



Staffing Schools Before Students Arrive: Filling Teacher Vacancies in Providence

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Every year, far too many students across the country begin school without a permanent teacher in place in their classroom. These teacher vacancies arise for many reasons – schools do not complete their hiring on time, teachers resign late in the summer, and new positions arise at the last minute. Regardless of the reason, vacancies and late hiring hurt students. Students whose teachers are hired after the start of the school year learn less than those whose teachers are hired earlier.

In the Providence Public School District (PPSD), roughly 5% of all teaching positions (about 75 a year) have historically remained unfilled by the start of school. As part of the state takeover, the district took aim at this challenge, moving up the hiring timeline, mounting a recruitment campaign, and making it a key priority to fill as many open teacher positions as possible.

As part of our ongoing research-practice partnership with PPSD and the Rhode Island Department of Education (RIDE), the Center for the Study of Educators at the Annenberg Institute has been exploring teacher staffing in the state. We have combined rich datasets from several sources to better understand these processes.¹ This is the first in a series of briefs describing the teacher workforce in Providence.

The Annenberg Institute's Center on the Study of Educators conducts rigorous research on educators in K-12 public schools to build knowledge, inform policy, and shape practice to improve educational outcomes for all students and reduce persistent educational inequalities.

We document six key lessons from this effort:

- ▲ PPSD hiring metrics improved considerably this year – despite having more positions to fill, the district had fewer vacancies by the start of school.
- ▲ Teachers of color made up a larger proportion of new hires than in past years, rising from 19% to 26% of PPSD new hires.
- ▲ PPSD posted open positions for external candidates much earlier this year and successfully hired for most of these positions well before the start of school.
- ▲ While the state takeover and the COVID-19 pandemic both affected school staffing substantially, our evidence suggests that the district's efforts to move up hiring timelines contributed to its success.
- ▲ Despite substantial progress, the district continues to struggle to fully staff classrooms in key areas, particularly classrooms for English learners, science, and mathematics.
- ▲ Because early posting matters, teachers who notify the district that they are leaving late in the year create open positions that are much harder to fill on time.

Despite more open positions to fill, PPSD reduced vacancies substantially in 2020

In the spring and summer of 2020, PPSD had to fill many more open positions than in past years. For the 2020-21 school year, the district had over 100 more open positions than in 2019-20.

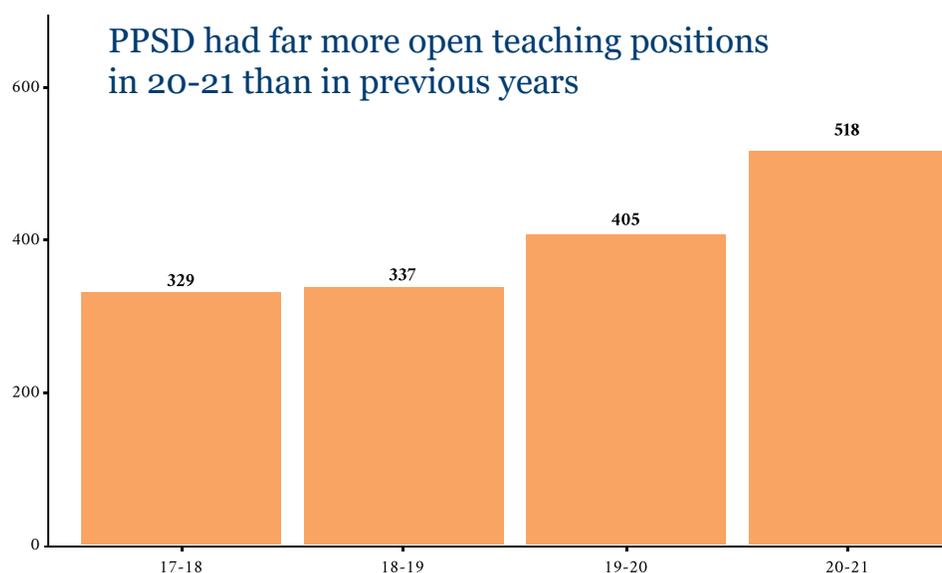


Figure 1: Open Teaching Positions by Year in PPSD

There were two primary reasons for this large increase in the number of positions to be filled:

New English Learner (EL) teaching positions: the district had nearly double the number of new or converted positions, largely because of the consent decree requiring the district to increase the number of teachers of English learners; the district added 177 new EL/Bilingual teaching positions, compared to 66 in 2019-20.

Attrition/retirement: the district faced somewhat higher levels of teacher attrition. In the past three years, PPSD had enjoyed relatively high rates of teacher retention. Each year, 8-9% of teachers left the district, while in 2020-21, 11% did. This reflects approximately 35 new positions the district had to fill. These increases in attrition came primarily from a 50% increase in teacher retirements; attrition was concentrated among older teachers. The increase in retirements is broadly consistent with trends several other urban districts across the country faced in response to the pandemic. We will explore retention trends in more detail in a future brief.

