

# COLORADO'S EDUCATOR SHORTAGE

## Survey Results for the 2021-2022 School Year



### Background on the Educator Shortage Survey

In response to Colorado House Bill 17-1003, *Concerning a Strategic Action Plan to Address Teacher Shortages in Colorado*, the Colorado Department of Education (CDE) and Colorado Department of Higher Education (CDHE) collaboratively collected data to analyze the state's educator shortage problem and developed a corresponding action plan regarding identified shortages. As a part of that plan, CDE created the Educator Shortage Survey, which is an annual statewide survey<sup>1</sup> for all local education agencies (LEAs), such as school districts and Boards of Cooperative Educational Services (BOCES) that employ educators.<sup>2</sup>

The purpose of the survey is to gather facts about the number of vacant educator positions and the ways those vacancies were filled, if they were filled at all. The survey includes questions regarding the number of vacant teaching positions by subject area, the number of vacant special services provider (SSP) positions by type, and beginning in 2019-2020, the number of vacant school leadership (e.g., principal and assistant principal) and paraprofessional positions. These shortage data allow CDE to identify educator shortage areas in Colorado and to report to the Colorado Legislature to inform decisions regarding support for recruiting and retaining educators.

Results are reported here according to varying levels of detail. This summary includes state shortage information for the following groups: (1) all teachers (including by subject area), SSPs (including by SSP type), principals/assistant principals and paraprofessionals; (2) all teachers, SSPs, principals/assistant principals and paraprofessionals separated by rural designation; and (3) all teachers by teaching subject area and rural designation. In addition, information regarding trends in the recruitment strategies used is included. For more detail about the frequency with which specific shortage mechanisms (hiring long-term substitutes, retired educators, alternative licensure program candidates and emergency authorization candidates) and recruiting strategies were used and for LEA-level data, [please see the additional tables here](#).

When analyzing the data by rural designation,<sup>3</sup> non-rural school districts had the most open positions, likely since these districts employ a larger number of educators than those in rural and small rural areas. Additionally, when analyzing results by teaching subject area, some teaching areas, including elementary education, had comparatively high numbers of open positions likely because there are more elementary teacher positions than exist in some other subject areas, such as physical education. To better understand the educator shortages in Colorado, the proportion of positions filled by a shortage mechanism or left unfilled to the total number of available positions in that subject area or region is reported, in addition to the total count of available positions<sup>4</sup>.

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<sup>1</sup> Starting with the 2018-2019 school year, the survey is required by statute per Senate Bill 19-003 and to meet Federal requirements per 34 CFR 682.201(q), 34 CFR 674.53(c), and 34 CFR 686.12. It was first administered in 2017-2018 as a voluntary survey. Data from the first-year survey are not comparable because of the vast differences in representativeness.

<sup>2</sup> Front Range BOCES, Mount Evans BOCES, and Ute Pass BOCES did not complete the Educator Shortage Survey for 2020-2021 because they are not required to submit data for the collection in which the survey is embedded. Other LEAs included are the Colorado School for the Deaf and Blind, Charter School Institute, Division of Youth Services, and CMHI Pueblo.

<sup>3</sup> A Colorado school district is determined to be rural based on the size of the district, the distance from the nearest large urban/urbanized area, and a student enrollment of approximately 6,500 students or fewer. Small rural districts are those districts meeting these same criteria and having a student population of fewer than 1,000 students.

<sup>4</sup> The number of all existing positions was calculated using the full-time equivalent (FTE) reported by each district and BOCES as a part of the annual Human Resources snapshot along with the number of unfilled positions reported in the survey. Percentage calculations for positions without a unique teaching subject (e.g., culturally and linguistically diverse educators) are not available because FTE data are not reported in the Human Resources snapshot.

