Educator Shortage Survey

2022-2023 Academic Year

Districts with Chronic Shortages

Part 1: Characteristics of Districts with Ongoing Shortages

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Districts with Chronic Shortages — Part 1: Characteristics of Districts with Ongoing Shortages

Tom Withee[a], Shereen Oca Beilstein[b]

Abstract

Data from the annual Educator Shortage Survey conducted by the Illinois Association of Regional Superintendents of Schools indicate that many Illinois public school districts face persistent difficulties staffing classrooms with qualified teachers. Data from the Illinois State Board of Education confirms that many districts are experiencing ongoing issues with high vacancy rates. As a result, policy makers, education leaders, and stakeholders are investing in and developing strategies to bolster the supply of qualified teachers in areas with deep shortages. This report highlights common characteristics of districts with chronic, or ongoing, teacher shortages. Regarding district and teacher characteristics, this included districts in urban and rural settings and districts with high percentages of novice teachers as well as low teacher salaries. Regarding student characteristics, districts with high percentages of students from low-income families, high percentages of students of color, high percentages of English language learners and students with special needs also experienced recurring and severe teacher shortages across the six years of investigation.

Context

In Illinois, discussions about teacher shortages predate the pandemic by many years (e.g., Illinois State Board of Education, 2011, 2014). Recent research, however, indicates that the magnitude of teacher shortages has increased for the 2022-23 school year, or SY2023 (Beilstein & Withee, 2023). Research also has shown that teacher shortages vary by county (Beilstein & Withee, 2022a), district (Bruno, 2022), content area (Beilstein & Withee, 2022b), and grade band (Beilstein & Withee, 2022c). In reaction to the escalating issue, Gov. JB Pritzker announced that he would allocate $70 million per year for the next three years under the Teacher Pipeline Grant Program to support those districts that are experiencing acute and chronic vacancies (Office of the Governor JB Pritzker, 2023).

Given both the historic nature of and recent focus on teacher shortages in Illinois, the following questions guided the current study:

1. Which districts across the state have *chronically high* teacher shortages (i.e., reported severe shortages in multiple school years)?
2. What are the characteristics of districts with chronically high teacher shortages?

To answer these questions, we compiled longitudinal data collected by the Illinois Association of Regional Superintendents of Schools (IARSS) and the Illinois State Board of Education (ISBE). Our

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analysis considers data on *unfilled* (i.e., positions left vacant) and *underfilled* (i.e., positions filled by less-than-qualified hires) positions for responding districts over the past six school years.

We find that there are 103 districts (12% of 861 districts) that have experienced recurring and severe shortages of unfilled and underfilled teacher positions. We also find that these districts with chronically high shortages share some common characteristics such as high student poverty level, high percentages of English language learners (ELL) and students with special needs, high percentages of novice teachers, and low average teacher salary among other features. Additionally, districts in urban and rural areas had more issues with chronically high shortages.

This report is the second in a series of white papers that examine educator shortages in Illinois (see Beilstein & Withee, 2023, for the first report). A subsequent report will focus on superintendents' reported causes of and solutions to help offset staffing challenges. Our goal with this series is to provide policymakers, education leaders, and other stakeholders with research that can aid decisions around addressing educator shortages and investing in the teaching profession to support a high-quality and diverse educator workforce.

Methods

We collected survey and administrative data from multiple sources at the district level from SY2018 to SY2023. We examined recruitment and placement of teachers through unfilled positions and underfilled positions from the IARSS Educator Shortage Survey (IARSS, 2018, 2019, 2020, 2021, 2022, & 2023) and unfilled positions from the ISBE Unfilled Positions Report (ISBE, 2023a and b). We also incorporated data on the number of teachers employed by districts, using full-time equivalent (FTE) counts from the SY2022 Illinois Report Card (ISBE, 2023c) to determine vacancy rates (i.e., the percentage of total available positions left unfilled, see e.g., Goldhaber et al., 2020; Wilson & Pearson, 1993). We use these three data sources to assess the magnitude of teacher shortages across districts statewide.

Data Sources

Teacher Shortage Measures

IARSS Educator Shortage Survey. Since SY2018, IARSS has administered the Educator Shortage Survey annually in the fall to all public school district superintendents across Illinois (IARSS, 2023). In Fall 2022, 690 of 858 district superintendents (80% response rate) completed the online survey for SY2023. For this report, we measure the magnitude of shortages by calculating the percentage of posted teacher positions reported by superintendents as unfilled and underfilled (i.e., *un/underfilled*).

ISBE Unfilled Positions (UFP) Report. This annual report provides information on the amount of unfilled full-time equivalent (FTE) teacher positions that were recorded by districts across the state (ISBE,

Acronym and Abbreviation Glossary

- **FTE** – Full-time equivalent (used by ISBE to report staffing numbers)
- **IARSS** – Illinois Association of Regional Superintendents of Schools
- **ISBE** – Illinois State Board of Education
- **SY** – School year (e.g., SY2018 refers to the school year that spans Fall 2017 to Spring 2018)
- **IRC** – ISBE's Illinois Report Card
- **UFP** – ISBE's Unfilled Positions report

2023)[c]. Comparable to the IARSS Educator Shortage Survey, ISBE asks districts to report their unfilled positions in the fall for that school year (i.e., data collected in Fall 2022 are representative of SY2023). In Fall 2022, 849 of 862[d] districts (98% response rate) completed the SY2023 survey. Note that we pulled not only the count of unfilled teacher positions from the SY2023 UFP but also the numbers they reported for filled FTE teacher positions and estimated vacancy rates.

ISBE Illinois Report Card (IRC). This annual report includes statewide data on student enrollments, school types, student and teacher demographics, and more (ISBE, 2023c). Here, we incorporate data on current and historical filled FTE teacher positions.

We combine ISBE's UFP and IRC to measure the magnitude of teacher shortages by calculating vacancy rates, which capture the percentage of total teacher positions (i.e., the sum of unfilled and filled positions) reported unfilled.

