of students with disabilities to special education teachers by state.

Since demand is driven by teacher churn, we looked at self-identified teacher commitment using several responses on the SASS:12 dataset as proxies. We found in low shortage states, special educators were more likely to indicate they would still enter the teaching

profession if given the chance versus high shortage states, compared with their colleagues in high shortage states. Further, responses on the SASS data revealed special educators in low shortage states were substantially more likely than their colleagues in high shortage states to indicate plans to remain in teaching for the long term. These findings appear to indicate teachers in low shortage states may feel working conditions are better, compared with their colleagues in high shortage states, thus are less likely to leave the profession. This translates into one less empty teaching slot for a school administrator to fill.

Supply

We investigated potential supply influences from a number of perspectives, including production, salary, and per pupil expenditures (PPE). First, the number of educator preparation programs (EPPs)² and the number of special education teachers produced within a state was statistically significantly different among high and low shortage states. Low shortage states out-produced high shortage states in terms of number produced in relation to number needed to fill positions: low shortage states produced about eight graduates for every uncertified special education teacher position. By contrast, high shortage states did not produce enough special education teacher graduates to fill their deficit, with less than one graduate for every two uncertified special education teachers, as shown in Figure 3.

² This number includes the number of special education programs available in each educator preparation program, as well as alternative pathways offered.