## Statewide Shortage Survey Results

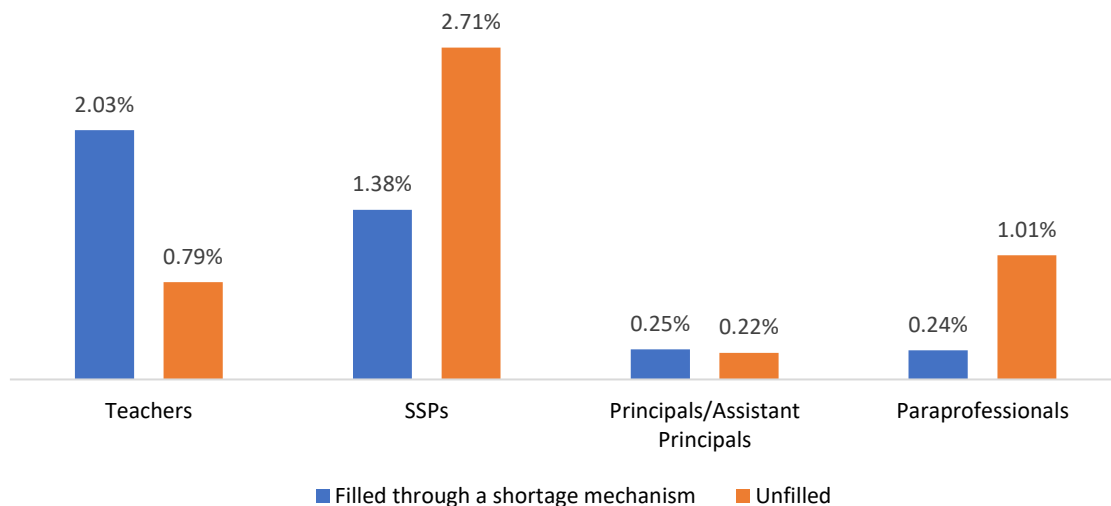
Across the state, LEAs reported having teacher, SSP, principal/assistant principal and paraprofessional positions to hire for the 2021-2022 school year. More specifically, LEAs reported having to hire for:

- 5,729 (10.33%) teaching positions from among the 55,482 teaching positions in the state.
- 1,102 (15.56%) SSP positions from among the 7,083 SSP positions in the state.
- 302 (8.23%) principal/assistant principal positions from among the 3,671 principal and assistant principal positions in the state.
- 2,174 (10.75%) paraprofessional positions from among the 20,217 paraprofessional positions in the state.

Of the total teaching positions to hire, 440 (7.68%) remained unfilled for the entire school year and 1,128 (19.69%) were filled through a shortage mechanism. Of the total SSP positions to hire, 192 (17.42%) remained unfilled for the entire school year and 98 (8.89%) were filled through a shortage mechanism. Of the total principal/assistant principal positions to hire, 8 (2.65%) remained unfilled for the entire school year and 9 (2.98%) were filled through a shortage mechanism. Of the total paraprofessional positions to hire, 205 (9.43%) remained unfilled for the entire school year and 48 (2.21%) were filled through a shortage mechanism. Positions to hire that were filled, but not filled by a shortage mechanism, are presumed to have been filled through traditional hiring mechanisms.

This series of graphs shows the percentage of all existing positions that were filled in the 2021-2022 school year through a shortage mechanism and that remained unfilled for each educator group as well as for each teaching subject area<sup>5</sup> and SSP type.<sup>6</sup>