Despite this large increase in open positions, PPSD had much more success in staffing classrooms earlier. In 2019-20, 16% of open positions had not been filled by the start of school – the district reduced that number to 10% in 2020-21. Perhaps just as importantly, nearly all of these positions were filled early. In 2019-20, the district was scrambling just before school started, filling 9% of open positions during that last week. (See Figure 2)

PPSD also made strides in diversifying its teacher workforce

Any efforts to address staffing challenges in PPSD also need to attend to issues of teacher diversity. The district's teaching workforce is 80% White, while 80% of students are Black or Latinx. Among the new teachers hired into the district by the start of the 2020-21 school year, 26% were teachers of color. This compares to 19% in 2019-20 and 15% on average over the past 3 years.

Last year, PPSD filled only 75% of open positions by the week before school began. This year, almost 90% of open positions were filled by that date.

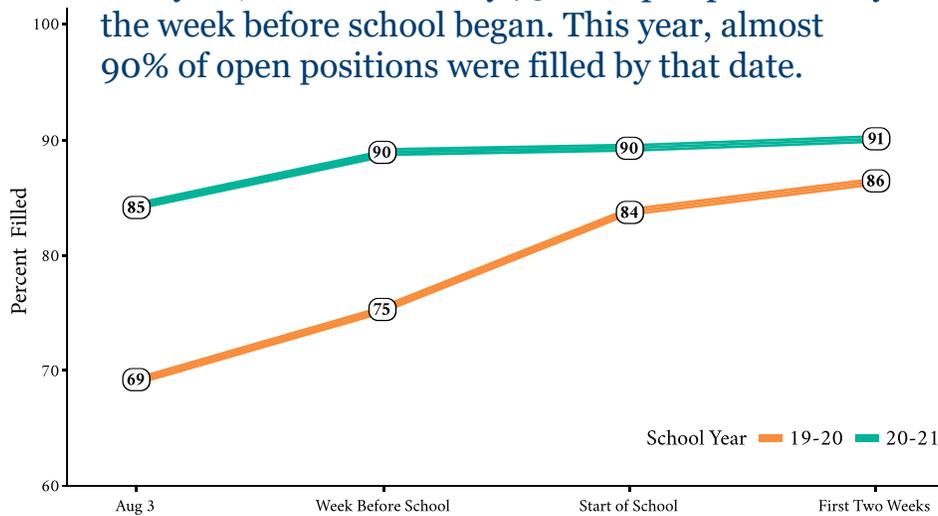


Figure 2: Fill Rate for Open Positions by Year

Why do we see these improvements?

Understanding the underlying cause of this improvement in staffing schools on time is challenging. PPSD did several things to improve staffing – it moved up the district’s hiring timeline and launched a recruitment campaign. However, the pandemic and the turnaround also had substantial impacts on the teacher labor market. Let’s explore these possibilities in turn:

(1) COVID and the turnaround

The pandemic and turnaround could cut both ways. On the one hand, the pandemic led some teachers and prospective teachers to leave the classroom or not apply for positions – because of concerns about their health, lack of child care, or myriad other reasons. In Providence, we might expect these challenges to be exacerbated by questions from the Providence Teachers Union and related media attention about the safety of PPSD school buildings. Similarly, the Johns Hopkins report and negative publicity about Providence schools may have made these positions seem less attractive to prospective applicants.

On the other hand, the sizable economic downturn made teaching positions relatively more attractive. Providence was one of few RI districts not to announce layoffs in June. Similarly, the turnaround came with the promise of additional resources and supports for schools and highlighted tremendous needs in Providence, both of which may have attracted teachers eager to be engaged in these efforts.

Late hiring matters for students

Students whose teachers are hired after the start of the school year learn less than those whose teachers are hired early – late teacher hiring directly reduces student achievement by three to five weeks of learning.ⁱ When teachers are hired late, they have no time to plan curriculum or prepare instructional materials. They also start without the opportunity to establish a classroom culture that is supportive to learning and where all students feel like they belong from day one.

Late hiring is often associated with a rushed hiring process – in an effort to staff schools quickly, the hiring process gets short shrift. A robust hiring process is critical to give teachers a good preview of the job and the school.ⁱⁱ Teachers hired without a clear job preview are less likely to find a good job match, leading them to be poor fits with their organizations and less likely to have success. We know that teachers who feel successful in their classroom are happier and more likely to stay in teaching.ⁱⁱⁱ Indeed, teachers hired late tend to leave their schools at higher rates than their peers hired on time, likely a result of lower-quality matches between these teachers and their schools.^{iv}

(2) Recruitment campaign

The Rhode Island Department of Education also invested in a nationwide recruitment campaign to attract teachers to the state, and especially Providence. This effort featured videos and a social media campaign beginning in June.

