

A photograph of a classroom with rows of wooden desks and orange chairs. A green chalkboard is visible in the background. The image is partially covered by a blue and green geometric overlay on the right side.

2021

BIENNIAL REPORT

SUPPLY & DEMAND OF TEACHERS IN MINNESOTA

m MINNESOTA
PROFESSIONAL EDUCATOR
LICENSING AND STANDARDS BOARD



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Key Findings

The Professional Educator Licensing and Standards Board (PELSB) releases the Teacher Supply and Demand Report biannually to inform policy-makers and education stakeholders on the current landscape of teachers in Minnesota.

Due to transitions to Tiered Licensure, some of the data-specific licensure types and licensure areas are inexact. Despite the limitations in data, the following conclusions can be drawn from the data included in this report:

1. More than half of Minnesota's teachers who hold a Tier 3 or Tier 4 License are currently not teaching in a public school classroom or charter school classroom. (See Table 1)
2. Most positions within public school districts and charter schools are being filled by teachers holding a Tier 3 or Tier 4 License. (See Tables 11 and 19)
3. During the 2019-20 academic year, the majority of districts (54%) did not fill a position using a teacher holding a Tier 1 License. (See Table 12)
4. Charter schools are much more likely to fill a position with a teacher holding a Tier 1 or Tier 2 License than public school districts. (See Table 20)
5. The majority of teachers holding a Tier 2 License have completed teacher preparation or are in the process of completing teacher preparation. (See Table 7)
6. The demand for teachers is evenly distributed among economic development regions within the state. (See Table 19)
7. A majority of districts reported being "somewhat significantly" or "very significantly" impacted by the teacher shortage (70%) and substitute teacher shortage (88%). (See Tables 23 and 24)
8. Minnesota continues to lag significantly in the ability to hire and retain racially and ethnically diverse teachers even close to the proportion of students of color and indigenous students in the state. (See Table 5)
9. Nearly a third of new teachers leave teaching within the first five years in the profession. (See Table 26)
10. The licensure areas filled with the highest proportion of teachers holding a Tier 1 License, Tier 2 License, or Out-of-Field Permission for their assignment remain consistent - special education fields, language licensure areas (exacerbated by the lack of teacher preparation programs in Minnesota), and career and technical fields.

Introduction

In Minnesota, a teacher providing instruction in a public school or charter school must hold a license aligned to the field and grade level taught.¹ The Professional Educator Licensing and Standards Board is responsible for issuing licenses and for collecting and reporting data on the number of licensed teachers in Minnesota as well as their assignments.²

Every two years, the Professional Educator Licensing and Standards Board (PELSB) provides information to the Minnesota Legislature about the supply and demand of licensed teachers in Minnesota public school districts and charter schools. Through licensure, assignment, and permission data, as well as surveys of Minnesota districts, charter schools, and teacher preparation providers, this report seeks to address the following questions:

- What is Minnesota's supply of professionally licensed teachers?
- What is Minnesota's demand of teachers?
- Does the supply and demand differ by economic development region, licensure area, district type, or race/ethnicity of teachers?

The data in this report primarily reflects the landscape of supply and demand within the 2019-2020 academic year. In some instances, where noted, 2018-2019 data is included. Please note that obtaining long-term trends in most data categories is not possible as the state of

BACKGROUND ON TIERED LICENSURE

Following extensive legislative changes in 2017, a new [Tiered Licensure System](#) went into effect on July 1, 2018, which created four different tiered licenses for teachers in Minnesota. Notably, a teacher must complete teacher preparation or the licensure via portfolio process to be eligible for a Tier 3 or Tier 4 License.* To receive a Tier 1 or Tier 2 License, the teacher must have a job offer from a public school or charter school (the license is therefore tied to the district and the assignment held by the teacher).

Minnesota transitioned to a new licensing system (Tiered Licensure) on July 1, 2018, and all old licensure types were converted by July 1, 2019.

This report will first describe the methods used to gather the supply and demand data presented and the limitations and challenges with the current data sources, as well as establish defined terms, which will be used throughout. A summary of the overall landscape for teachers (Section 1) is provided, followed by data targeted at the supply (Section 2) and demand (Section 3).

individual has held a Tier 2 license for three years. With Tiered Licensure implemented on July 1, 2018, no teacher has yet to complete three years on a Tier 2 license.

¹ Minn. Stat. 120A.22, subdivision 10.

² Minn. Stat. 122A.09, subdivision 4; Minn. Stat. 122A.091.

* A Tier 3 license can also be issued without teacher preparation or licensure via portfolio process if the



Methods and Limitations

Data collected for this report comes from the following sources. Please note that specific limitations of each data source is also described below.

- The Staff Automated Reporting System (STAR) houses licensure and employment data collected from school districts, including a reporting of licensed teachers and non-licensed staff and their assignments. Data, ultimately used to prepare the “STAR Compliance Report,” is collected in October of each academic year. Therefore, a significant amount of data used in this report was collected in October 2019. Limitations include:
 - STAR data is often considered a comprehensive overview for the full school year, but actually, it is only a snapshot of assignments held in October. Staffing changes, including additional licenses and permissions obtained later in the year, are not reflected in this data source.
 - Licensure areas in Minnesota are much more limited than assignments.³ The interconnection between licensure areas and assignments is further complicated by the fact that multiple licensure areas may be allowed to teach a single assignment. This makes it more difficult to pinpoint shortage areas in those licensure fields.
 - Licensure areas have drastically changed over the past fifty years in Minnesota. However, individuals who received a license prior to changes maintain the original license category.⁴

³ Please see the 2020-21 Licensure Assignment Table to see which licensure areas may teach which assignments, available here https://mn.gov/pelsb/assets/20-21%20licensure%20assignment_tcm1113-445754.pdf.

⁴ For example, the “Mild to Moderate Handicap” license was replaced by multiple licensure areas. The [2020-21 Licensure Assignment Table](#) addresses both legacy and current licensure categories.

This creates much more complexity in which licensure areas may align to assignments, thus adding to the difficulty of identifying shortage areas.

- STAR data is submitted by individual districts. With over 500 different public school districts and charter schools in Minnesota, the collection and reporting of data, despite efforts to standardize, are varied.
 - There were many significant reporting errors for the 2019-2020 academic year data discovered and manually fixed by PELSB staff. It is impossible to know how many errors have not been discovered.
 - There are differences in interpretation and collection of employment status, reason for leave, and demographic reporting, all data points that policymakers need to effectively evaluate the supply and demand of the workforce.
 - There is evidence that districts have adapted the way certain categories, notably race and ethnicity of their staff in academic year 2019-2020, are interpreted and reported. This makes trend data difficult.
- Some data through STAR must remain duplicated when analyzed with differing parameters. For example, when looking at district assignments, it is possible to provide a headcount of teachers who hold multiple assignments within a single district, but it is not possible to give preference to one district over another if they have teachers with assignments that cross districts.
- District assignments and the STAR system include non-instructional assignments that can be filled by non-licensed staff or licensed teachers. Further, some licensed teachers may fill non-instructional positions and some licensed administrators may fill appropriate instructional positions.
- Race and ethnicity data reporting in STAR was greatly challenged in the 2019-2020 reporting year, with changes to race/ethnicity categories, district application of these categories, and coding errors. A full analysis of these limitations are outlined in Table 3.
- The [STAR Compliance Report](#) is a report prepared by PELSB that provides data on the number of teachers who are not appropriately licensed for their assignment. This report comes from the STAR system, but includes months of “clean-up” of data with districts. This process includes correcting reporting errors to assignment and licensure areas and bringing individuals without the appropriate permission or license into compliance.
- Educators Online is the licensure system that stores data from individuals’ licensure and renewal applications. This online system began construction in 2017 and continues today. Data was previously stored in licensing systems that lived on a mainframe through the Department of Education. Current data and legacy data is designed to synchronize so that data of all individuals licensed and the data collected from their applications can be pulled from a single source. Limitations of this source include:

Reliable data is challenging in the first full year of Tiered Licensure implementation, with data pulled from multiple sources and the transition to new online licensing systems.