A Note on These Teacher Shortage Measures. One distinction between the IARSS and ISBE data that we would like to highlight is based on differences in how each organization defines teacher shortages. The ISBE UFP report captures only unfilled positions, whereas IARSS collects information on both unfilled and underfilled positions. In our analyses, we use both definitions of teacher shortages for several reasons. First, the ramifications of unfilled positions affect students' learning opportunities, as school leaders may decide to increase class sizes or cancel classes, among other measures in response to vacancies (IARSS, 2023). Second, we include underfilled positions because their uneven distribution across districts and schools often disproportionately impacts students of color and students from low-income families (Cardichon et al., 2020; Sutcher et al., 2019). And third, research also has linked underfilled positions with decreased student achievement (Podolsky et al., 2019).

Another distinction we would like to raise is related to how vacancy rates are calculated for each data source. For the IARSS data, we calculate the percentage of *posted teacher positions* that were reported *unfilled and underfilled*. Whereas for the ISBE data, we calculate the percentage of *total FTE teacher positions* that were reported *unfilled*. Because the denominators for these calculations differ, the resulting percentage also differ. For example, because the number of total FTE teacher positions is substantially greater than the number of posted teacher positions, the vacancy rate for unfilled positions (using ISBE data) is much lower than the percentage of un/underfilled positions (using IARSS data). To illustrate, for SY2023, ISBE reported 131,982 filled FTE teacher positions (ISBE, 2023c) compared to IARSS' report of 7,787 posted teacher positions (IARSS, 2023) statewide. This leads to a vacancy rate of 2.5% (3,318/135,300) and to a percentage of posted teacher positions reported un/underfilled of 27.9% (2,175/7,787).

Chicago Public Schools (CPS) was among the districts that did not participate in the IARSS survey across all six years. However, CPS responded to the ISBE Unfilled Positions survey for all six years of investigation. This is important to note as CPS serves a significant portion of students and employs a large number of educators.

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[c] Our analysis of ISBE's Unfilled Positions data excludes Special Education Districts/Cooperatives, Vocational Districts/Schools, and other Administrative Agents.

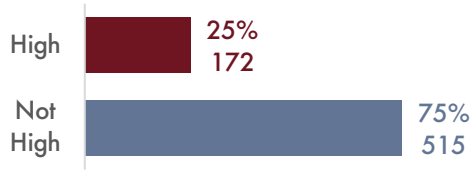
[d] The number of total districts surveyed by IARSS' Educator Shortage Survey and ISBE's UFP report for SY2023 differ because the UFP contains additional districts that are considered administrative agents in the IRC.

District Selection Process: Identifying Districts with Chronically High Shortages

IARSS High Shortages of Un/underfilled Teacher Positions

We first set out to identify which districts were experiencing large magnitudes of teacher shortages. Using IARSS Educator Shortage Survey data for SY2023, we calculated the percentage of posted teacher positions that were reported by districts as un/underfilled in Fall 2022 (i.e., at the district level, taking the number of unfilled and underfilled positions divided by the number of posted positions). We established quartile ranges and used the third quartile as our cutoff for identifying districts because this group constitutes the top 25% of responding districts (172 of 687 responding districts and 172 of all 862 districts, or 20%) with *high* shortages. For SY2023, the lower cutoff for the third quartile was 67.9% of posted teacher positions reported un/underfilled (see Figure 1). These 172 districts were labeled as having high shortages of un/underfilled positions for SY2023. This cutoff of reaching at least 67.9% of posted teacher positions reported un/underfilled was then applied to previous years[e] of IARSS Educator Shortage Survey data, dating to SY2018, and was used to identify districts that had previously experienced high shortages. Identifying districts with high teacher shortages across all years was then used to determine districts with chronically high shortages for a longitudinal comparison.

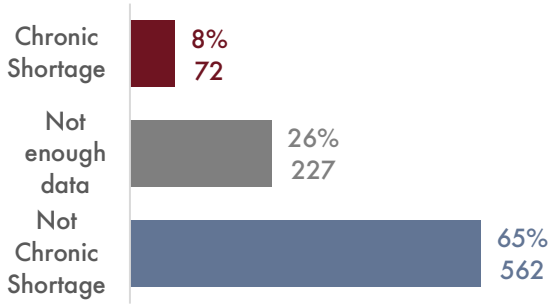
Figure 1: Districts with High Un/Underfilled Teacher Postions



IARSS Chronically High Shortages of Un/underfilled Teacher Positions

Our next step was to determine which districts have experienced recurring school years with high shortages, or *chronically high* shortages of un/underfilled positions, according to the IARSS Educator Shortage Survey data. First, we tallied the number of years of available data for each district. To ensure enough data was present to determine a recurring, or chronic issue, districts that had fewer than three years (i.e., less than 50%) of available data were categorized as *not enough data*. Second, we tallied the number of years each district was categorized as experiencing high shortages and compared that to the number of years of available data. Districts with at least 50% of their available yearly data classified as high shortages were also categorized as having experienced chronically high shortages. We identified 72 districts (8% of 861) as having chronically high shares of un/underfilled teacher positions across SY2018 – SY2023 (Figure 2).

Figure 2: Districts with Chronic High Un/Underfilled Teacher Postions IARSS SY2018 - SY2023

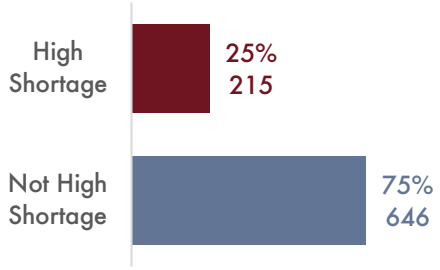


[e] The cutoff based on SY2023 data was applied to previous years for three main reasons: (1) SY2023 data had the highest response rate for both IARSS and ISBE UFP data. (2) Our previous research found that compared to previous years, SY2023 showed higher rates of shortages for both IARSS and ISBE UFP data compared to previous years (Beilstein & Withee, 2023). (3) We used quartiles from SY2023 data, as the next white paper will build from these analyses by examining IARSS Educator Shortage Survey responses on superintendents' perceptions of causes and solutions from those districts with chronically high shortages.