(3) Hiring timelines

Providence also made substantial changes to its hiring policies that enabled the district to post positions for external candidates much earlier than in past years. In past years, the majority of teaching jobs open to external applicants were posted in May; that timeline was moved up to the end of March this year.

Did the PPSD changes help?

While we cannot tell definitively which of these explanations contributed to the reduction in vacancies in 2020-21, evidence suggests that moving up the hiring timeline contributed substantially. It appears that, at most, the recruitment campaign, pandemic, and/or turnaround effort made positions in PPSD only slightly more attractive than in past years. This year, 494 external candidates had applied to the district by the end of September, compared to 435 in 2019-20. A key metric documenting the attractiveness of teaching positions is the number of unique external applicants who apply for each externally posted position. Last year, the district had 2.0 unique external applicants for each possible position; in 2020-21, it was 2.4.

However, the district did hire substantially earlier this year. This year, 60% of externally posted positions were posted by April 1, compared to just 14% of external positions last year. Posting early matters. Over the past several years, in PPSD, 91% of positions posted in March are filled by the start of school, compared to just 57% for positions posted after June 1.

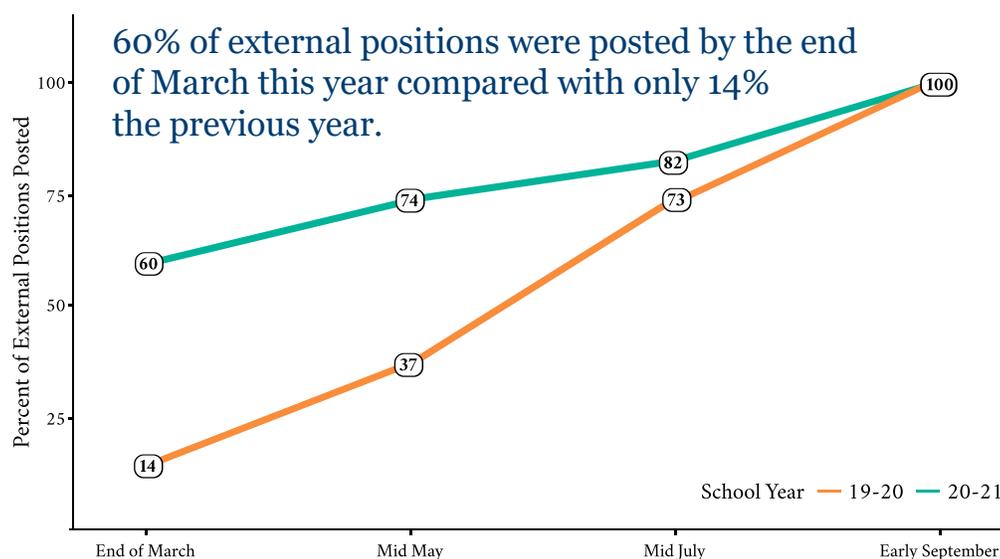


Figure 3: Timing of External Position Postings by Year

PPSD continues to face staffing challenges in EL and STEM positions

While PPSD reduced the number of vacancies unfilled by the start of school, we still see approximately 52 positions that were not filled by the start of school in the fall of 2020 – too many PPSD students were in classrooms without full-time teachers when school began.² We anticipate that the pandemic and turnaround efforts will continue to shape the teacher labor market over the next hiring cycle, suggesting that even more proactive attention to staffing all classrooms will be necessary for the 2021-22 school year.

By far the most common staffing challenges come in ESL/bilingual, science, and mathematics classrooms – two-thirds of all vacancies unfilled by the start of school come in these three areas, but they represent just 39% of all teaching positions. Providence is not alone in struggling to hire teachers in these areas – they are the largest areas of teacher shortage in the country. However, our analysis reveals the potential for more targeted solutions that might help alleviate these concerns.

(1) The challenges in EL and science/mathematics are different.

The district has many EL vacancies at the start of the year because it has so many positions to fill in this area. In 2020-21, bilingual/ESL teachers made up 24% of the teacher workforce but nearly half of all open positions. The district filled these positions at the same rate as other subject areas – only 8% of these positions ended up remaining unfilled by the start of school. For science and mathematics, the district had relatively few open positions, but these positions were harder to fill – 16% were not filled by the start of school. This suggests that the district’s efforts in staffing ESL/bilingual classrooms are heading in the right direction, while the challenges in science and mathematics are more persistent.

(2) Some processes that produce open positions are more problematic than others.