- This system continues to face errors in data synchronizing. These are addressed when discovered, but changes, specifically to legacy licensure codes (licensure fields that no longer exist) may continue to face discrepancies in data reported before the shift to a new licensure system.
- Licensure data comes from an individual's application. Self-reported, or undeclared, demographic information may differ from that reported by the district through STAR.
- PELSB processes administrative licenses. The data for these licenses reside in the same data tables as teacher licenses. While utilizing precise definitions and filtering out for data analysis is possible, differences occur when an individual holds both an administrative and teaching license and an administrative assignment.
- Short call substitute licenses are part of licensure data. Individuals who hold both a tiered license and a substitute license are filtered out of the substitute teacher data. This can provide some discrepancies in licensing and assignments when an individual holds a tiered license and a substitute license.
- Some of the tables included in this report include duplicated counts when analyzed with differing parameters. For example, when looking at licensure areas, it is not possible to give preference to one license over another when a single individual holds multiple licenses. This becomes more complex when an individual holds an administrative and a teaching license. In prior reports, these individuals have been removed from the unduplicated number. This report removes the administrative license or substitute license in the duplicated counts, but keeps the individual in the unduplicated headcount for teachers.
- The Tiered Licensure Report is an annual report provided by PELSB to review the state of licensure in Minnesota. Many tables provided in this Supply and Demand Report can be found in data collected in the [2020 Tiered Licensure Report](#). Limitations to this data include:
 - Because Tiered Licensure is still new, initial data includes only two academic years. In the 2018-2019 academic year, all licenses and permissions were extended one year to support the transition from previous licensure types to Tiered Licensure. That means 2019-2020 was the first year of all licensure types transitioned to tiers.
 - Elements of Tiered Licensure include requirements that have not been able to go into effect. For example, all "five-year professional licenses" held on June 30, 2018 were automatically transitioned to a Tier 4 License irrelevant of years teaching. Individuals obtaining professional licensure on or after July 1, 2018 required three years of teaching Minnesota before moving to a Tier 4. This means that Tier 3 Licenses should change drastically in the first three years of Tiered Licensure implementation. Other permissions and licensure categories have similar elements that affect the stability of these early numbers.
 - Teachers may change tiers throughout an academic year. Transition up Tiered Licensure can include requirements completed mid-year. For example, a teacher may pass a licensure exam required for a higher tier in January. In data provided through STAR, this teacher would appear in the lower tier. In data provided through licensure tables, they would appear only in the higher tier.

- Minnesota Department of Education continues to house student data. Student data from the [Minnesota Report Card](#) is included in this report.

The ability to pull consistent numbers of individuals or licenses, even within an established definition, remains difficult given all the various methods and limitations to the data available.

For effective data analysis regarding the supply and demand of teachers, often a single table utilizes data coming from multiple sources. For example, Table 3 includes information from STAR, legacy licensure systems, and the new licensure system, with some data in the table overriding other data sources (i.e. using the race or ethnicity provided in an application over the district's report of that individual's race or ethnicity). Additionally, some data comes from the snapshot in October 2019, with other comes from licensure data throughout the academic year.

PELSB ensures that standardized definitions are used in data collection and sorting. PELSB runs face validity and sampling checks for accuracy of data. However, with multiple data sources, multiple data collection tools and agencies, and the movement of this data over an academic year, the numbers remain extremely inconsistent both between reporting years when attempting to look at trends, and within a single reporting year.

PELSB continues to work with MN.IT regarding data fields that will allow more standardized collection and reporting of data with the goal of providing accurate trends in the supply and demand of teachers to support policy decisions around workforce needs, development, and targeted strategies for growth.

Definitions



Active License: When a teacher, who holds a Tier 3 or Tier 4 License, is currently filling an assignment. The following license types are not included in this definition: substitute, administrative, supervisor, or director. The following assignments are not included in this definition: non-instructional assignments, including administrative positions, coaches, or paraprofessionals.

Assignment: When an individual is employed by a Minnesota public district or charter school and is working in an instructional position. The following assignments are not included or considered in this report: non-instructional positions, including administrative positions, coaches, or paraprofessionals.

District: For purposes of this report, the term “district” includes public school districts, charter schools, and “other educational institutions” that are required to fill open assignments with licensed teachers.

Duplicated: The total number within a category, even when a single individual may be counted multiple times (i.e., number of licenses held by teachers in Minnesota).

License: Authorization granted by PELSB to teach in a public school district or charter school. Only licenses that allow an individual to serve as a “teacher of record” as a classroom teacher, itinerant teacher, or related services school professional are included. The following license types are not included in this definition: substitute, administrative, supervisor, and director. All tiers are included.

Other Educational Institution: These include intermediate districts and schools, vocational cooperatives, special education cooperatives, state operated schools, regional service cooperatives, miscellaneous cooperatives, and education districts.

Permissions: Authorization granted by PELSB to a licensed teacher, to teach outside of the field or grade span of their license (called an “Out-of-Field Permission”) or to teach in multiple licensure areas within an established innovated program (called an “innovative program permission”). Permissions are granted upon request by a public district, charter school, or other educational institution. An Out-of-Field Permission can be issued to any teacher holding a Tier 2, Tier 3, or Tier 4 License. An Innovative Program Permission can be issued to any teacher holding a Tier 3 or Tier 4 License.

Professional License: A license with unlimited renewals that is transferable to any school district, including a Tier 3 or Tier 4 License.

Tier 1 License: A one-year license that requires the individual to hold a bachelor’s degree⁵ and the district to show that no “acceptable” teacher holding a Tier 2, Tier 3, or Tier 4 License applied for the position. The license is limited to the district verifying the need and has limited renewals.

Tier 2 License: A two-year license that requires the individual to have either a master’s degree in the content, enrollment in teacher preparation, or two of five criteria aligned to the content and pedagogical knowledge and skills. The license requires a job offer from a Minnesota public school district, charter school, or other educational institution. The license is limited to the district offering the job and has limited renewals.

Unduplicated: The headcount of individuals within a category (i.e. the number of licensed teachers in Minnesota).



⁵ Individuals applying for a Career and Technical Education or Career Pathways license are not required to hold a bachelor’s degree.



Section 1: Minnesota Teacher Workforce Overview

This section offers a snap shot of the teacher workforce during the 2019-2020 academic year, including the total number of teachers and assignments in Minnesota. The data is disaggregated into licensure tier and permission type as well as by race and ethnicity. Throughout, this report highlights the challenges in presenting accurate race and ethnicity data across licensure tiers.

Additionally, this section explores data as disaggregated by economic development region, including the percentage of teachers of color and indigenous teachers in comparison to the percentage of students of color and indigenous students in those regions.⁶ This data shows the great discrepancy in Minnesota's teacher workforce, as there is a significantly lower percentage of teachers of color and indigenous teachers than students of color and indigenous students in each economic development region. Further, this section shows the percentage of teachers on each licensure tier within each economic development region, showing how the use of teachers holding different tiers remains relatively consistent across the state.

Finally, this section also provides data on the incoming supply of teachers from teacher preparation. Specifically, data regarding the new Tier 2 licensure area shows the majority of teachers holding a Tier 2 License have either completed teacher preparation or are enrolled in teacher preparation

⁶ A map of Minnesota's economic development regions is available at

<https://apps.deed.state.mn.us/assets/lmi/areamap/edr.shtml>.

Table 1: Professional Licenses

	Professional Licenses (Tier 3 and Tier 4)	Active
Total Licenses	186,059	122,515
Total Licensed Teachers	113,986	56,628

Table 1 shows the number of teachers who hold a Tier 3 or Tier 4 License (referred to as a “professional license”) as well as the number of different licenses held.⁷ Additionally, the table shows how many teachers, who hold a Tier 3 or Tier 4 License, held a position in a public school or charter school during the 2019-2020 school year.

Notably, 51.32% of teachers who hold a professional license were not active classroom teachers. Many of these individuals may continue to work in the field of education; for example, as teacher leaders, administrators, or teachers in private schools. PELSB does not maintain data on how many of these teachers have left the profession. However, an analysis of positions filled by teachers holding a Tier 1 or

Tier 2 License (or a permission in the table below), reveals that if 15% of teachers with an active license (and not in the classroom) returned, there would be enough to fill all assignments currently filled by a teacher who is not holding a professional license for their assignment.

Further analysis of the data disaggregated by economic development region, district type, and licensure area is provided below to more accurately indicate where shortages may be more pronounced. For example, if all the teachers holding a professional license but not actively assigned to a Minnesota public district, charter school, or other educational institution hold an elementary license, shortages in other licensure areas will remain pronounced.

⁷ Note: While a teacher can hold more than one license at a time (for example, a health education license and a physical education license), a teacher cannot hold multiple licenses in different tiers.

Table 2: Assignments and Teachers Holding a Tier 1 License, Tier 2 License, or Permission for the Assignment

	Assignments Filled By a Teacher On a Tiered License or Holding a Permission	Tier 1	Tier 2	OFP	IPP	Assignments Using a Tier1, Tier 2, OFP, or IPP	Percentage Of Assignments Filled By a Teacher Holding a Tier 1, Tier 2, OFP, or IPP
Total Assignments	133,720	1,275	3,911	3,303	1,545	10,034	7.5%
Unduplicated Teachers Holding an Assignment	61,006	610	1,911	1,614	370	4,505	7.4%

Table 2 provides a snapshot of licensure data and assignment data as of October 2019, as reported in STAR.⁸ The table shows the total scope of assignments (duplicated with many teachers holding multiple assignments) as well as the unduplicated number of teachers holding assignments. The table shows the relatively low use of teachers holding a Tier 1 License, Tier 2 License, Out-of-Field Permission or Innovative Program Permission.