ISBE High Shortages of Unfilled Teacher Positions

We followed a similar process to determine districts with high shortages using ISBE data (IRC and UFP report). First, we pulled the yearly number of unfilled FTE teacher positions and the number of FTE teachers employed by districts for SY2018 – SY2023 and calculated vacancy rates, or the percentage of total teacher positions (i.e., the sum of unfilled and filled positions) reported unfilled. Quartile ranges were established using districts' vacancy rates for SY2023, and following the method established with the IARSS Educator Shortage Survey data, we used the third quartile as our cutoff for identifying districts with *high* shortages. According to ISBE SY2023 data, the lower cutoff for the third quartile was a vacancy rate of 2.81%, which constituted 25% of districts (215 of 861 districts). Using the third quartile as an indicator, we labeled districts with a vacancy rate of 2.81% or higher as high shortage. These 215 districts were categorized as having high shortages of unfilled teacher positions for SY2023 (see Figure 3). This cutoff of reaching a vacancy rate of at least 2.81% was then applied to previous years of ISBE UFP and IRC data, dating to SY2018, and was used to identify districts that had previously experienced high shortages.

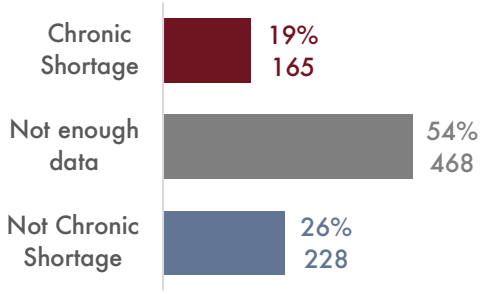
Figure 3: Districts with High Unfilled Teacher Postions ISBE SY2023



ISBE Chronically High Shortages of Unfilled Teacher Positions

We also applied the previously described process of identifying which districts have experienced chronically high shortages to the ISBE UFP and IRC data. We first tallied the number of years of available data for each district. To ensure enough data was present to determine a chronic issue, we filtered out districts that had fewer than three years[f] of data spanning SY2018 – SY2023 (i.e., less than 50%) and labeled these districts as having *not enough data*. Again, we tallied the number of years each district was categorized as experiencing high shortages and compared that to the number of years of available data. Districts with at least 50% of their available yearly data classified as high shortages were also categorized as having experienced chronically high shortages. We identified 165 districts as having chronically high shares of unfilled teacher positions across SY2018 – SY2023 (see Figure 4). Table 1 summarizes selection criteria used for identifying districts with high and chronically high shortages.

Figure 4: Districts with Chronic High Unfilled Teacher Postions ISBE SY2018 - SY2023



[f] For ISBE's UFPs for SY2018 – SY2022, it was unclear whether districts did not report their unfilled positions or if they had no unfilled positions. For this analysis, we assumed that no data present meant no data was reported, not that there were no unfilled positions.

Table 1: Selection Criteria for Identifying Districts with High and Chronically High Shortages

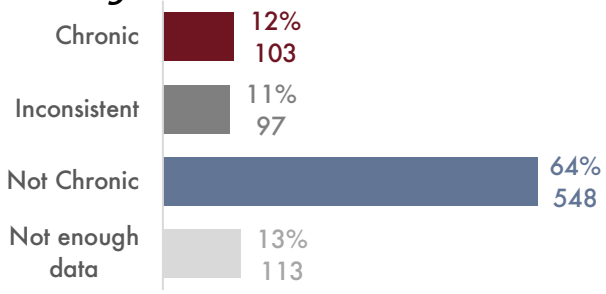
	IARSS Un/underfilled Survey Data	ISBE Unfilled Positions Data
High shortages	67.9% (third quartile for SY2023) or more of posted teacher positions reported un/underfilled	2.81% (third quartile for SY2023) or higher vacancy rate
Chronically high shortages	At least three years of available data from SY2018 – SY2023 and at least 50% of those years designated as having high shortages	

Comparing Data Sets: Identifying Districts with Chronically High Shortages

Because the IARSS and ISBE data measure teacher shortages through different methods, we compared these data when identifying which districts to include in our analyses. More specifically, our criterion for determining districts with chronically high shortages included districts as experiencing chronically high shortages in both data sets, or chronically high shortages in one data set and not enough data in the other data set.

Across both data sources and spanning SY2018 – SY2023, we identitied 103 districts with chronically high shortages, 97 districts with inconsistent shortages (chronic in one data set and not chronic in the other), 548 districts without chronically high shortages, and 113 districts without enough data in both data sets to make a determination (see Figure 5). The remainder of this paper focuses on the 103 districts that were identified as experiening chronically high teacher short ages (see Appendix).

Figure 5: Districts with Chronically High Shortages from both IARSS and ISBE



Analytical Plan

After we identified districts with chronically high shortages, we conducted a descriptive analysis (i.e., measuring the frequency of occurrence) to explore whether these shortages were related to specific characteristics of the district, its students, or teachers. For districts, these variables included district size, type, funding (i.e., Evidence Based Funding, or EBF tiers), and urbanicity. For students, these variables included student poverty levels, as indexed through free and reduced-price lunch, race/ethnicity, and also whether students were classified as ELLs or special needs (i.e., students with an Individualized Education Program, or IEP). And finally, for teachers, these variables included average salary and the percentage of teachers who were novice as well as on short-term approvals. All variables related to district, student, and teacher characteristics were taken from the SY2022 IRC (ISBE, 2023c), except for district urbanicity, which was pulled from the National Center for Education Statistics (NCES, 2021).

Results

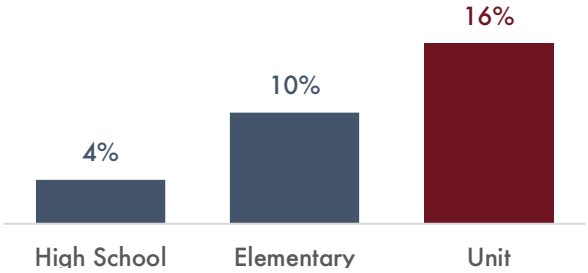
Characteristics of Districts with Chronically High Shortages

District Characteristics

Type of District

From the IRC, districts are labeled based on the grade levels they serve as either high school (grades 9 – 12), elementary (any combination of PreK – 8), or unit (PreK – 12 and K – 12). For SY2022, there were 99 high school districts, 383 elementary school districts, and 379 unit districts among all Illinois public schools. From our descriptive analysis, we found that unit and elementary districts had more issues with chronically high teacher shortages than high school districts (see Figure 6). Among unit districts, 16% (61 of 379 unit districts statewide) were identified as having problems with chronically high teacher shortages. For high school districts, only 4% (4 of the 99 high school districts statewide) were identified as having chronically high teacher shortages. For elementary districts, about 10% (38 of the 383 elementary districts statewide) were identified as having chronically high teacher shortages.