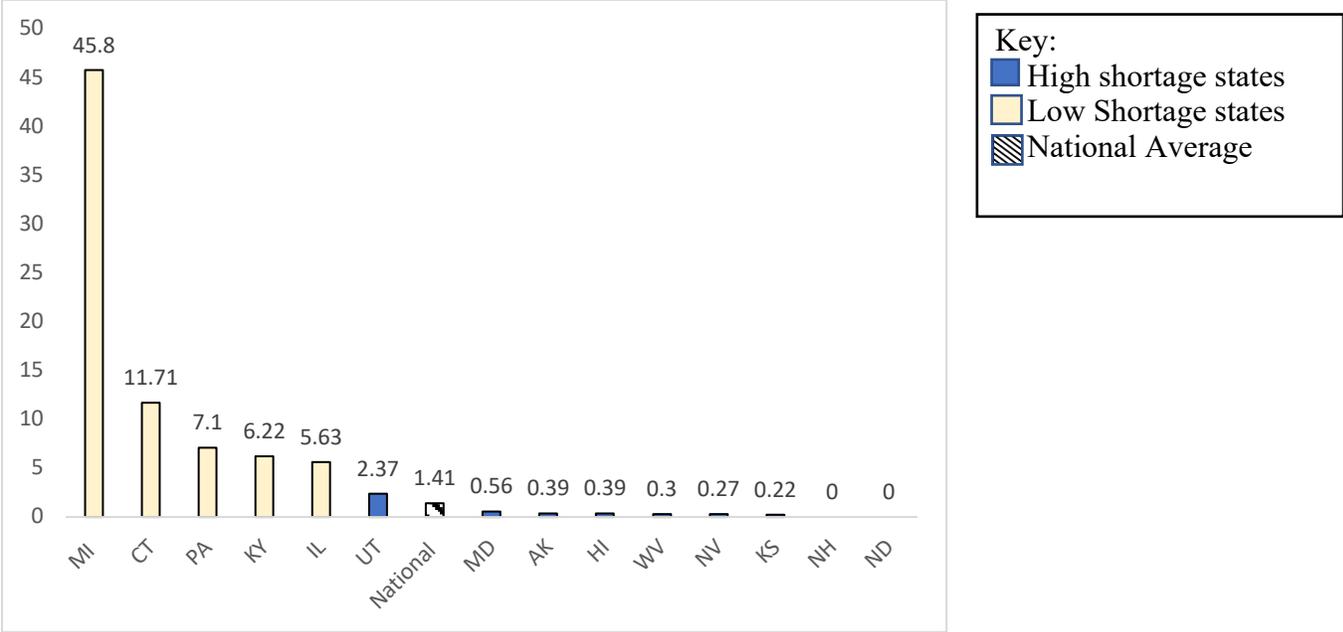
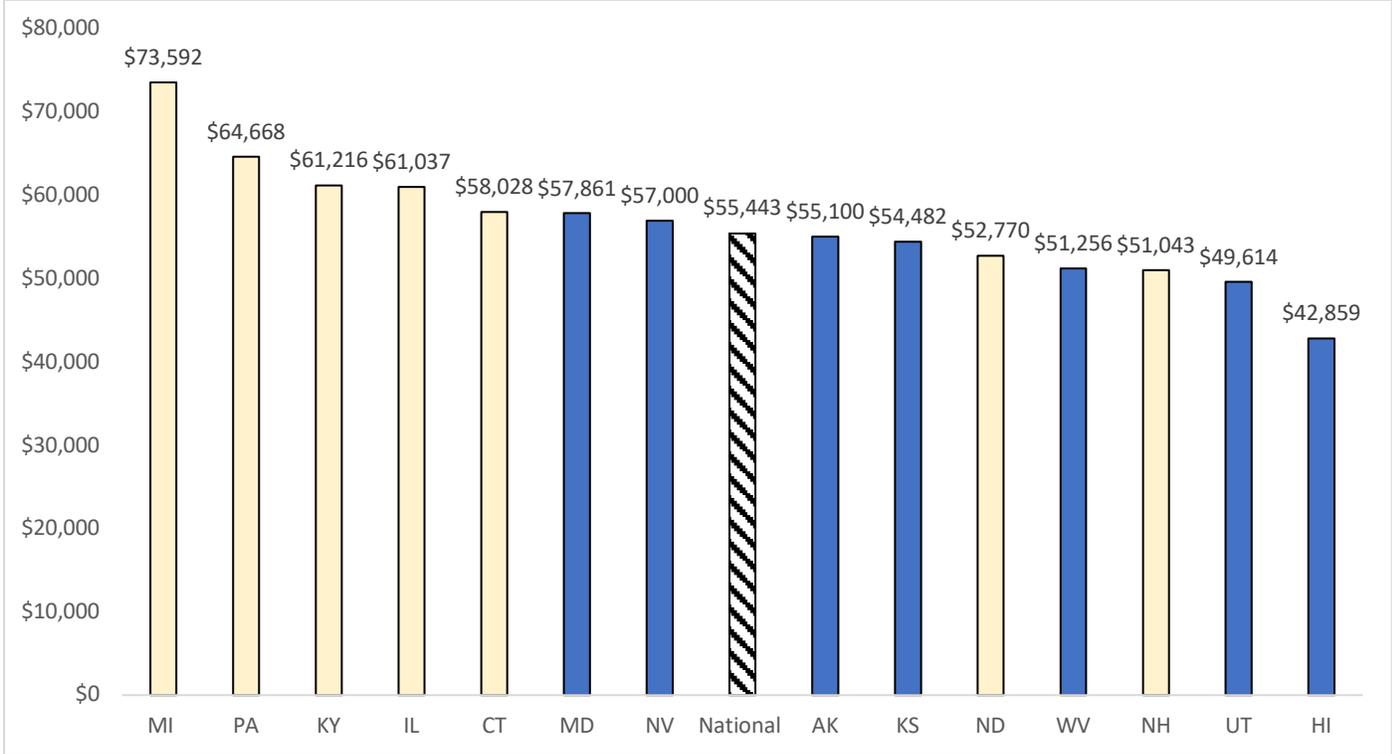


Figure 3. Ratio of special education teacher graduates produced to uncertified special education teacher positions.