Later this report will show disaggregated data to identify teacher shortages by licensure area, economic development region, and race and ethnicity, as well as district surveys that highlight administrator concerns over teacher shortages. However, this table shows the overall use of teachers holding a Tier 1 License, Tier 2 License, Out-of-Field Permission or Innovative Program Permission for their assignment remains low at 7.4%.

⁸ With the transition to Tiered Licensure, there was a time during 2018-2019 when teachers holding legacy licenses, such as the 5-year professional license, were given a one-year extension. This means that 2019-2020 is the first full academic year of licensure data entirely under Tiered Licensure and new permission

types. While many requirements remained consistent, district and individuals continue to navigate the exact requirements of new licensure types and permissions. This has meant that major shifts were seen between 2018-2019 and 2019-2020. Continued shifts are expected for a few more years.

Table 3: Number of Teachers Holding a Tiered License or Permission, By Race and Ethnicity

Race/Ethnicity	Tier 1	Tier 2	Tier 3	Tier 4	Teachers	Out-of-Field Permission	Innovative Program Permission
American Indian or Alaskan Native	22	69	69	924	1,084	37	6
Asian	30	76	159	910	1,175	96	4
Black, Not of Hispanic Origin	61	153	139	1,208	1,561	40	6
Hawaiian/Pacific Islander	1	5	4	39	49	3	0
Hispanic	51	179	180	1,111	1,521	62	5
Multiple Categories	17	57	67	559	700	30	10
White, Not of Hispanic Origin	424	1,565	3,666	78,804	84,459	2,071	511
No Race/Ethnicity Provided	257	429	3,024	13,646	17,356	157	23
Total	863	2,533	7,308	97,201	107,905	2,496	565

*Note that a teacher who holds an Out of Field Permission or Innovative Program Permission must also hold a license.

CAUTION:

There are numerous errors in race and ethnicity data, due to STAR system shortcomings as well as significant changes in how districts and individuals identified race and ethnicity. Another couple years of data is needed before conclusions can be drawn regarding an increase or decrease of teachers in race and ethnicity categories.

Table 4: Percent of Teachers Holding a Tiered License, By Race and Ethnicity

Race/Ethnicity	Percent of Tier 1	Percent of Tier 2	Percent of Tier 3	Percent of Tier 4	Percent of All Licenses
American Indian or Alaskan Native	2.55%	2.72%	0.94%	0.95%	1.00%
Asian	3.48%	3.00%	2.18%	0.94%	1.09%
Black, Not of Hispanic Origin	7.07%	6.04%	1.90%	1.24%	1.45%
Hawaiian/Pacific Islander	0.12%	0.20%	0.05%	0.04%	0.05%
Hispanic	5.91%	7.07%	2.46%	1.14%	1.41%
Multiple Categories	1.97%	2.25%	0.92%	0.58%	0.65%
White, Not of Hispanic Origin	49.13%	61.78%	50.16%	81.07%	78.27%
No Race/Ethnicity Provided	29.78%	16.94%	41.38%	14.04%	16.08%
Total	100%	100%	100%	100%	100%
Teachers of Color and Indigenous Teachers	21.09%	21.28%	8.46%	4.89%	5.64%

CAUTION:

There are numerous errors in race and ethnicity data, due to STAR system shortcomings as well as significant changes in how districts and individuals identified race and ethnicity. Another couple years of data is needed before conclusions can be drawn regarding an increase or decrease of teachers in race and ethnicity categories.

Table 3 provides data on the race and ethnicity of teachers who held a teaching license or permission as of June 30, 2020, and Table 4 provides this data as a percentage of the total within each license or permission category. The percentages in Table 4 refer to the percent of teachers within that licensure tier within each race or ethnicity category. For example, 2.55% of all Tier 1 Licenses are held by American Indian or Alaskan Native teachers.⁹

The need to effectively analyze the increase or decrease of teachers of color and indigenous teachers in Minnesota is essential in providing policy makers with sound data regarding the impact of policies, such as grants and loan forgiveness, on Tiered Licensure. However, the data listed here from 2019-2020 is difficult to analyze or draw conclusions from as the data collected in 2019-2020 differed from previous years in four main areas:

1. Data sources continue to prioritize self-reporting on an individual's license application over district reporting of an individual's race and ethnicity with the STAR report. This results in a high percentage of "No Race/Ethnicity Provided" as individuals are not required to identify their race or ethnicity in a licensure application.¹⁰
2. Race and ethnicity categories in prior years were documented using state race and ethnicity categories where only a single category could be selected. Starting in 2018-2019, data collected aligned with the MDE categories and Federal reporting categories now include Hawaiian/Pacific Islander and a Multiple Categories option. The Multiple Categories option greatly affected the increased percentage of teachers of color, particularly within Tier 1 and Tier 2 where small changes disproportionately impact percentage change. For example, 196 individuals coded as "White, Not of Hispanic Origin" in 18-19 were coded as white and one other race/ethnicity in 19-20 data, based on district reporting.
3. For the first time, an individual in the STAR report was no longer able to be coded with a single race or ethnicity code, but rather could check one or more race or ethnicity categories. If the teacher selected more than one, they were automatically included in the "Multiple Categories" column. For example, a teacher who identified as "American Indian or Alaskan Native" and "White, Not of Hispanic Origin" would appear as "Multiple Categories" in the data below.
4. As noted in the introduction to this report, a new STAR reporting system has caused some data irregularities in district reports. PELSB staff were able to identify a reporting error from a large district in which the race/ethnicity of their teachers was misidentified. This error was captured due to the size of the district and required a manual correction of the aggregate data. A more extensive analysis comparing 18-19 data with 19-20 data found additional irregularities. Without meeting with each of the more than 500 districts reporting this data, it is impossible to tell which changes are due to changes in how race and ethnicity are perceived within a district and how many are errors in reporting. For example, a significant number of individuals identified as "White,

⁹ See 2020 [Tiered Licensure Report](#) for additional data.

¹⁰ PELSB collects race/ethnicity data through the Staff Automated Reporting (STAR) system and on license applications. Reporting race/ethnicity on license applications is optional, and PELSB does not collect race/ethnicity data until a district, charter school, or other educational institution reports individuals' race or ethnicity through the STAR system.

Not of Hispanic Origin” in 18-19 were identified as “American Indian or Alaskan Native” in 19-20 data based on district reporting.

Tier 1 and Tier 2 licenses show more significant change, notably due to the already low number of teachers of color and indigenous teachers. Small errors or changes in how race and ethnicity were reported can lead to significant increases in the proportion of teachers of color or indigenous teachers within each tier.

For these reasons, it is with great caution that PELSB reports this data, as conclusions drawn to inform policy may be drawn in error. Increases in teachers of color, particularly within Tier 1 and Tier 2 appear to reflect more a change in how race and ethnicity are reported than an actual increase in teachers of color.



Table 5: Proportion of Teachers of Color and Indigenous Teachers (TOCIT) Compared to Students of Color and Indigenous Students (SOCIS) by Economic Development Region (EDR)

Region	Description	Total Number of TOCIT	Percent of Total TOCIT within the EDR	Total Number of SOCIS ¹¹	Percent of Total SOCIS within the EDR
1	Northwest	16	1.18%	3,097	22.08%
2	Headwaters	55	4.16%	11,175	76.44%
3	Arrowhead	89	2.24%	11,580	26.16%
4	West Central	45	1.44%	7,988	22.36%
5	North Central	34	1.44%	5,651	21.53%
6E	Southwest Central	16	1.12%	4,666	27.96%
6W	Upper Minnesota Valley	14	1.96%	1,600	21.36%
7E	East Central	51	2.36%	3,953	15.34%
7W	Central	102	1.61%	16,145	19.83%
8	Southwest	31	1.49%	7,270	34.27%
9	South Central	45	1.40%	7,987	22.95%
10	Southeast	113	1.62%	22,232	28.34%
11	7-County Twin Cities	4,886	12.09%	236,325	47.99%
TOTAL		5,497¹²	7.28%	339,669	38.03%

Table 5 compares the proportion of teachers of color and indigenous teachers (TOCIT) with the proportion of students of color and indigenous students (SOCIS) by economic development region. In every economic development region, the percent of teachers of color and indigenous teachers is far lower than that of their student populations. This remains evidence of the need

to revisit policies around recruitment, preparation, and retention specifically addressing populations of color and indigenous populations. Improved data collections tools to dig deeper than the Federal race and ethnicity categories for teachers and students could also provide more alignment with strategies required to bridge this gap.