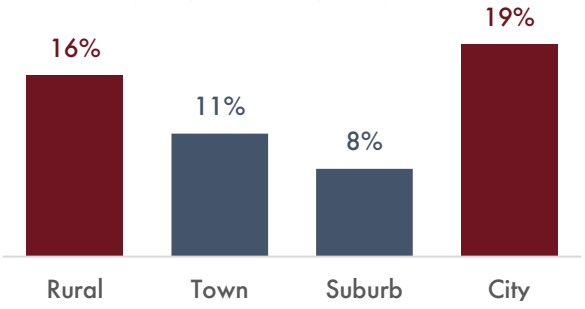
Figure 6. Percent of Districts with Chronically High Shortages by Type of District



Urbanicity of District

The National Center for Education Statistics (NCES, 2021) includes an urbanicity index for every district in the United States ranging from rural remote to large city. For SY2022, there were 37 city districts, 345 suburban districts, 164 town districts, and 315 rural districts among all Illinois public schools. Districts in cities and rural areas had more issues with chronically high teacher shortages than suburban districts (see Figure 7). Of districts in the city, 19% (7 out of 37 city districts statewide), including City of Chicago SD 299 (Chicago Public Schools), had problems with chronically high teacher shortages. In rural areas, 16% (51 out of 315 rural districts statewide) of districts had chronically high teacher shortages. Only 11% (18 out of 164 town districts statewide) of town districts had chronically high teacher shortages. In suburbs, 8% (27 out of 354 suburban districts statewide) of districts had chronically high teacher shortages.

Figure 7. Percent of Districts with Chronically High Shortages by Urbanicity

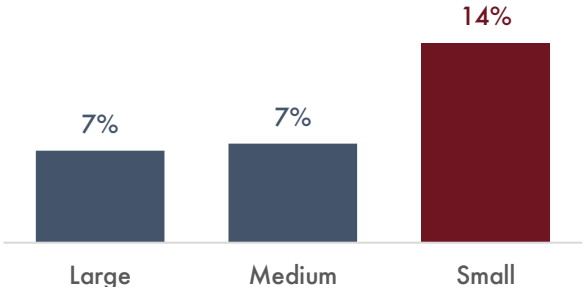


Size of District

The IRC contains information on student enrollment. Districts were grouped by the size of their student body as small (less than 1,500 students), medium (1,500–3,500 students), and large (more than 3,500 students). For SY2022, there were 107 large districts, 156 medium districts, and 598 small districts across all Illinois public schools. We found that small districts had more issues with chronically high teacher shortages than large districts (see Figure 8). Of the small districts, 14% (85 of

598 small districts statewide) had issues with chronically high teacher shortages. For large districts, 7% (7 out of 107 large districts statewide) had chronically high teacher shortages. For medium districts, 7% (11 out of 156 medium districts statewide) had chronically high teacher shortages.

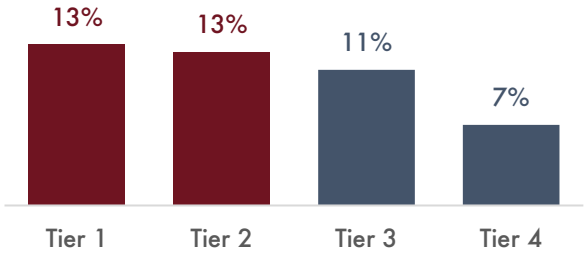
Figure 8. Percent of Districts with Chronically High Shortages by District Size



District Financial Capacity to Meet Needs

In Illinois, districts receive state funding based on the EBF formula, and districts are placed in tiers based on their need for state funding (ISBE, 2017). From the IRC for SY2022, districts in Tier 1 had less than 69.4% EBF, districts in Tier 2 had less than 90.0% EBF, districts in Tier 3 had between 100% and 90.1% EBF, and districts in Tier 4 had greater than 100% EBF. For SY2022, there were 305 districts in Tier 1, 321 districts in Tier 2, 62 districts in Tier 3, and 164 districts in Tier 4 in Illinois public schools statewide[9]. We found that districts in Tier 1 and Tier 2 had more issues with chronically high teacher shortages than districts in Tier 4 (see Figure 9). In Tier 1, 13% (41 of 305 districts statewide in Tier 1) of districts had chronically high teacher shortages. In Tier 2, 13% (41 of 321 districts statewide in Tier 2) of districts had chronically high teacher shortages. For Tier 3, 11% (7 out of 62 districts statewide in Tier 3) of districts had chronically high teacher shortages. For Tier 4, 7% (11 out of 164 districts statewide in Tier 4) of districts had chronically high teacher shortages.

