2020 ILLINOIS EDUCATOR SHORTAGE SURVEY

Which Educator Positions Are Most Difficult to Fill?

Analysis of High Need and Hard to Staff Roles

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ABSTRACT

The Illinois Association of Regional Superintendents of Schools (IARSS) has conducted a series of educator shortage surveys over the past four years.[1] This white paper takes a closer look at which educator positions have consistently gone unfilled or filled with a less than qualified hire. High need positions (high numbers of openings) are distinguished from hard to staff positions (high percentage unfilled). Additionally, specific positions are identified as both high need and hard to staff and will require targeted strategies to alleviate shortages. Finally, comparing the results of the IARSS shortage surveys against the evidence-based funding formula put forth by the Illinois School Board of Education show that Illinois schools are significantly understaffed in all areas.

INTRODUCTION

Even in the best of times, when there is a surplus of educators overall, states and districts often experience teacher shortages in particular subject areas or specific types of schools. For example, in Illinois in 2011, when there were more than five new teacher certificates issued for each new teacher hired and over 25 social studies certificates issued for each new social studies teacher hired, subject areas like math, special education and bilingual education were still short-staffed.[2] When the overall educator supply is tight, as in recent years, these shortage areas can become even more frustrating.

The paper uses data from the IARSS shortage surveys to identify the teaching and administrative positions that were most susceptible to educator shortages. The IARSS surveyed superintendents regarding vacancies in 25 teaching positions and 8 administrative roles over the past three years. These IARSS shortage survey data are particularly useful for addressing this issue because **superintendents reported on not just how many vacancies for each position and whether those openings were filled, but also HOW they were filled** (by a qualified candidate or an unqualified candidate). Examining data on these "underfilled" positions (openings filled with less-than-qualified candidates) allows a measure of educator quality as well as educator supply, a significant advantage over many similar studies.

FINDINGS

To better understand the educator shortage, it is important to have an idea of how many vacancies need to be filled and how difficult it is to fill a given position. For example, it may be relatively easy to find qualified teachers for elementary self-contained classrooms, but districts may have trouble staffing this position because there are so many vacancies each year. These positions are **High Need** because there is a large volume of these educators required to fill all the available vacancies. On the flip side, even though there might be very few openings for Computer Science teachers, these positions may be difficult to fill because there are so few qualified applicants. These positions are **Hard to Staff** because districts are only able to fill a small proportion of openings with a qualified candidate. While both High Need and Hard to Staff positions are examples of a mismatch between

supply and demand that can lead to shortages, they are distinct problems and the strategies for effectively addressing these problems are quite different.

TEACHER POSITIONS

The IARSS shortage survey data reveals how these issues, High Need and Hard to Staff, differ across various educator positions. Table 1 displays the number of teaching vacancies reported by types of positions and the proportion of each position that went unfilled or filled by a less than qualified hire (underfilled).

Table 1. Teacher Staffing by Subject Area (2018-2020) Sorted by Shortage Risk Score

Position	High Need (Vacancies per 100 Districts)[a]	Hard to Staff (% of Vacancies Unfilled or Underfilled)[a,b]	Shortage Risk Score (Estimated # of Vacancies Unfilled or Underfilled Per 100 Districts)[a,c]
Special Education (K-12)	**152**	22%	**34**
School Psychologists	24	**44%**	11
Bilingual Education	39	28%	11
Mathematics	**57**	19%	11
Elementary Self-Contained Gen Ed	**149**	7%	10
Physical Education	44	22%	10
Career and Technical Education	38	27%	10
Social Workers	37	26%	10
Science	39	21%	8
Foreign Language	22	34%	7
School Nurses	21	32%	7
Early Childhood	24	23%	6
Speech and Language Pathologists	27	23%	6
Library/Media Specialist	11	**42%**	5
Art	22	22%	5
English Language Arts (ELA)	**52**	9%	5
School Counselors	18	21%	4
Music	28	14%	4
English as a Second Language	25	16%	4
Computer Science	7	**38%**	3
Driver Education	5	29%	2
Health	10	23%	2
Reading	13	14%	2
Blind or Deaf	4	**42%**	2
Social Science	25	7%	2

a: Rounded to the nearest whole number.
b: Reported on "per 100 districts" rate to compare data across years with different sample sizes.
c: The product of multiplying the number of un- or underfilled vacancies that occur annually by the proportion of vacancies that do not typically get filled by qualified candidates.