¹¹ Data from the Minnesota Department of Education

¹² Note: a teacher may be counted in multiple districts and potentially multiple economic development regions.

Table 6: Percentage of Teachers by Tier and Economic Development Region (EDR)

Region	Description	Total Number	Percent on Tier 1	Percent on Tier 2	Percent on Tier 3	Percent on Tier 4	Percent on All Tiers
1	Northwest	1,352	0.89%	3.70%	5.99%	89.42%	100.00%
2	Headwaters	1,323	1.36%	4.31%	5.97%	88.36%	100.00%
3	Arrowhead	3,970	0.73%	2.52%	4.91%	91.84%	100.00%
4	West Central	3,125	0.35%	2.69%	5.41%	91.55%	100.00%
5	North Central	2,366	0.59%	2.62%	4.10%	92.69%	100.00%
6E	Southwest Central	1,425	1.12%	2.39%	5.82%	90.67%	100.00%
6W	Upper Minnesota Valley	713	1.26%	4.21%	5.47%	89.06%	100.00%
7E	East Central	2,157	1.02%	1.85%	4.31%	92.81%	100.00%
7W	Central	6,352	0.80%	1.54%	5.05%	92.60%	100.00%
8	Southwest	2,083	1.06%	4.51%	6.14%	88.29%	100.00%
9	South Central	3,211	0.75%	3.36%	6.98%	88.91%	100.00%
10	Southeast	6,976	0.97%	2.47%	5.42%	91.14%	100.00%
11	7-County Twin Cities	40,420	0.80%	2.98%	5.86%	90.36%	100.00%
0	Total	75,473	0.82%	2.83%	5.64%	90.71%	100.00%

Table 6 shows the total number of teachers with an assignment within each economic development region in the state. The table shows the percent of teachers within that region on each tier.

Use of teachers holding different licensure types remain relatively consistent across economic development regions. This data will be separated in the [Section 2: Supply](#) and [Section 3: Demand](#) for further analysis.

Table 7: Pathway to Tier 2 License¹³

	Master's Degree	Enrolled in Teacher Preparation	Completed Teacher Preparation	Two of the following			
				8 Credits	2 Years Teaching Experience	Field Specific Methods	Passed Exams
Number	250	763	971	539			
Percent	9.9%	30.2%	38.5%	21.4%			

There are several ways for an individual to be qualified for a Tier 2 License, such by holding a master's degree aligned to the assignment, being enrolled in a board-approved teacher preparation program aligned to the assignment, completing a state-approved teacher preparation program, or meeting two of four qualifications aligned to the assignment (eight upper-division credits, training in field-specific methods, passing scores on content and pedagogy examinations, and two or more years of teaching experience). Table 7 shows the qualifications that led to the issuance of a Tier 2 License. Table 7 separates individuals who have completed teacher preparation for the assignment, as these individuals, through completion, would meet at least one of the other qualifications through their preparation program.

The primary use of the Tier 2 License is "completed teacher preparation" with 38.5% of Tier 2 Licenses issued with this qualification. These teachers are not issued a Tier 3 License

because they have either not passed tests, completed a teacher preparation program in another state with less than 12 weeks of student teaching, or completed a teacher preparation program but are unable to receive an official recommendation from the provider. Another 30.2% of teachers receive a Tier 2 License through "enrollment in teacher preparation" which aligns with previous licensure types such as the nonrenewable, limited license, and provisional license.

Nearly 70% of teachers who hold a Tier 2 license have completed teacher preparation or are enrolled in teacher preparation.

This data shows that the majority of teachers holding a Tier 2 License have completed teacher preparation or are in the process of completing teacher preparation.

¹³ This table includes 2523 total unduplicated teachers holding a Tier 2 License issued since July 1, 2018. The online licensing database does not currently track the pathway to receive a Tier 2 License. The information in this table is based on a manual review of each licensure application. During the transition to a new licensing system, 871 records did not indicate the pathway to a Tier 2. Of these 871 teachers, 69% of these individuals were moved to a Tier 3 or a Tier 4 License, many of them Tier 4 teachers who were issued a Tier 2 before rulemaking created the Out-of-Field Permission. This table does not include these individuals as well as related service fields holding a Tier 2 License.

Table 8: Number of Teachers Prepared in Minnesota Compared to Number of Teachers Prepared Outside of Minnesota

Preparation Location	18-19	19-20
Out-of-State Preparation	5,958	6,115
Minnesota Preparation	53,708	53,243
Total	59,666	59,358

Table 8 shows the number of teacher prepared in Minnesota in comparison to prepared in another state. Most of Minnesota’s teachers received teacher preparation in state. Note: Some teachers have not received teacher preparation or were licensed prior to the required tracking of preparation provider. Therefore, if a teacher did not have an affiliated “recommending provider” listed on their license, the teacher was not included in this table.

Prior to 2015, state law required teachers trained in other states to evidence meeting the standards for teaching in Minnesota. Requirements for out-of-state trained teachers were streamlined in statute in 2015 and amended again in 2017. Since then, the percentage of teachers teaching in Minnesota who completed their teacher preparation in a state other than Minnesota has remained approximately ten percent of the active teachers in the state.



Section 2: Supply

This section analyzes the supply of teachers in Minnesota. When analyzing supply, the data will look at licensure areas that use the lowest number of teachers holding a Tier 1 License, Tier 2 License, or permission for their assignment, both as a raw number and as a percentage of all teachers in that licensure field.

The data in this section also looks at the supply of Tier 3 and Tier 4 teachers by economic development regions and highlight specific districts that use the highest number of professionally licensed teachers. Additionally, this section notes the percentage of districts that did not use teachers holding a Tier 1 License, Tier 2 License, or Out-of-Field Permission in the 2019-2020 academic year.

Further, this section explores data on the employment status of current teachers in 2018-2019 and 2019-2020 academic years, showing the number of teachers returning to a particular district, entering a particular district for the first time, or returning from a leave.

Given the fact that a large portion of Minnesota's teachers have completed teacher preparation in Minnesota, this section also provides enrollment and completion numbers from teacher preparation licensure programs in Minnesota, disaggregated by licensure area. This provides a snap shot of future supply and demand considerations.

Finally, this section looks at the use of three key grants that are provided to teacher preparation candidates or teacher preparation providers to increase the number of teachers in shortage areas, including increasing teaches of color and indigenous teachers.

Table 9: Licensure Areas with Lowest Number of Tier 1 Licenses, Tier 2 Licenses, or Out-of-Field Permissions

Licensure Area	Number of Tier 1, Tier 2, and OFP
Driver and Traffic Safety	5
American Indian Language and Culture	7
French	11
German	11
Classical Languages	15
Physical and Health Disabilities	19

Table 10: Licensure Areas with Lowest Proportion of Tier 1 Licenses, Tier 2 Licenses, or Out-of-Field Permissions¹⁴

Licensure Area	Number of Tier 1, Tier 2, and OFP	Percent of Total on a Tier 1, Tier 2, or OFP
Reading	25	0.57%
Social Studies	141	1.27%
Elementary Education	746	1.53%
Early Childhood	198	1.88%
Communication Arts/Literature	220	1.95%
Music	129	2.39%
Life Science	90	2.44%
Mathematics	258	2.98%
Developmental Disabilities	192	3.23%
Spanish	94	3.50%

Tables 9 and 10 show the licensure areas with the lowest demand for teachers holding a Tier 1 License, Tier 2 License, or Out-of-Field Permission for their assignment.¹⁵ Table 9 shows the five least likely licensure area assignments to be filled by a teacher holding a Tier 1 License, Tier 2 License, or Out-of-Field Permission by raw number. Table 10 shows the same information but as a proportion of licenses within that field. Table 9 is more

¹⁴ This table only includes licensure areas with 25 teachers or more.

¹⁵ Many licensure areas cannot be included here because they are no longer active (i.e. "History" is not a "Social Studies" license). Tier 1, Tier 2, and Out-of-Field Permissions are only granted under current licensure areas. Additionally, related service licensure areas are often tied to other statutory

requirements specific to their field (i.e. Social Work) and these licensure areas have different qualifications and ability to receive Tier 1 Licenses, Tier 2 Licenses, or Out-of-Field Permissions. These tables remove inactive licensure areas and related services licenses.

a measure of how limited these licensure categories are overall than of a lack of permission being used. Table 10 shows areas where the lowest percentage of teachers teaching in these licensure fields are not holding a professional license for the assignment. Certain areas listed here may reflect a robust teaching workforce with the licensure area (i.e. Social Studies or Elementary). Other areas may be listed because of the difficulty in finding someone with the necessary knowledge and skills to fill the assignment without teacher preparation (i.e. Developmental Disabilities). See Table 18 for licensure areas with the highest number and proportion of teachers holding a Tier 1 License, Tier 2 License, or Out-of-Field Permission.