Figure 9. Percent of Districts with Chronically High Shortages by District Financial Capacity

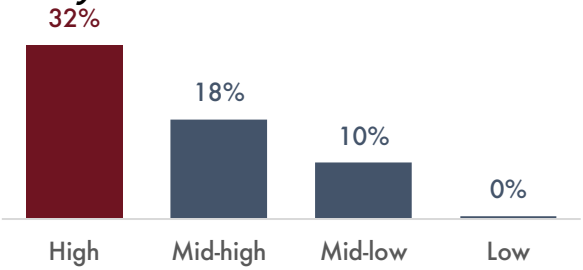


Student Body Characteristics

Student Poverty Level of District

The IRC also contains information on student poverty levels. Districts were grouped by the percentage of their student body who qualifies for free or reduced lunch as low (0–25.0%), mid-low (25.1–50.0%), mid-high (50.1–75.0%), and high (75.1–100%). For SY2022 in Illinois, there were 205 districts with low poverty levels, 366 with mid-low poverty levels, 212 with mid-high poverty levels, and 78 with high poverty levels. We found that districts with high poverty levels had more issues with chronically high teacher shortages than districts with low poverty levels (see Figure 10). Districts with mid-high and mid-low poverty levels, respectively, had more issues with chronically high teacher shortages than districts with low poverty levels, but not as much as

Figure 10. Percent of Districts with Chronically High Shortages by Student Povery Level



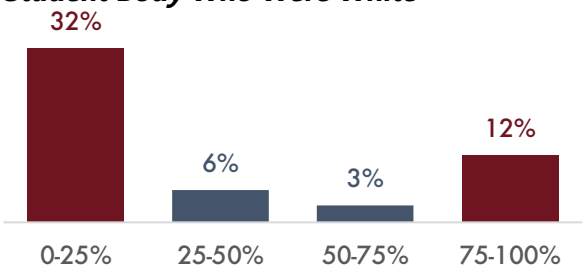
[9] Within the IRC for SY2022 there were 10 districts without data for EBF. All 10 were either Charter schools or Cooperative High Schools. Seven of these were part of the Chicago Public Schools system.

districts with high poverty levels. Of the districts with high poverty levels, 32% (25 of 78 high-poverty districts statewide) had chronically high teacher shortages. For districts with mid-high poverty levels, 18% (39 of 212 mid-high poverty districts statewide) had chronically high teacher shortages. For districts with mid-low poverty levels, 10% (38 of 366 mid-low poverty districts statewide) had chronically high teacher shortages. For districts with low poverty levels, 0% (1 of 205 low-poverty districts statewide) had chronically high teacher shortages.

Student Race/Ethnicity

The IRC reports on student demographics. For this report, we investigated the relationship between the percentage of the student population who identifies as White and chronically high teacher shortages. For SY2022, there were 98 districts with 0-25% of their student body who identify as White, 103 districts that fell within 25-50%, 161 districts within 50-75%, and 499 districts within 75-100% for all Illinois public schools. Districts with 0-25% of their student body who identify as White had more issues with chronically high teacher shortages than other districts (see Figure 11). More specifically, for these districts, 32% (31 of 98 districts statewide) had chronically high teacher shortages. Also, 12% (61 of 499 districts statewide) of districts with 75-100% of their student body who identify as White had chronically high teacher shortages. For districts with 25-50% of their student body who identify as White, 6% (6 out of 103 districts statewide) had chronically high teacher shortages. For districts with 50-75% of their student body who identify as White, 3% (5 out of 161 districts statewide) had chronically high teacher shortages.

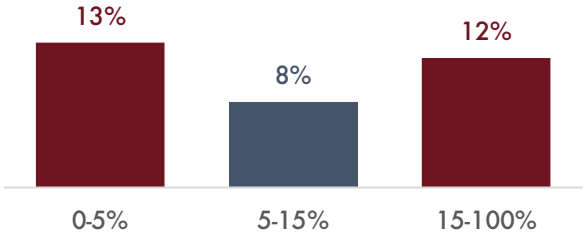
Figure 11. Percent of Districts with Chronically High Shortages by Percent of Student Body Who Were White



Students who are English Language Learners

The IRC also reports on the percentage of students who are ELLs. For SY2022, there were 570 districts with 0-5% of their student body who were ELL, 155 districts with 5-15% of their student body who were ELL, and 136 districts with 15-100% of their student body who were ELL for all Illinois public schools. Districts with 0-5% of their student body who were ELL had more issues with chronically high teacher shortages than other districts (see Figure 12). Specifically, for districts with 0-5% of their student population being ELL, 13% (75 of 570 districts statewide) had chronically high teacher shortages. Also, 12% (16 of 136 districts statewide) of districts with 15-100% of their student body being ELL had chronically high teacher shortages. For districts with 5-15% of their student population being ELL, only 8% (12 of 155 districts statewide) had chronically high teacher shortages.

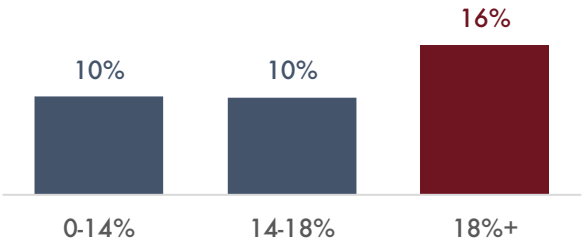
Figure 12. Percent of Districts with Chronically High Shortages by Percent of Students Who Were English Language Learners



Students with Special Needs

The IRC also includes the percentage of students who have special needs through an IEP. For SY2022, there were 245 districts with 0-14% of their student body who had an IEP, 326 districts with 14-18% of their student body who had an IEP, and 290 districts with 18%+ of their student body who had an IEP for all Illinois public schools. Districts with 18%+ of their student body who had an IEP had more issues with chronically high teacher shortages than other districts (see Figure 13). Of the districts with 18%+ of their student body having an IEP, 16% (45 of 290 districts statewide) had chronically high teacher shortages. For districts with 0-14% of their student body having an IEP, 10% (25 of 245 districts statewide) had chronically high teacher shortages. For districts with 14-18% of their student body who had an IEP, 10% (33 of 326 districts statewide) had chronically high teacher shortages.

Figure 13. Percent of Districts with Chronically High Shortages by Percent of Students with Special Needs

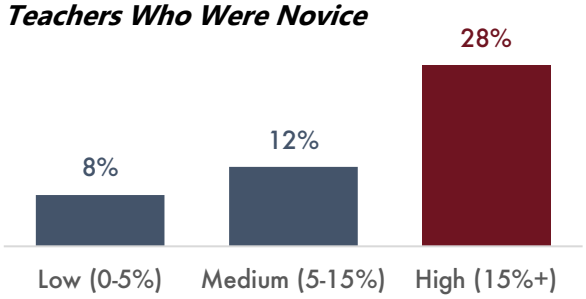


Teacher Characteristics

Novice Teachers

The IRC includes the percentage of novice teachers for each district. A novice teacher has less than five years of teaching experience. For SY2022, there were 337 districts with low percentages (0-5%) of novice teachers, 453 with medium percentages (5-15%) of novice teachers, and 71 districts with high percentages (15%+) of novice teachers for all Illinois public schools. We found that districts with high percentages of novice teachers had more issues with chronically high teacher shortages. More specifically, 28% of districts with more than 15% of novice teachers (20 out of 71 districts statewide) had chronically high teacher shortages (see Figure 14). For districts with 0-5% of novice teachers, 8% (27 out of 337 districts statewide) had chronically high teacher shortages. For districts with 5-15% of novice teachers, 12% (56 out of 453 districts statewide) had chronically high teacher shortages.