The High Need column shows the number of vacancies in the type of position per 100 districts. Special education and elementary self-contained teachers stand out as being in especially high need. Each of these positions experienced about 150 vacancies for every 100 districts, or roughly one and a half vacancies per district each year. Math and English language arts teachers make up a secondary group of high-need positions, averaging 50-60 vacancies per 100 districts. Looking across these data, positions that typically have the most personnel across all schools (elementary self-contained) also have the highest need, whereas positions that generally have fewer personnel (computer science) tend to have the lowest need.[3] There is a clear and understandable connection between the number of personnel and the number of vacancies.

The Hard to Staff column shows the proportion of vacancies that went unfilled or underfilled. Four positions – teachers of the blind or deaf, school psychologists, library/media specialists, and computer science teachers – were consistently ranked among the most difficult to fill. Around 40% of the vacancies in these positions went unfilled or underfilled. At the other end of the spectrum, ELA, social science, and elementary self-contained positions have proven to be the easiest to staff. The Hard to Staff measure follows a different pattern that is not related to the sheer volume of personnel in each area, but rather a measure of the supply of personnel with the relevant qualifications who are willing to work in a given district.

"Recruiting enough qualified candidates to meet the growing needs of our dual language and special education programming continues to be the challenge. Retaining these staff because they can leave to access salary bonuses in other districts is a common frustration."

-2020 IARSS Educator Shortage Survey: Superintendent from Suburban Cook Region

The **Shortage Risk Score** column is a combination of the High Need and the Hard to Staff statistics that describes the interplay between supply and demand. This measure is a predictor of the number of vacancies that typically go unfilled or underfilled for each position based on historic data. The Shortage Risk Score falls between two and eleven for all but one subject area, special education. Special education typically experiences around 34 unfilled or underfilled vacancies per 100 districts. Some areas such as elementary self-contained may be high need in terms of volume, but they are relatively easy to staff. Other areas such as teachers of the blind or deaf may be harder to staff, but they are not in particularly high demand. However, by this measure, we can see that **special education is clearly an outlier, with a high Shortage Risk Score**, that warrants particular attention when it comes to understanding educator shortages.

ADMINISTRATOR POSITIONS

The same approach to understanding teacher shortages can be applied to administrator shortages. Table 2 displays the same analysis for the eight administrator positions. The High Need column indicates that principals, superintendents, and assistant superintendents were the highest need administrative positions, with each reporting more than 10 vacancies for every 100 districts. Looking at Hard to Staff positions identifies director of technology, assistant superintendent, and chief school business officer as the hardest to staff. When districts had vacancies in these areas, approximately one in five went unfilled or underfilled.

The Shortage Risk Score shows that principal, superintendent, and assistant principal positions were the most frequently unfilled or underfilled. Interestingly, these three positions were also the least difficult to staff among administrators. For these positions, vacancies were filled by a qualified hire at least 90% of the time. This could indicate that, because administrative vacancies tend to be filled by qualified hires at generally high rates, **administrator shortages are driven primarily by vacancy rates** (High Need), rather than how difficult it is to fill a given position (Hard to Staff).

Table 2. Administrator Staffing by Position (2018-2020) Sorted by Shortage Risk Score

Position	High Need (Vacancies per 100 Districts)[a]	Hard to Staff (% of Vacancies Unfilled or Underfilled)[a,b]	Shortage Risk Score (Estimated # of Vacancies Unfilled or Underfilled Per 100 Districts)[a,c]
Principal	**24**	6%	**1.4**
Assistant Principal	17	8%	1.3
Superintendent	13	10%	1.3
District Content Specialist	5	12%	0.6
Assistant Superintendent	4	20%	0.8
Director of Special Ed	4	12%	0.5
Director of Technology	3	21%	0.6
Chief School Business Officer	2	19%	0.4

a: Rounded to the nearest whole number.
b: Reported on "per 100 districts" rate to compare data across years with different sample sizes.
c: The product of multiplying the number of un- or underfilled vacancies that occur annually by the proportion of vacancies that do not typically get filled by qualified candidates.

COMPARING TEACHER AND ADMINISTRATOR STAFFING

Comparing Table 1 (teacher staffing) to Table 2 (administrator staffing) can help us further understand these dynamics. Comparing the High Need columns, more than half of teaching positions have higher needs than the highest need administrative position. Similarly, comparing the Hard to Staff positions, more than half of teaching positions are harder to staff than the hardest to staff administrator position. Because teaching positions are generally both higher need and harder to staff than administrative positions, the Shortage Risk Score for every teaching position is higher than the Shortage Risk Score for the most at-risk administrative position. This is mainly due to district staffing levels; districts simply need more teachers than they do administrators.[4] Also, many districts can go years without having to fill an administrative opening. But there may be other factors at work as well. For example, districts might be able to function with some teaching positions unfilled whereas they might not be able to operate with unfilled administrative positions. The IARSS shortage survey indicates that districts will cancel classes, convert classes to online, create study halls and hire substitutes to account for unfilled teacher positions, whereas they will combine roles, promote lead teachers, hire deans of students, or hire teacher leaders to fill a potentially vacant administrative position.