Table 11: Professional License by Economic Development Region (EDR)

Region	Description	Total Number of Teachers	Percent on Tier 3	Percent on Tier 4
1	Northwest	1,352	5.99%	89.42%
2	Headwaters	1,323	5.97%	88.36%
3	Arrowhead	3,970	4.91%	91.84%
4	West Central	3,125	5.41%	91.55%
5	North Central	2,366	4.10%	92.69%
6E	Southwest Central	1,425	5.82%	90.67%
6W	Upper Minnesota Valley	713	5.47%	89.06%
7E	East Central	2,157	4.31%	92.81%
7W	Central	6,352	5.05%	92.60%
8	Southwest	2,083	6.14%	88.29%
9	South Central	3,211	6.98%	88.91%
10	Southeast	6,976	5.42%	91.14%
11	7-County Twin Cities	40,420	5.86%	90.36%
0	Total	75,473	5.64%	90.71%

Table 11 shows the percent of teachers holding a professional license within each economic development region. While there is large differences in the raw number of teachers teaching across economic development regions of Minnesota, there is very little variation in the proportion of those teachers holding a Tier 3 or Tier 4 license. There was a significant increase in

Tier 3 teachers from the 2019 Tiered Licensure Report (explained in the Methods and Limitations section), but this, too, was equally spread among economic development regions, with the South Central region having a percentage point more than the average and the North Central region having a percentage point less than the average.

Table 12: District Use of Teachers Holding a Tier 1 License, Tier 2 License, or Out-of-Field Permission

	No Tier 1	No Tier 2	No Tier 1 or Tier 2	No Out-of-Field Permission
Total	54%	19%	15%	18%

Table 12 shows the percent of districts that did not use a teacher holding a Tier 1 License, Tier 2 License, or Out-of-Field Permission to fill an assignment in the 2019-2020 academic year. Though use of teachers not holding a professional license or teaching outside of their licensure field remains a need throughout the

state (see [Section 3: Demand](#)), the majority of districts in Minnesota did not hire a teacher holding a Tier 1 License in 2019-2020 academic year. And nearly 1 in 5 districts did not hire a teacher holding a Tier 2 License or a teacher holding an Out-of-Field Permission.

Table 13: Districts with Highest Percentage of Teachers Holding a Tier 4 License

District or Charter	Percent on Tier 4	Total Teachers
Paynesville Public School District	100.00%	77
Chokio-Alberta Public School District	100.00%	25
Region 3 - Northeast Service Coop	100.00%	22
Wadena-Deer Creek School District	100.00%	97
Edina Public School District	98.80%	585
West Central Area	98.53%	68
Tracy Area Public School District	98.48%	66
Goodhue Public School District	98.31%	59
Cleveland Public School District	97.87%	47
Esko Public School District	97.87%	94

Table 13 shows the districts with the highest percent of teachers holding a Tier 4 License, of districts with more than 20 teachers. Of the ten districts, charters, or educational institutions

with the highest percentage of teachers holding a Tier 4 License, nine are public school districts, one is a regional special education cooperative, and none are charter schools.¹⁶

¹⁶ Note: During the 2019-20 academic year, there were eight charter schools and nine educational institutions with 98% or higher usage of teachers

holding a Tier 4 License, but those schools and institutions had fewer than 20 total teachers and therefore were not included in the table.

Table 14: Employment Status for Teachers with Assignment

Employment Status	18-19	19-20
Returning	53,076	53,547
Newly Licensed Minnesota Program Completer	2,294	1,964
Program Completer From Another State	221	274
Return from Break in Service	1,349	564
Transfer from a Different Public School in Minnesota	2,560	3,030
Transfer from Another State or Non-Public School	739	608
Leave of Absence ¹⁷	158	101
Total	60,397	60,103

Table 14 shows the reason, as indicated by the district, a teacher was employed in the last two academic years. The vast majority of teachers in each academic year continue to be returning teachers, with additional thousands merely transferring positions within public schools or charter schools. The number of newly licensed teachers who completed teacher preparation remains around 3% of the active teachers, with a continued rate of around 10% of those recent

program completers coming from states other than Minnesota.

More than 94% of assignments are filled with teachers returning to their district or moving from another public school district.

¹⁷ Categories include travel, professional growth, parental leave, illness, travel, extended leave, and employed but no assignment.

Table 15: Teacher Preparation Programs and Candidate Enrollment (2018-2019)

Teacher Preparation Program	Baccalaureate Programs	Post Baccalaureate Programs	Enrolled Candidates
Elementary Education	27	11	4,150
Special Education: Academic and Behavioral Strategist	12	13	948
Early Childhood Education	14	4	846
Social Studies	26	14	704
Communication Arts and Literature	26	13	471
English as a Second Language	15	11	410
Special Education: Emotional Behavioral Disorders	0	11	410
Special Education: Autism Spectrum Disorders	1	13	375
Physical Education	17	7	358
Special Education: Learning Disabilities	0	10	339
Mathematics	26	14	312
Health	15	6	294
Reading	0	11	222
Science: Life Sciences	23	15	219
Visual Arts	17	7	211
Instrumental Music	22	7	208
Vocal Music	23	7	182
Science: General Science (5-8)	18	8	162
Middle Level Mathematics Endorsement*	20	6	153
World Languages and Cultures (K-12)	19	10	140
Preprimary Endorsement*	10	2	137
Special Education: Developmental Disabilities	1	9	131
Special Education: Early Childhood	2	5	126
Work-Based Learning	3	2	97
Special Education: Developmental and Adapted Physical Education Endorsement*	7	2	83

Middle Level Communication Arts and Literature Endorsement*	19	8	68
Science: Chemistry	14	21	67
Library Media Specialists	0	3	61
Middle Level Social Studies Endorsement*	17	4	58
Technology	1	0	57
Agricultural Education	3	2	44
Middle Level Science Endorsement*	17	6	42
Parent and Family Education	1	2	36
Driver and Traffic Safety	0	1	32
Science: Physics	15	11	28
Business	1	2	26
Science: Earth and Space Science	7	7	23
Dance and Theatre Arts	1	1	18
Computer, Keyboarding, and Related Technological Applications	0	2	15
World Language and Cultures: K-8 Endorsement*	7	3	14
CTE: Communications Technology	0	1	8
CTE: Construction	1	2	7
Special Education: Deaf or Hard of Hearing	0	1	4
Adult Basic Education	1	1	2
CTE: Manufacturing	1	2	2
CTE: Transportation	1	2	2
Bilingual/Bicultural Endorsement*	1	0	1
Dance	1	1	0
Theatre Arts	1	1	0
Family and Consumer Sciences	1	0	0
Special Education: Oral/Aural Education	0	1	0
Special Education: Physical and Health Disabilities	0	1	0
TOTAL	455	304	12,319

*Endorsement programs are only available to individuals already holding a professional license or who are completing an initial licensure program in addition to the endorsement program.

Table 15 shows the number of teacher preparation programs in Minnesota, the number of baccalaureate or post-baccalaureate programs, and the number of candidates enrolled in a teacher preparation program in 2018-2019 academic year.

Enrollment numbers are helpful to consider future supply of teachers prepared in Minnesota. For the 2018-2019 academic year, 3,261 teacher candidates successfully completed a teacher licensure program in Minnesota. Of those completers, 85% identified as white.¹⁸

Policymakers can use information in this table regarding the supply of Minnesota-prepared teachers in comparison to data in the following section regarding licensure areas in greatest demand of teachers. It is notable that with the addition of the Academic and Behavioral Strategist license, a cross-categorical special

education license, there has been a steep decrease of undergraduate disability specific licensure programs, including in the high needs areas of Emotional Behavioral Disorders and Learning Disabilities.

Additionally, there remain multiple licensure areas where no teacher preparation program exists. Notably among these are World Languages and Cultures: Hmong, American Sign Language, and Blind or Visual Impaired preparation programs.

The following areas have a notably high demand for more professionally licensed teachers.

Area	Number of Teachers Holding a Tier 1 or Tier 2 License or Out-of-Field Permission	Enrolled in a Teacher Preparation Program in 2018-2019
Academic and Behavioral Strategist	657	948
Autism Spectrum Disorder	346	375
Emotional and Behavioral Disorders	513	410
Blind and Visually Impaired	26	No Minnesota Programs

¹⁸ [Annual Teacher Preparation Data Summary Report](#).