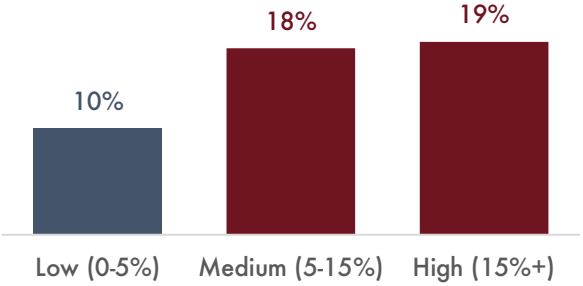
Figure 14. Percent of Districts with Chronically High Shortages by Percent of Teachers Who Were Novice



Short-Term Approvals

The use of short-term approvals for teacher licensure was expanded in response to the pandemic. For SY2022, there were 16 districts with high percentages (15%+) of short-term approvals, 160 with medium percentages (5-15%) of short-term approvals, and 685 with low percentages (0-5%) of short-term approvals for all Illinois public schools. We found that more districts with medium to high percentages of short-term approvals (more than 5%) had chronically high teacher shortages (see Figure 15). Approximately 19% (3 of 16 districts statewide) of districts with high percentages and 18% (29 of

Figure 15. Percent of Districts with Chronically High Shortages by Percent of Teachers with Short-Term Approvals

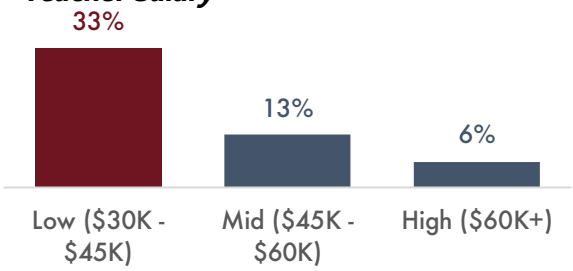


160 districts statewide) of districts with medium percentages of short-term approvals had chronically high teacher shortages. Only 10% (71 of 685 districts statewide) of districts with low percentages of short-term approvals had chronically high teacher shortages.

Teacher Salary

In past reports, we have shared the disparity in teacher salaries across the state of Illinois (Withee & Beilstein, 2022). For SY2022, there were 81 districts with low average teacher salaries ($30K-$45K), 435 with mid-range average teacher salaries ($45K-$60K), and 345 with high range average teacher salaries ($60K+) for all Illinois public schools. A high percentage of districts with low average teacher salaries had chronically high teacher shortages. Of the districts with low average teacher salaries, 33% (27 of 81 districts statewide) had chronically high teacher shortages (see Figure 16). For districts with mid-range average teacher salaries, 13% (55 of 435 districts statewide) had chronically high teacher shortages, and for districts with high average teacher salaries, only 6% (21 of 345 districts statewide) had chronically high teacher shortages.

Figure 16. Percent of Districts with Chronically High Shortages by Average Teacher Salary



Results Summary

In this section, we provide a descriptive analysis of which district, student, and teacher characteristics are related to districts with chronically high shortages. Based on district characteristics, unit districts, compared to high school districts, were more likely to have chronic teacher shortages. More rural districts and districts in cities had chronic teacher shortages than suburban districts or districts in towns. We found that small districts (less than 1,500 students) may be more likely to experience issues with chronically high teacher shortages. More districts in EBF Tiers 1 and 2 (based on capacity to meet expectations through evidence-based funding) had issues with chronic teacher shortages than districts in EBF Tiers 3 and 4.

Based on demographic characteristics of the student body, districts with a higher percentage of their student body coming from low-income households were more likely to experience chronically high teacher shortages. More districts with 0-25% of the student body who identify as White, or districts with larger populations of students of color, had chronic teacher shortages. In addition, highly White districts (75-100%) also had chronic shortages. We interpret these results to mean that both very urban and very rural districts are experiencing long-term staffing challenges. Chronic shortage issues appear to skew toward districts with higher percentages of ELLs (though we note districts with lower percentages of students with ELLs also saw chronic shortages) and students with special needs.

Based on characteristics of teachers, we found alignment between districts with chronic teacher shortages and high percentages of novice teachers. We also found alignment between districts with chronic teacher shortages and high percentages of teachers on short-term approvals. Districts with low average teacher salaries were also likely to have issues with chronic teacher shortages.

Conclusion

We compared longitudinal data, from SY2018 – SY2023, collected by multiple state organizations (IARSS and ISBE), with two aims: (1) to understand which districts in Illinois have historically chronic and persistent issues with teacher shortages; and (2) to determine if there were common characteristics of Illinois school districts with chronic teacher shortages.

We identified 103 districts that had chronic teacher shortages in one or both of the IARSS and ISBE data sets (for a list of these districts, see Appendix). We also found that districts experiencing chronically high teacher shortages also share some commonalities related to district, student, and teacher characteristics.

Regarding teacher characteristics, results indicate that districts with high percentages of novice teachers and high percentages of teachers on short-term approvals had consistent chronic teacher shortages. Districts with high percentages of novice teachers and chronically high teacher shortages may struggle with teacher retention. High percentages of novice teachers indicate that a significant portion of the teaching staff is new to the profession, with less than five years of experience. Similarly, districts with high percentages of short-term approvals are unable to fill positions with highly qualified staff and hire someone less than qualified to fill a crucial position. Chronically high teacher shortages indicate that the district has large percentages of unfilled positions year after year. Further research into staff retention and mobility for these districts could lead to insights into strategies that support the recruitment and retention of educators.