### Positions Filled Through Shortage Mechanisms or Unfilled

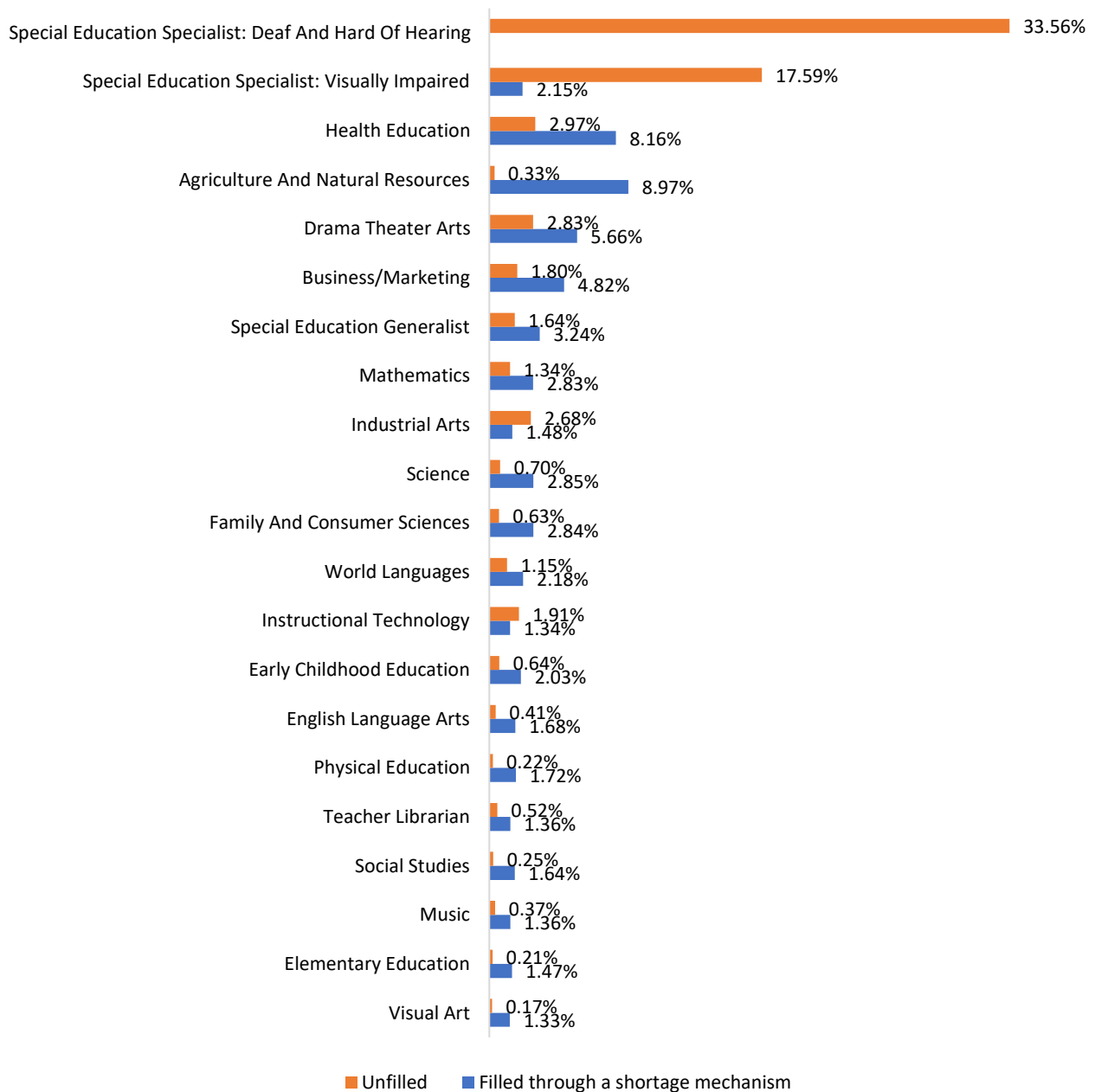


<sup>5</sup> Based on the feedback from the 2018-2019 survey, two subject areas, Health Education and Industrial Arts, were added to the survey starting with the 2019-2020 administration of the survey. For teaching positions not aligned to a unique subject area reported in the Human Resources Collection (e.g., culturally and linguistically diverse education), [please see additional tables here](#).

<sup>6</sup> Principal/assistant principal and paraprofessional data cannot be disaggregated into subgroups.

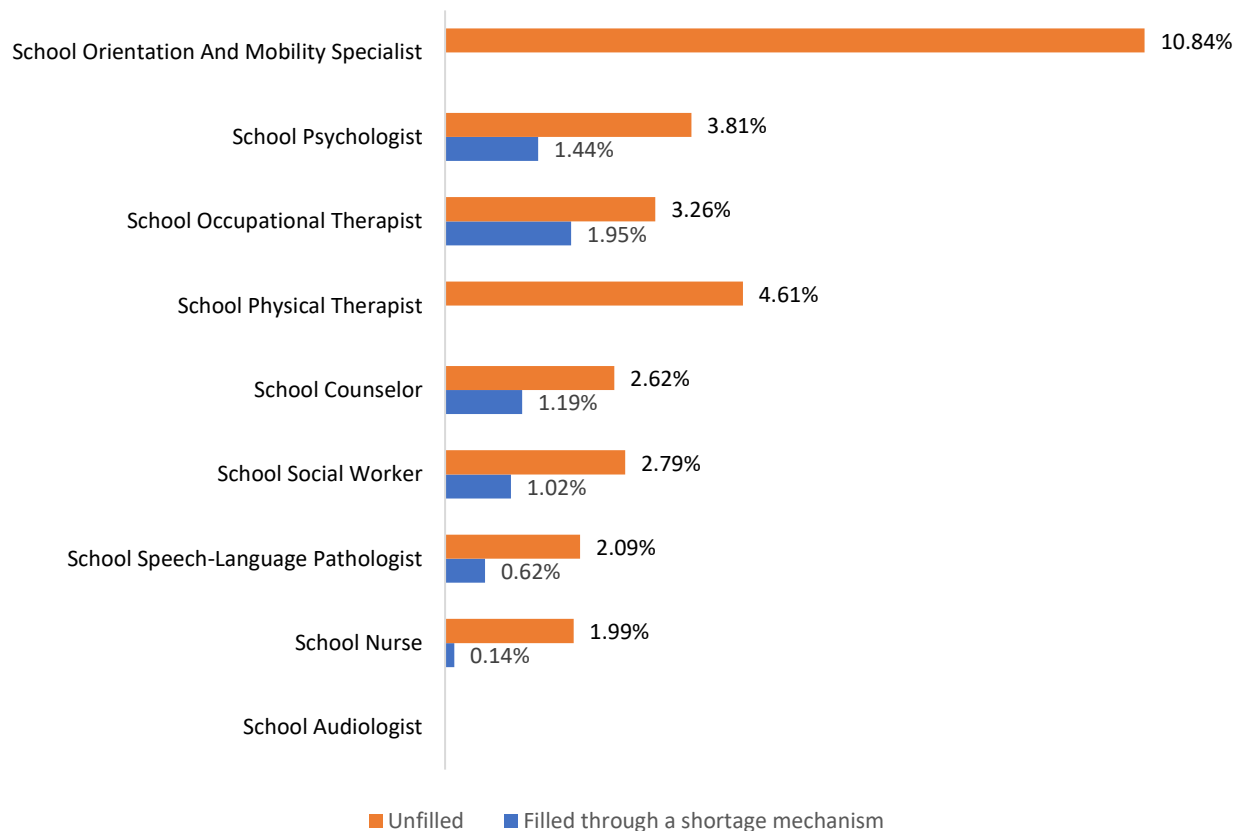
Analysis of the percentage of positions unfilled by subject area revealed a statewide shortage in special education. Three special education subject areas ranked in the top seven shortage areas. Although the specialist positions are comparatively fewer, over 33% of all deaf and hard of hearing specialist and 18% of visually impaired specialist positions were left unfilled or filled by a shortage mechanism. Top core teaching subject shortage areas left unfilled or filled by a shortage mechanism include Special Education Generalist ( $n = 292$ ) Mathematics ( $n = 168$ ), Science ( $n = 126$ ), World Languages ( $n = 51$ ), and Early Childhood Education ( $n = 25$ ).