Table 16: Teacher Preparation Candidate Grants

Grant Name	Providers Received	Amount Allocated	Candidates Impacted
MN Teacher Candidate Grant	31	\$1,203,582	252
Federal TEACH Grant	21	\$1,088,422.50	381
Collaborative Urban and Greater Minnesota Educator Grant	6	\$1,066,030	337

State and federal grants provided to teacher candidates is one effort to increase the supply of teachers. Table 16 shows how grants for teacher candidates were distributed in 2019-2020 academic year. Included in Table 16 are three grants providing funds to candidates to complete teacher preparation and the number of candidates impacted by those grants.¹⁹



¹⁹ See Appendices 3, 4, and 5 for the information disaggregated by provider.



Section 3: Demand

This section looks at demand for teachers in Minnesota, specifically by licensure area, district type and region, as well as the retention of licensed teachers. For purposes of this report, “demand” is defined as a teaching assignment unfilled or filled with a teacher holding a Tier 1 License, Tier 2 License, or permission for the assignment. State and federal formulas for evaluating teacher shortage areas (for grants and scholarships) include the percentage of full-time equivalency (FTE) of a licensure area that is being taught by an individual not holding a professional license or teaching outside of their licensure field. In Minnesota, these assignments include those held by teachers with Tier 1 and Tier 2 Licenses, Out-of-Field Permissions, Innovative Program Permissions, and teachers who are out-of-compliance for their assignment. While some districts may choose to hire a Tier 2 teacher over a teacher holding a professional license for their assignment, a formal procedure is necessary when thinking of “demand” of teachers in order to target policy changes to increase supply of professionally licensed teachers.

For the purposes of analyzing demand, this section looks at licensure areas with the highest number and highest proportion of teachers who hold a Tier 1 License, Tier 2 License, or Out-of-Field Permission for their assignment. The licensure areas filled with the highest proportion of teachers holding a Tier 1 License, Tier 2 License, or Out-of-Field Permission for their assignment remain consistent - special education fields, language licensure areas (exacerbated by the lack of teacher preparation programs in Minnesota), and career and technical fields.

Further, this section identifies trends by economic development region, as well as district type. Notably, the use of teachers holding a Tier 1 and Tier 2 License is relatively even across the state. Further, as mentioned elsewhere in this report, charter schools have a much higher proportion of teachers holding a Tier 1 License, Tier 2 License, or remain out-of-compliance for their assignment. District-level data will also confirm this as, the majority of districts with the highest use of Tier 1 teachers and Tier 2 teachers as a percentage of the teachers employed in the district are charter schools.

In addition to raw numbers, this section includes district survey data, showing district perception of the teacher shortage, the substitute teacher shortage, and licensure areas that are particularly hard to fill or went unfilled in the 2019-2020 academic year.

Finally, teacher retention data is provided in this section, first looking at the “cohorts” of new teachers over the last five years and the retention of those teachers in each subsequent year. This is followed by the reason teachers did not return to their teacher assignment in 2019-2020 as identified by the district in the STAR report.



Table 17: Licensure Areas with Largest Number of Teachers Holding a Tier 1 License, Tier 2 License, or Out-of-Field Permission

Licensure Area	Number of Tier 1, Tier 2, and OFP
Elementary Education	746
Academic and Behavioral Strategist	657
Emotional Behavior Disorders	513
Career and Technical Education	458
Autism Spectrum Disorders	346

Table 18: Licensure Areas with highest Proportion of Teachers Holding a Tier 1 License, Tier 2 License, or Out-of-Field Permission²⁰

Licensure Area	Number of Tier 1, Tier 2, and OFP	Percent of Total on a Tier 1, Tier 2, or OFP
Hmong	26	100.00%
American Sign Language	28	50.91%
Career and Technical Education Fields	458	48.52%
Academic and Behavioral Strategist	657	23.57%
Theater Arts	53	19.20%
Blind or Visually Impaired	26	13.33%
Agricultural Education	43	12.95%
Autism Spectrum Disorders	346	11.79%
Family and Consumer Sciences	104	10.68%

The raw number of Tier 1, Tier 2, and permissions needed for a licensure area are almost entirely a factor of the number of positions in the state. The top five categories in Table 17 shows little more than noting in areas where the most licensed teachers are needed, as well as the number of teachers not holding a professional license or teaching outside of their licensure field for these particular areas. This is important to review, as

²⁰ Table 18 only includes districts with more than 25 total teachers in the district.

even with high numbers of licensure programs and candidates enrolled in these licensure areas, there are still significant numbers of positions filled with not fully prepared teachers.

Table 18 shows the percentage of teachers holding a Tier 1 License, Tier 2 License, or Out-of-Field Permission as compared to the total number of teachers holding that particular license. Many of these licensure areas do not have corresponding teacher preparation programs available in Minnesota (Hmong, American Sign Language, and Blind/Visual Impaired) or have very few programs; while other licensure areas often utilize content experts in the field instead of individuals trained in the pedagogy of instruction (CTE and theater arts). It is notable that the fairly new cross-categorical special education licensure field of Academic and Behavioral Strategist is present both as a total number and as a proportion of those with the license.

The following three areas, with a high proportion of teachers holding a Tier 1 or Tier 2 License or Out-of-Field Permission have no corresponding teacher preparation program:

- Blind and Visually Impaired
- Hmong Language
- American Sign Language



Table 19: Percent of Teachers Holding a Tier 1 License, Tier 2 License, Out of Field Permissions or Out of Compliance for their assignment by Economic Development Region (EDR)

Region	Description	Total Number on All Tiers	Percent on Tier 1	Percent on Tier 2	OFP Percent of Total Teachers on Tiers	Out of Compliance
1	Northwest	1352	0.89%	3.70%	4.29%	0.96%
2	Headwaters	1323	1.36%	4.31%	3.48%	0.76%
3	Arrowhead	3970	0.73%	2.52%	4.48%	0.63%
4	West Central	3125	0.35%	2.69%	3.01%	0.54%
5	North Central	2366	0.59%	2.62%	4.06%	0.42%
6E	Southwest Central	1425	1.12%	2.39%	4.49%	0.35%
6W	Upper Minnesota Valley	713	1.26%	4.21%	4.63%	0.98%
7E	East Central	2157	1.02%	1.85%	5.01%	0.97%
7W	Central	6352	0.80%	1.54%	2.76%	0.22%
8	Southwest	2083	1.06%	4.51%	5.28%	0.62%
9	South Central	3211	0.75%	3.36%	3.46%	0.84%
10	Southeast	6976	0.97%	2.47%	3.15%	0.32%
11	7-County Metro Area	40420	0.80%	2.98%	2.32%	0.39%
Total		75473	0.82%	2.83%	2.96%	0.45%

Table 19 shows the proportion of teachers within each economic development region that held a Tier 1, Tier 2, and Out-of-Field Permission during the 2019-2020 academic year. Additionally, it shows the proportion of teachers within each economic development region that remained out of compliance for their assignment.

As with the percentage of teachers holding a professional license, the use of teachers holding a Tier 1 and Tier 2 License remains consistent across economic development regions. As a measure of demand, this indicates an even spread of shortages across the state. Economic development regions outside of the 7-county metro area do use a higher percentage of Out-of-Field Permissions than the metro area indicating a greater reliance on teachers utilizing

an out-of-field permission for a portion of their total assignments. While the larger districts may be able to hire a single individual for each science content area, for example, small districts in greater Minnesota may utilize a single teacher licensed in one science discipline to teach multiple areas.

Teachers out of compliance with their assignment remain significantly low overall. Just under 800 violations were initially reported as non-compliant, with over half being resolved with the district in the months following the submission of the STAR report. The proportion of teachers out of compliance for their assignment also remains consistent across economic development region.

Table 20: Percent of Teachers Holding a Tier 1 License, Tier 2 License, Out of Field Permission or Out of Compliance for Their Assignment by District Type

District Type	Description	Total Number on Tiers	Percent on Tier 1	Percent on Tier 2	OFPs as Percent of Teachers	Out of Compliance
01/03	Public School District	68,010	0.49%	2.15%	2.6%	0.40%
07	Charter School	5,483	4.21%	9.74%	5.5%	1.20%
All Others	Other Educational Institution	1,980	2.73%	7.07%	6.5%	0.35%
Total		75,473	0.82%	2.83%	3.0%	0.45%

While the proportion of teachers holding a Tier 1 License, Tier 2 License, or permission within economic development regions are relatively consistent, it is clear that charter schools use a much higher percentage of teachers holding a Tier 1 and Tier 2 License than public school districts and other educational institutions. Charter schools also have a much higher percentage of their total teachers on a Tier 3 License than other district types. Again, a teacher is only eligible for a Tier 4 License after the teacher has taught in Minnesota public school or charter schools for three years, completed a teacher preparation program, and passed their basic skills exam.