We also found that districts with chronic teacher shortages also had lower average teacher salaries. Our previous paper on teacher salaries (Withee & Beilstein, 2022) highlighted the extreme disparities in teacher salaries across Illinois. In particular, we found that high school districts and large districts had significantly higher starting salaries than their counterparts across the state. Results from this study on chronic teacher shortages contribute to how we can interpret findings from the salary study. Broadly speaking, high school districts pay better than unit or elementary districts, and fewer high school districts experience chronic teacher shortages. Similarly, large districts tend to pay teachers better, and large districts tend to have fewer issues with chronic teacher shortages than small- and medium-sized districts. Further research into the correlations between teacher pay and chronic teacher shortages could lead to insights into strategies to support teacher retention and reduce attrition.

Regarding student characteristics, districts with consistently high teacher shortages also have a high percentage of students from low-income households. While student poverty levels were a strong factor in chronic teacher shortages, district funding (EBF Tier) was not as clear a factor in chronic teacher shortages. We also found that districts with consistent chronic teacher shortages also have a higher percentage of students of color (or a lower percentage of the student body who identify as White), as well as higher percentages of ELLs and students with special needs. Previous research has found that uneven access to highly qualified educators can lead to inequitable learning opportunities and decreased student achievement, especially for students of color and students from low-income families (Cardichon et al., 2020; Sutcher et al., 2019; Podolsky et al., 2019). Further research into recruitment and retention strategies specifically to support districts with students from these populations is needed to provide equitable educational access to all students across the state.

Regarding district characteristics, suburban and town districts do not struggle with chronic teacher shortages as much as rural districts or districts within cities. When combining our results for district urbanicity with our results for student ethnicity, we find that districts with chronic teacher shortages fall into two clear groups: (1) districts in the city with low percentages of students who identify as White; (2) rural districts with high percentages of students who identify as White. As stakeholders seek to address the teacher shortage, targeted strategies will be needed to address the diverse landscape of Illinois public schools.

Research has shown that teacher shortages tend to be concentrated in different geographic regions (Beilstein & Withee, 2022a; Bruno, 2022), content areas (Beilstein & Withee, 2022b), and schools with larger populations of students of color and students from low-income families (Cardichon et al., 2020). This paper adds to the literature by documenting that chronic teacher shortages exist particularly for (1) districts with larger populations of students of color, students from low-income families, as well as ELL and special needs students; (2) districts with lower teacher salaries and higher amounts of novice teachers; and (3) districts in urban and rural settings. Targeted strategies are greatly needed to bolster the supply of qualified teachers in areas with persistent shortages. For specific policy recommendations developed by IARSS, please refer to the 2022-23 Educator Shortage Report (IARSS, 2023).

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Appendix

We identified 103 districts as having chronic teacher shortages according to either both IARSS survey data and ISBE unfilled positions data, or chronic in either data set and not enough data in the other. The table below lists the 103 districts along with whether they experienced chronically high shortages according to IARSS survey data and ISBE unfilled positions data. Table 9 also details whether the district is eligible for the Teacher Pipeline Grant (TPG) and if the district was identified as having chronic shortages according to TPG eligibility.

List of Districts with Chronically High Teacher Shortages

District	IARSS Chronic	ISBE Chronic	Chronically High Shortages	TPG Selected	TPG Chronic
City of Chicago SD 299	Not enough data	Chronic	Chronic	TPG	Y
Decatur SD 61	Not enough data	Chronic	Chronic	TPG	Y
Waukegan CUSD 60	Not enough data	Chronic	Chronic	TPG	Y
Peoria SD 150	Not enough data	Chronic	Chronic	TPG	Y
Prairie-Hills ESD 144	Not enough data	Chronic	Chronic	TPG	Y
Dolton SD 149	Not enough data	Chronic	Chronic	TPG	Y
Country Club Hills SD 160	Not enough data	Chronic	Chronic	TPG	Y
Harvard CUSD 50	Not enough data	Chronic	Chronic	TPG	Y
Kankakee SD 111	Not enough data	Chronic	Chronic	TPG	Y
North Greene CUSD 3	Chronic	Chronic	Chronic	TPG	Y
Clay City CUSD 10	Not enough data	Chronic	Chronic	TPG	N
Pope Co CUD 1	Chronic	Not enough data	Chronic	TPG	N
Kewanee CUSD 229	Not enough data	Chronic	Chronic	TPG	Y
Westville CUSD 2	Not enough data	Chronic	Chronic	TPG	Y
Lincoln ESD 156	Chronic	Chronic	Chronic	TPG	Y
Sunnybrook SD 171	Not enough data	Chronic	Chronic	TPG	Y
Virginia CUSD 64	Chronic	Chronic	Chronic	TPG	Y
South Fork SD 14	Chronic	Chronic	Chronic	TPG	Y
Thomasboro CCSD 130	Not enough data	Chronic	Chronic	TPG	N
Zion ESD 6	Not enough data	Chronic	Chronic	TPG	Y
Danville CCSD 118	Not enough data	Chronic	Chronic	TPG	Y
Jacksonville SD 117	Chronic	Chronic	Chronic	TPG	Y