Next, we examined differences in salary among general and special educators using the average salaries for special education teachers across states and accounting for cost of living and teacher experience. As shown in Figure 4, we identified statistically significant differences in special education teacher salaries between high and low shortage states. Teachers in low shortage states made significantly more annually by nearly \$8,000 compared with teachers in high shortage states. Next, we examined compensating differentials, which also indicated statistically significant differences between low and high shortage states: in low shortage states, special education teachers earn 106% of what would be predicted on the basis of cost of living and quality of life variables. In contrast, high shortage states paid only 95% of what would be expected. This finding relates to the overall attractiveness of the job, which takes into consideration not only salary, but per pupil spending, and infrastructure investments. The results indicate that in low shortage states, the job of a special educator potentially appears to be a more attractive job when compared to a special educator job in a high shortage state.



Key:
■ High shortage states
■ Low Shortage states
 National Average

Figure 4. Average salary for special education teachers adjusted for the cost of living in each state.

Last, we investigated differences in per pupil expenditure, which may account for supply needs. We found no statistically significant differences, however, average per pupil expenditures in low shortage states exceeded high shortage states by \$1,500 per pupil. While this finding is not statistically significant, the additional \$1,500 in per pupil spending may have an impact nonetheless.

Summary

To summarize, we found the following statistically significant differences between the high and low shortage states identified in our analysis:

- Percentage of students served in schools who are non-white

- Ratio of special education graduates to uncertified positions
- Teacher salaries
- Compensating differentials

Further, we suggest these factors may have practical significance:

- Number of special education teacher graduates
- Per pupil expenditures
- Ratio of special educators to students with disabilities
- Commitment to teaching

In light of current upheaval in many states among educators over low school funding, low pay, and outcry over poor working conditions, these findings may not be surprising (Van Dam, 2019). Although limited by the constraints available data, we can make some broad recommendations for education stakeholders.

Recommendation 1. High shortage states need to find ways to increase their production of special educators to fill the gaps. Implementing policies with demonstrated effectiveness, such as providing loan forgiveness programs or state scholarships may help to increase the supply available, as well as providing access to *rigorous* alternative career pathways (Espinoza, Saunders, Kini, & Darling-Hammond, 2018).

Recommendation 2. Consider recruitment and retention strategies aimed at teachers of color, as high shortage states had significantly higher proportions of students of color being served in schools. Teacher residencies and Grow Your Own programs have shown promise in recruiting and retaining teachers of color (Gist, Bianco, & Lynn, 2019). In addition, not only have these programs shown to increase the retention of qualified teachers of color, others have also found when students of color are served by teachers of color, student achievement tends to

increase (Carver Thomas, 2018; Dee, 2004), creating a win-win for the state and local communities.

Recommendation 3. Perhaps most importantly, teacher pay and investment in public education appears to matter, especially in hard to staff positions such as special education, as evident with continued teacher strikes across the nation (Van Dam, 2019). A report published by the Learning Policy Institute (Baker, 2017) found student achievement and graduation rates rose in states and school districts that increased school spending, specifically in lower income districts that served large numbers of students with disabilities. Unfortunately, with the Great Recession of 2008, many states and districts significantly cut education spending (Leachman, Masterson, & Figuerora, 2017) with many states that still have not increased school spending to pre-recession levels. Only 21 states spent more in 2015 on education than they did in 2008, and 17 states lagged by 10% or more from 2008 to 2015 (Leachman et al., 2017). In these states, increasing special education teacher pay and per pupil expenditures could enhance their ability to retain teachers.

Conclusion

Providing all students with disabilities access to a qualified, prepared special educator continues to be a challenge in almost every state. To ensure there is a supply to fill demand, it is recommended state policymakers and district administrators work together to review existing data to determine the extent of the shortage problem. In addition, finding ways to support teachers through not only increased pay, but improved working conditions such as investment in building infrastructure and school supplies may be additional policy drivers state lawmakers and school district administrators want to consider to make the job more attractive. The recent wave of teacher strikes has not only been about salaries, but poor working conditions, and additional proposed policies that could impact public education funding (Van Dam, 2019). If the continued

movement of teacher strikes continues, as speculated, teachers across the country will not stop until policymakers find more permanent solutions to supporting teachers, especially for our most vulnerable students (Van Dam, 2019).

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