Charter schools and other educational institutions also use a higher percentage of Out-of-Field Permissions (licensed teachers teaching

outside of the licensure area), but this difference is not as pronounced as the use of Tier 1 and Tier 2 teachers.

Teachers out of compliance with their assignment remain significantly low overall. Just under 800 violations were initially reported as non-compliant, with over half being resolved with the district in the months following the submission of the STAR report. No district type had a significant number of teachers who remained out of compliance for their assignment. However, charter schools were three times more likely than public districts or other educational institutions, as a proportion of their total teachers, to have a teacher out of compliance for their assignment.

Table 21: District with Highest Proportion of Teachers Holding a Tier 1 License

District	Percent on T1	Total Teachers in the District
SciTech Academy Charter School	30.77%	13
Rochester STEM Academy	27.27%	11
Aurora Waasakone Community of Learners Charter School	27.27%	11
E.C.H.O. Charter School	25.00%	16
East Range Academy of Tech-Science	25.00%	16
KIPP Minnesota Charter School	20.45%	44
Wright Technical Center	20.00%	25
Skyline Math and Science Academy	18.75%	16
Minnesota Internship Center	17.86%	28
Sejong Academy of Minnesota	17.86%	28

Tables 21 and 22 show the public school districts, charter schools, or other educational institutions with the highest proportion of teachers holding a Tier 1 or a Tier 2 License out of the total teachers they have in their district. The district type with the highest

Table 22: Districts with Highest Proportion of Teachers Holding a Tier 2 License²¹

District	Percent on T2	Total Teachers in the District
Twin Cities German Immersion Charter School	40.82%	49
New Century School	38.10%	21
Gateway STEM Academy	36.84%	19
Career Pathways	33.33%	12
Yinghua Academy	32.26%	62
St Paul Conservatory Performing Art	30.43%	46
Hiawatha Academies	28.85%	156
International Spanish Language Academy	28.57%	21
Arcadia Charter School	27.78%	18
Kato Public Charter School	27.27%	11

proportion of teachers holding a Tier 1 License (Table 21) and Tier 2 License (Table 22) was charter schools with nine of the top ten district types listed in Table 21 being charter schools, and all top ten districts in Table 22 being charter schools.

²¹ Tables 21 and 22 include only districts with more than 10 total teachers in the district.

Table 23: District Perception of a Shortage of Teachers

How significantly has the issue of teacher shortage affected your district?	Type	Total	Very Insignificant	Insignificant	Neutral	Significant	Very Significant
	Total	375	7	25	80	185	78
	Rural	238	3	13	44	121	57
	Suburban	66	2	6	18	34	6
	Urban	71	2	6	18	30	15
How do you view the availability of teachers compared to five years ago?	Type	Total	Significantly More	Somewhat More	About	Somewhat Fewer	Significantly Fewer
	Total	375	3	7	51	144	170
	Rural	238	2	2	24	80	130
	Suburban	66	0	1	10	38	17
	Urban	71	1	4	17	26	23

District surveys remain an important element of the discussion regarding supply and demand of teachers. Table 23 shows how districts perceive the teacher shortage and availability of teachers.²² The data is disaggregated into community type.

The survey data provides information to support data from licensing. If a district, for example, receives a single application from a teacher holding a Tier 4 License for an open position that data will not appear in conversations regarding demand for teachers. However, the district may find concerns in not having a wide pool of qualified applicants to find the best fit for their

students and would note this concern in the survey results presented here.

With a response rate of approximately 70%, the vast majority of districts are significantly or very significantly impacted by the teacher shortage (70%) and believe the availability of teachers is “somewhat fewer” or “significantly fewer” than five years ago (84%).

When separated out by community type, rural and urban areas share a similar perception of the shortage and availability of teachers, with suburban districts indicating slightly less concern.

²² Of the 535 public school districts and charter schools, 375 responded to the survey request.

Table 24: District Perception of a Shortage in the Availability of Substitute Teachers

How significantly has the issue of substitute teacher shortage affected your district?	Type	Total	Very Insignificant	Insignificant	Neutral	Significant	Very Significant
	Total	375	4	10	31	126	204
	Rural	238	0	4	11	77	146
	Suburban	66	1	2	6	30	27
	Urban	71	3	4	14	19	31
How do you view the availability of substitute teachers compared to five years ago?	Type	Total	Significantly More	Somewhat More	About	Somewhat Fewer	Significantly Fewer
	Total	375	1	0	39	90	245
	Rural	238	1	0	16	51	170
	Suburban	66	0	0	8	18	40
	Urban	71	0	0	15	21	35

Table 24 shows how districts perceive the substitute teacher shortage and availability of substitute teachers. The data is disaggregated into community type.

In Minnesota, a short-call substitute can replace a teacher of record or fill a vacant assignment for no more than 15 consecutive days. Any individual holding a tiered license may work as a short-call substitute.²³

With a response rate of approximately 70%, the vast majority of districts are significantly or very significantly impacted by the shortage of substitutes (88%) and believe the availability of substitute teachers is somehow or significantly fewer than five years ago (89%).

The perception of the impact of a substitute shortage the availability of substitutes remain relatively consistent across community types.

²³ A long-term substitute can replace a teacher of record or fill a vacant assignment for more than 15 consecutive days. A long-term substitute can only be filled by individuals licensed for that assignment. When addressing supply and

demand of “substitutes,” the data refers to short-call substitutes.

Table 25: District Ability to Fill Open Positions in the 2019-2020 Academic Year

Did you have teaching positions that were difficult to fill in 2019-2020?	Type	Yes	No
	Total	296	79
	Rural	188	50
	Suburban	55	11
	Urban	53	18
Did you have teacher positions that were budgeted for in 2019-2020, but were not filled due to lack of qualified applicants?	Type	Yes	No
	Total	101	274
	Rural	57	181
	Suburban	18	48
	Urban	26	45

Table 25 uses data from the district survey to show the districts' ability to fill open positions in 2019-2020 academic year. The data is disaggregated by community type.

The majority of districts reported difficulty filling teaching positions during the last academic year. Additionally, and of greatest concern in conversations regarding supply and demand of teachers, is the nearly 27% of reporting districts who had one or more positions unfilled for the 2019-2020 academic year. While at least 101 unfilled positions (some districts may have more than one unfilled position) may seem small compared to number of assignments in the state (see Table 2), it is important to note that even with Tier 1, Tier 2, and permissions, these positions were not able to be filled. These unfilled positions are not included in data where shortage areas are

addressed in earlier tables using demand as number or proportion of teachers holding a Tier 1 License, Tier 2 License, or Out-of-Field Permission.

Districts also provided the licensure areas most difficult to fill, and the three areas identified most were all in special education fields: Autism Spectrum Disorder, Emotional Behavioral Disorder, and Learning Disabilities. The districts identified the licensure areas with unfilled positions, and the three areas identified most were "special education" (which may reference Academic and Behavioral Strategist cross-categorical licensure or a variety of disability-specific licensure areas), and two related service licensure areas: Speech Language Pathologists and School Psychologists.

Table 26: Teacher Attrition by Cohort

Cohort Year	First-Year Teachers	Return to Teaching				
		2015-16	2016-17	2017-18	2018-19	2019-20
2015-16	3,107		2,753 (-11.4%)	2,586 (-16.8%)	2,410 (-22.5%)	2,294 (-26.2%)
2016-17	3,119			2,757 (-11.6%)	2,566 (-17.7%)	2,418 (-22.5%)
2017-18	2,736				2,527 (-7.6%)	2,239 (-18.2%)
2018-19	2,329					2,042 (-12.3%)
2019-20	1,964					

Table 26 shows the retention rate of teachers in the first five years of teaching. Data shows a relatively consistent 11% attrition after one year, 17% after two years, and 22.5% after three years. Nearly a third of new teachers leave teaching within the first five years in the profession. When considering the 4,505 Tier 1 License, Tier 2 License, and permissions used during the 2019-2020 academic year, improving

the retention rate for teachers could quickly fill this demand for professionally licensed teachers.