For example, nearly all of the positions that open because teachers retire are filled by the start of the school year. These positions are posted early. By contrast, open positions that arise from leaves of absence, teacher resignations over the summer, and positions that are filled and then reopened (because teachers accept a new position and then leave) are much more likely to lead to unfilled classrooms at the start of school. These positions are posted much later in the year. Any efforts to identify teachers who will be resigning or taking leaves of absence earlier or to limit the churn in positions would enable the district to post these positions earlier and contribute substantially to resolving these staffing challenges. Here, relational trust plays an important role as teachers need to feel secure to share these personnel decisions with school principals in a timely manner.

(3) PPSD attracts relatively few applicants to the classroom.

PPSD has consistently received fewer applications per position than other districts. On average, PPSD receives 10 to 12 applications per position compared to 28 applications per teaching position nationally, and they receive considerably fewer in hard-to-staff subjects.^{vi} This year, more than three quarters of applicants said they heard about positions in the district through School Spring, the district website or from a district employee, indicating that there may be an opportunity to further increase awareness through continued recruitment campaigns. Lastly, the applicant pool in the district is largely local, although PPSD did see a modest increase in out-of-state applicants this year.

Boston’s success in accelerating hiring timelines

In 2013, Boston Public Schools (BPS) introduced a suite of reforms to redesign the way teachers were hired in the district. At the time, 17% of new BPS teachers were hired after the beginning of the school year and 37% left their schools after the first year. BPS and the Boston Teachers Union negotiated a shift to a full mutual consent hiring process with early, open postings for teaching positions. In other words, the district got rid of its preferences for internal teacher transfers and enabled principals to hire whatever teachers – from inside BPS or outside – they preferred. The benefits have been striking for both teachers and students.^v

Over the course of a single year, the district moved the median hire date up by two months and cut late hiring in half. We also found that the reform increased the diversity and retention of new teacher hires and ultimately led to greater student achievement. The proportion of newly hired teachers of color increased by 25% and the retention of all new hires rose by 30%. The reforms ultimately increased achievement by between 1.5 and 2.5 months of learning, largely as a result of more effective new teacher hires.

(4) Attrition for bilingual/ESL teachers contributes to staffing challenges.

While PPSD has a high retention rate for teachers overall, attrition is somewhat higher for bilingual/ESL teachers. A substantial body of research suggests that teachers tend to stay in positions where they feel supported and successful. Challenges in retaining bilingual/ESL teachers may suggest that these teachers are being asked to do too much in schools and are not supported to be successful with their students.

Improving these areas could yield even more improvement in staffing in future years. Of course, simply staffing classrooms with permanent teachers is a minimal goal. The district also needs to attend directly to the effectiveness and diversity of these teachers. Here, recruiting larger pools of applicants can help substantially, as can efforts to identify talent from a wide variety of sources such as teachers' aides, substitutes, or teachers from out of state. The district's hiring processes are also quite limited, with few teachers participating in the detailed screening – interviews with the principal and a school-based hiring committee, sample teaching demonstrations, and so on – that are common in charter schools and other local districts.

¹ We'd like to thank LaShanda Harbin who provided tremendous assistance in cleaning the data used in this brief.

² 9 of these were positions that ended up being cut or cancelled, suggesting that they may not have reflected actual district needs.

¹ Papay, J.P. & Kraft, M.A. (2016) The Productivity Costs of Inefficient Hiring Practices: Evidence from Late Teacher Hiring. *Journal of Policy Analysis and Management*, 35(4), 791-817.

ⁱⁱ Liu, E., & Johnson, S. M. (2006). New teachers' experiences of hiring: Late, rushed, and information-poor. *Educational Administration Quarterly*, 42, 324–360; Simon, N.S., Johnson, S.M., & Reinhorn, S.K. (2019). Making a Match: How Successful High-Poverty Schools Hire Teachers (EdWorkingPaper No.19-45). Retrieved from Annenberg Institute at Brown University: <http://edworkingpapers.com/ai19-45>.

ⁱⁱⁱ Johnson, S. M., Birkeland, S. E. (2003). Pursuing a “sense of success”: New teachers explain their career decisions. *American Educational Research Journal*, 40, 581–617.

^{iv} Papay, J.P. & Kraft, M.A. (2016) The Productivity Costs of Inefficient Hiring Practices: Evidence from Late Teacher Hiring. *Journal of Policy Analysis and Management*, 35(4), 791-817.

^v Kraft, M.A., Papay, J.P., Wedenoja, L. & Jones, N. (2020). The Benefits of Early and Unconstrained Hiring: Evidence from Teacher Labor Markets. Brown University Working Paper.

^{vi} Combs, E. & Silverman, S. (2018). A Leak in the Pipeline: How Hiring Bias Might Be Compounding the Teacher Shortage. *Frontline Research*.