ANALYSIS

Illinois' new school funding formula provides evidence-based recommendations for various staffing levels which can serve as a useful baseline describing how many educators *should* be employed in

each district across the state.[5] These staffing levels are based on research identifying the resources that each district needs to provide an adequate education to all students.

Some examples of the staffing levels recommended by the evidence-based funding (EBF) formula include:

- One teacher for every 15 low-income K-3 students or every 20 non-low-income K-3 students.
- One guidance counselor for every 450 elementary/middle school students or every 250 high school students.
- One principal and assistant principal for every 450 elementary or middle school students or every 600 high school students.

In the most recent iteration of their educator supply and demand report, the Illinois School Board of Education (ISBE) compared the current number of educators working various positions throughout the state to the staffing levels recommended by the evidence-based funding formula.[6] **According to ISBE's analysis, nearly all positions are currently staffed substantially below EBF-recommended levels**. Most notably, the current number of guidance counselors is almost 100% lower than the EBF recommendations, meaning that Illinois districts only average about one guidance counselor for every 900 elementary students and every 500 middle/high school students. Nonetheless, the IARSS surveys indicated only about four unfilled or underfilled vacancies for school counselors per 100 districts. Even though the IARSS surveys indicated relatively minor problems with principal and assistant principal shortages, ISBE's analysis suggests that these positions are still only staffed at levels that are 31% and 6% below their respective recommendations.

Interestingly, ISBE's analysis identifies only one educator role that is currently staffed at or above the levels required by the funding formula – special education teachers. According to the EBF formula, each district should aim to provide one special education teacher for every 141 students. Looking at actual district staffing patterns, ISBE finds that Illinois schools exceeded that ratio by 72% in 2019-2020, meaning there was one special education teacher for approximately every 82 students. The Individuals with Disabilities Education Act (IDEA) sets guidelines for schools to follow in determining the maximum number of students in a special education environment.[7] These guidelines range from a 20:1 student-teacher ratio in an inclusion classroom to a 6:1 student-teacher ratio in isolated high needs classrooms. This range of teaching environments for special education teachers and recommended staffing levels, makes it complicated to estimate the demand for special education teachers, assistants, and psychologists. Still, both ISBE's supply and demand report and the IARSS survey data find that special education is the area with the most unfilled or underfilled vacancies, and by quite a wide margin. According to the ISBE's supply and demand report, special education had more than four and a half times as many unfilled positions as any other subject area in 2020. ISBE notes that one reason special education teachers are in such high demand is because they have consistently lower retention rates (82% for special education over the past three years, versus 86% for all educators statewide).

CONCLUSION

There are specific teaching and administrative positions that are particularly high need, and some are hard to staff. There are also some positions where shortage may be less of an issue. It is worth exploring what differentiates these two poles. Why are some roles perennially on the verge of shortage while others are consistently over-supplied? When it comes to staffing all schools so they can succeed, there are many competing demands at play: student needs, community priorities, and

the various local, state, and federal laws, policies, regulations, and budgets. Of course, the wants and needs of prospective teachers and administrators also factor in, as some roles may simply be more intrinsically appealing than others. Some positions, like special education teachers, have historically been and continue to be more difficult to fill than others. **In the absence of changes to policy and practice, it seems reasonable to believe that high need positions and hard to staff roles are likely to remain just that, high need and hard to staff.** A forthcoming paper in this series will explore alternatives that exist for balancing and shaping these competing demands through changes to policy and practice.

BIBLIOGRAPHY

[1] The IARSS survey was developed in 2017 and included questions about superintendents' perceptions of the supply of teachers, substitute teachers, and administrators, factors that affect their ability to recruit educators, and the types of educators that were in short supply. It was later updated with questions about future vacancies (2018), responses to the educator shortage (2019), teacher recruitment (2020), and the impact of COVID-19 (2020) pandemic. The surveys were distributed to all superintendents in the state each fall from 2017 through 2020. Between 524 and 628 districts responded to the survey annually, for response rates ranging from 61% to 73%. Due to improvements in data collection between 2017 and 2018, only the 2018, 2019 and 2020 data are used in this paper. Visit https://iarss.org/educator-shortage/ to access the full reports.

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