The table also shows a concerning downward trend in first year teachers in Minnesota (column 2). A decrease in new teachers combined with the attrition rate exacerbates demand for teachers



Table 27: Percent of Teachers Leaving a Position by Reason²⁴

Reason Leaving	2019-20	Percent of Total
Educator in Another District	724	31.07%
Personal Reasons	608	26.09%
Unknown	405	17.38%
Not Offered Reemployment For Reason Other Than Staff Reduction	339	14.55%
Staff Reduction	122	5.24%
Retirement	63	2.70%
Long Term Substitute	27	1.16%
Educator Outside Minnesota	25	1.07%
Other Educational Occupation	11	0.47%
Licensed to Non-licensed Position	6	0.26%
Total	2,330	100.00%

Table 27 shows data reported from STAR by districts identifying the reason teachers, who were reported in the prior year (2018-19), are no longer reported in their report for this academic year (2019-20). This data is difficult to draw too many conclusions from, as more than 43% of data points are “unknown” or “personal reasons” which do not offer significant information regarding why individuals may not remain in the profession. It is informative in considering the scope of supply to see how few teachers retired (63) last academic year and how

few were not offered reemployment for reasons other than staff reduction (339).

Beyond these data points, this table helps identify how additional data could be collected to provide a more accurate and detailed picture of teacher attrition.

There is no data on why more than 43% of teachers leave a position.

²⁴ This data includes all license types and permissions.



Conclusions

Though challenges with consistent and accurate data makes it difficult to identify and fully analyze specific trends and come to detailed conclusions regarding the supply and demand of teachers, broad themes can still be assessed through the data provided.

The trend toward less supply of teachers and more demand from districts, specifically within targeted licensure fields, continues. These trends are not unique to economic development regions around the state.

The implementation of Tiered Licensure has converted the multiple and often unclear licensure types prior to 2017 into a static Tiered Licensure structure. However, the reliance on teachers holding a Tier 1 License, Tier 2 License, or Out-of-Field Permission or the equivalent licensure type remained relatively low before and after implementation of Tiered Licensure. Additional years, including a better understanding of Tiered Licensure among districts and perspective teachers, should provide a more accurate picture of the impact, if any, of Tiered Licensure on the supply and demand of teachers, particularly the ability of a teacher to move up in tiers.

While broad discussions around teacher shortages are important, policy that is more effective should target the three areas where the demand of teachers is highest with the lowest supply.

The first area in need of more teachers is within special education licensure fields. While multiple licensure fields have teacher shortages (heritage language programs such as Hmong and Somali language and career and technical education programs were highlighted earlier in this report), both the high number of positions and low supply in special education fields highlights this as a necessary target. Adding to this

concern, recent changes to the Academic and Behavioral Strategist licensure area within special education has resulted in fewer disability-specific teacher preparation programs being offered throughout the state.

Second, the high proportion of teachers holding a Tier 1 or Tier 2 License within charter schools highlights the need to focus on these district types when considering how to increase supply of professionally licensed teachers working in charter schools. There are likely many reasons for this high proportion of teachers holding a Tier 1 or Tier 2 License teaching in charter schools and a deeper investigation of these reasons could support not only the increased supply, but also meaningful pathways toward professional licensure.

Third, teachers of color and indigenous teachers remain in short supply in Minnesota. The percentage of teachers of color and indigenous teachers remains significantly lower than the students of color and indigenous students in the state. The lack of teachers of color is often noted as a key element to a dramatic and persistent achievement gap between SOCIS and white students in

Minnesota. Though the data sources need further review, it is clear that there is a larger percentage of teachers of color and indigenous teachers holding a Tier 1 or a Tier 2 License. Policy objectives that support the increased recruitment, preparation, and support for these teachers to ultimately obtain a professional license could have a significant increase in the supply of teachers of color and indigenous teachers in Minnesota.

Finally, a complete and accurate analysis of the supply and demand of teachers in Minnesota needs more robust and reliable data in the following areas:

- the race and ethnicity of teachers and teacher candidates,
- the reason teachers leave the classroom,
- the employment of licensed individuals not in the classroom,
- the qualifications that lead to a Tier 2 License, and
- the impact of state and federal grants.

With improved data sources and expanded information, policymakers can fully assess both the impact of policies and funding, and know where to target future policy changes and funding opportunities to ensure an effective educator is in every Minnesota classroom.

Supply and Demand Focus Areas:

- Increase supply of professionally licensed special education teachers
- Increase supply of professionally licensed teacher in charter schools
- Increase teachers of color and indigenous teachers

Appendix

A1: 2019-2020 Federal TEACH Grant Data

2019-2020 Award Year Grant Volume by School						
Award Year Cumulative Activity through Quarter ending (6/30/2020)						
Data Source: Common Origination and Disbursement (COD) System						
Data as of Jul 1, 2020						
					TEACH PROGRAM	
OPE ID	School	State	Zip Code	School Type	YTD Recipients	YTD Disbursements
00233400	AUGSBURG UNIVERSITY	MN	554541351	Private-Nonprofit	30	\$92,483.00
00233600	BEMIDJI STATE UNIVERSITY	MN	566012699	Public	14	\$28,728.00
00234100	COLLEGE OF ST BENEDICT	MN	563742099	Private-Nonprofit	5	\$18,772.00
00234200	ST. CATHERINE UNIVERSITY	MN	551051789	Private-Nonprofit	7	\$20,035.00
00234600	CONCORDIA COLLEGE - MOORHEAD	MN	565620001	Private-Nonprofit	2	\$5,628.00
00234700	CONCORDIA UNIVERSITY - SAINT PAUL	MN	551045494	Private-Nonprofit	12	\$32,881.00
00235300	GUSTAVUS ADOLPHUS COLLEGE	MN	560821498	Private-Nonprofit	4	\$13,150.00
00235400	HAMLIN UNIVERSITY	MN	551041284	Private-Nonprofit	28	\$73,554.00
00236000	MINNESOTA STATE UNIVERSITY, MANKATO	MN	560016068	Public	33	\$93,033.00
00236700	MINNESOTA STATE UNIVERSITY MOORHEAD	MN	565630001	Public	27	\$45,982.00
00237500	SOUTHWEST MINNESOTA STATE UNIVERSITY	MN	562581598	Public	48	\$135,173.00
00237700	ST. CLOUD STATE UNIVERSITY	MN	563014498	Public	27	\$57,725.50
00237900	SAINT JOHN'S UNIVERSITY	MN	563212000	Private-Nonprofit	5	\$18,760.00
00238000	SAINT MARY'S UNIVERSITY OF MINNESOTA	MN	559871399	Private-Nonprofit	5	\$10,348.00
00238800	UNIVERSITY OF MINNESOTA DULUTH	MN	558122496	Public	1	\$3,764.00
00238900	UNIVERSITY OF MINNESOTA	MN	562672113	Public	6	\$22,536.00
00239400	WINONA STATE UNIVERSITY	MN	559875838	Public	32	\$108,940.00
00396900	UNIVERSITY OF MINNESOTA - TWIN CITIES	MN	554550422	Public	10	\$24,693.00
00905800	BETHEL UNIVERSITY	MN	551126999	Private-Nonprofit	75	\$254,529.00
01037400	METROPOLITAN STATE UNIVERSITY	MN	551065000	Public	6	\$16,446.00
02504200	WALDEN UNIVERSITY	MN	554012511	Proprietary	4	\$11,262.00

A2: CUGMEC Grant Data

Grantee	Award Amount
Augsburg University	\$118,878
Concordia University, St. Paul	\$152,300
Hamline University	\$100,000
Metropolitan State University	\$406,000
Saint Mary's University of Minnesota	\$187,926
University of St. Thomas	\$101,016
Total	\$1,066,030

A3: Minnesota Teacher Candidate Grant



Minnesota Teacher Candidate
Grant Fiscal Year 2020
Awards by
Institution Data as
of 6/1/2020

Institution Name	Total # Awards	Total Amt Awards (* data suppressed due to # of awards < 10)
Augsburg University	24	\$118,268
Bemidji State University	3	*
Bethany Lutheran College	0	\$0
Bethel University	1	*
Carleton College	0	\$0
College of St. Benedict	6	*
College of St. Scholastica	4	*
Concordia College, Moorhead	2	*
Concordia University, St. Paul	0	\$0
Crown College	0	\$0
Gustavus Adolphus College	2	*
Hamline University	15	\$74,958
Martin Luther College	0	\$0
Metropolitan State University	22	\$110,000
Minnesota State University, Mankato	3	*
Minnesota State University, Moorhead	4	*
North Central University	0	\$0
Southwest Minnesota State University	0	\$0
St. Catherine University	1	*
St. Cloud State University	17	\$59,060
St. John's University	0	\$0
St. Mary's University of Minnesota	4	*
St. Olaf College	0	\$0
University of Minnesota, Crookston	0	\$0

University of Minnesota, Duluth	10	\$39,210
University of Minnesota, Morris	0	\$0
University of Minnesota, Twin Cities	85	\$410,862
University of Northwestern, St. Paul	3	*
University of St. Thomas	40	\$198,457
Walden University	0	\$0
Winona State University	6	*
Total	252	\$1,203,582

A4: [2020 Tiered Licensure and Permission Report](#)



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