East St Louis SD 189	Chronic	Chronic	Chronic	TPG	Y
Harvey SD 152	Not enough data	Chronic	Chronic	TPG	Y
CCSD 168	Chronic	Chronic	Chronic	TPG	Y
Hoopeston Area CUSD 11	Chronic	Chronic	Chronic	TPG	Y
Posen-Robbins ESD 143-5	Not enough data	Chronic	Chronic	TPG	Y
North Chicago SD 187	Not enough data	Chronic	Chronic	TPG	Y
Cahokia CUSD 187	Not enough data	Chronic	Chronic	TPG	Y
La Harpe CSD 347	Chronic	Chronic	Chronic	TPG	Y
Canton Union SD 66	Chronic	Chronic	Chronic	TPG	Y
Winthrop Harbor SD 1	Not enough data	Chronic	Chronic	TPG	N
Madison CUSD 12	Chronic	Not enough data	Chronic	TPG	N
Central CUSD 3	Chronic	Chronic	Chronic	TPG	Y
DePue USD 103	Chronic	Chronic	Chronic	TPG	Y
Altamont CUSD 10	Not enough data	Chronic	Chronic	TPG	N
Bushnell Prairie City CUSD 170	Chronic	Chronic	Chronic	TPG	Y
West Prairie CUSD 103	Chronic	Chronic	Chronic	TPG	Y
North Clay CUSD 25	Chronic	Chronic	Chronic	TPG	Y
Calumet City SD 155	Chronic	Chronic	Chronic	Not TPG	N
Burnham SD 154-5	Chronic	Chronic	Chronic	Not TPG	N
District 50 Schools	Chronic	Not enough data	Chronic	Not TPG	N
Galatia CUSD 1	Not enough data	Chronic	Chronic	Not TPG	N
Dongola USD 66	Not enough data	Chronic	Chronic	Not TPG	Y
Norris City-Omaha-Enfield CUSD 3	Not enough data	Chronic	Chronic	Not TPG	N
South Central CUD 401	Chronic	Not enough data	Chronic	Not TPG	N
Hazel Crest SD 152-5	Chronic	Chronic	Chronic	Not TPG	Y
Streator Twp HSD 40	Chronic	Not enough data	Chronic	Not TPG	N
Trico CUSD 176	Chronic	Not enough data	Chronic	Not TPG	N
Waltonville CUSD 1	Chronic	Not enough data	Chronic	Not TPG	Y
Kell Cons SD 2	Chronic	Chronic	Chronic	Not TPG	N
New Simpson Hill SD 32	Chronic	Chronic	Chronic	Not TPG	N
Carrier Mills-Stonefort CUSD 2	Chronic	Not enough data	Chronic	Not TPG	N

Spring Garden Community Consolidated School District 178	Chronic	Not enough data	Chronic	Not TPG	Y
Scott-Morgan CUSD 2	Not enough data	Chronic	Chronic	Not TPG	N
Stewardson-Strasburg CUD 5A	Chronic	Not enough data	Chronic	Not TPG	N
Thornton SD 154	Not enough data	Chronic	Chronic	Not TPG	N
Dalzell SD 98	Not enough data	Chronic	Chronic	Not TPG	N
Christopher USD 99	Chronic	Not enough data	Chronic	Not TPG	N
Willow Grove SD 46	Chronic	Not enough data	Chronic	Not TPG	N
Ford Heights SD 169	Not enough data	Chronic	Chronic	Not TPG	Y
Ashton-Franklin Center CUSD 275	Chronic	Not enough data	Chronic	Not TPG	N
Edinburg CUSD 4	Not enough data	Chronic	Chronic	Not TPG	Y
Grayville CUSD 1	Chronic	Chronic	Chronic	Not TPG	Y
East Dubuque USD 119	Chronic	Chronic	Chronic	Not TPG	Y
Momence CUSD 1	Not enough data	Chronic	Chronic	Not TPG	Y
Brown County CUSD 1	Chronic	Chronic	Chronic	Not TPG	N
Cissna Park CUSD 6	Not enough data	Chronic	Chronic	Not TPG	N
CUSD 3 Fulton County	Chronic	Chronic	Chronic	Not TPG	N
Morrisonville CUSD 1	Chronic	Not enough data	Chronic	Not TPG	N
Mulberry Grove CUSD 1	Chronic	Chronic	Chronic	Not TPG	N
Palestine CUSD 3	Chronic	Chronic	Chronic	Not TPG	N
Panhandle CUSD 2	Chronic	Not enough data	Chronic	Not TPG	N
Pearl City CUSD 200	Chronic	Not enough data	Chronic	Not TPG	N
Rossville-Alvin CUSD 7	Not enough data	Chronic	Chronic	Not TPG	N
Malden CCSD 84	Chronic	Not enough data	Chronic	Not TPG	N
Calumet Public SD 132	Not enough data	Chronic	Chronic	Not TPG	N
Paris CUSD 4	Chronic	Chronic	Chronic	Not TPG	N
Chester-East Lincoln CCSD 61	Chronic	Not enough data	Chronic	Not TPG	N
Pikeland CUSD 10	Chronic	Chronic	Chronic	Not TPG	N
ESD 159	Not enough data	Chronic	Chronic	Not TPG	N
Donovan CUSD 3	Chronic	Chronic	Chronic	Not TPG	Y
Nauvoo-Colusa CUSD 325	Chronic	Chronic	Chronic	Not TPG	N

Lindop SD 92	Not enough data	Chronic	Chronic	Not TPG	N
Windsor CUSD 1	Chronic	Chronic	Chronic		
Edgar County CUD 6	Not enough data	Chronic	Chronic		
Beecher City CUSD 20	Chronic	Chronic	Chronic		
Hartsburg Emden CUSD 21	Chronic	Chronic	Chronic		
Pembroke CCSD 259	Not enough data	Chronic	Chronic		
Gen George Patton SD 133	Not enough data	Chronic	Chronic	Not TPG	Y
Deland-Weldon CUSD 57	Chronic	Chronic	Chronic	Not TPG	N
Dwight Twp HSD 230	Chronic	Not enough data	Chronic	Not TPG	N
Brussels CUSD 42	Chronic	Not enough data	Chronic	Not TPG	Y
New Holland-Middletown ED 88	Chronic	Chronic	Chronic	Not TPG	Y
Cairo USD 1	Not enough data	Chronic	Chronic	Not TPG	Y
Grand Ridge CCSD 95	Chronic	Chronic	Chronic	Not TPG	N
Armstrong Twp HSD 225	Chronic	Chronic	Chronic	Not TPG	Y
Ohio CHSD 505	Not enough data	Chronic	Chronic	Not TPG	N
Ohio CCSD 17	Not enough data	Chronic	Chronic	Not TPG	N
Medinah SD 11	Chronic	Not enough data	Chronic	Not TPG	N
Horizon Science Acad-Belmont Charter Sch	Not enough data	Chronic	Chronic		
ACE Amandla Charter School	Not enough data	Chronic	Chronic		
LEARN Charter 9 Campus in Waukegan	Not enough data	Chronic	Chronic		