### Percentage of Teaching Positions Filled Through Shortage Mechanisms or Unfilled by Subject Area



Shortage areas in the 2021-2022 academic year also included special service providers. Of these categories, School Counselors have the largest number of total positions in Colorado, and the 3.81% of positions left unfilled or filled via a shortage mechanism (seen below) represents the largest category by job count ( $n = 98$ ). It is also important to note that all 62 School Audiologist positions were filled through traditional hiring mechanisms for the 2021-2022 academic year.

### Percentage of SSP Positions Filled Through Shortage Mechanisms or Unfilled by SSP Type



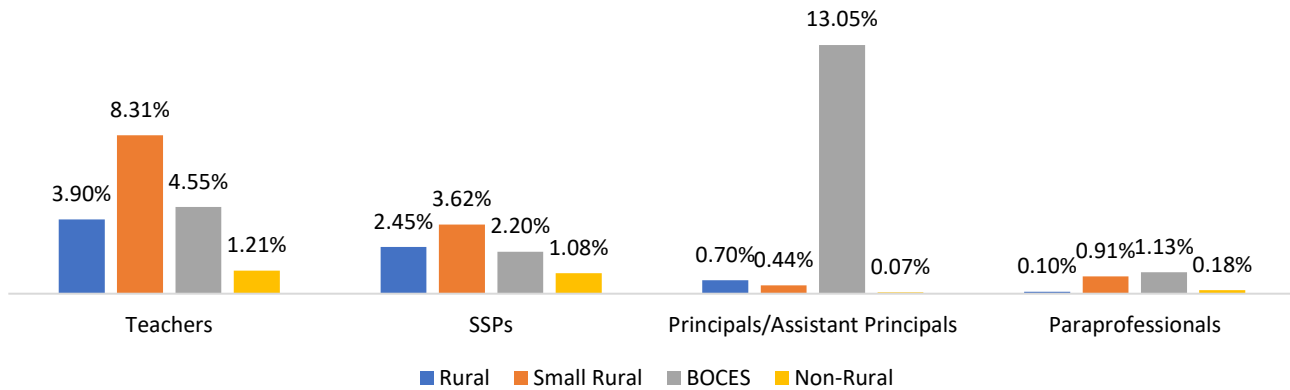
### Shortage Survey Results by Rural Designation

To better understand how geographical setting impacts educator shortages, survey results are presented for the following categories: small rural, rural, non-rural, BOCES and 'other'<sup>7</sup>. The graphs below display the percentages of existing positions filled through a shortage mechanism or that remained unfilled for teachers, SSPs, principals/assistant principals and paraprofessionals by rural designation. Because the other category is comprised of fewer LEAs and thus fewer educators, it is important to note that any position unfilled or filled through a shortage mechanism in this category had a large impact on the overall shortage percentages in this category.

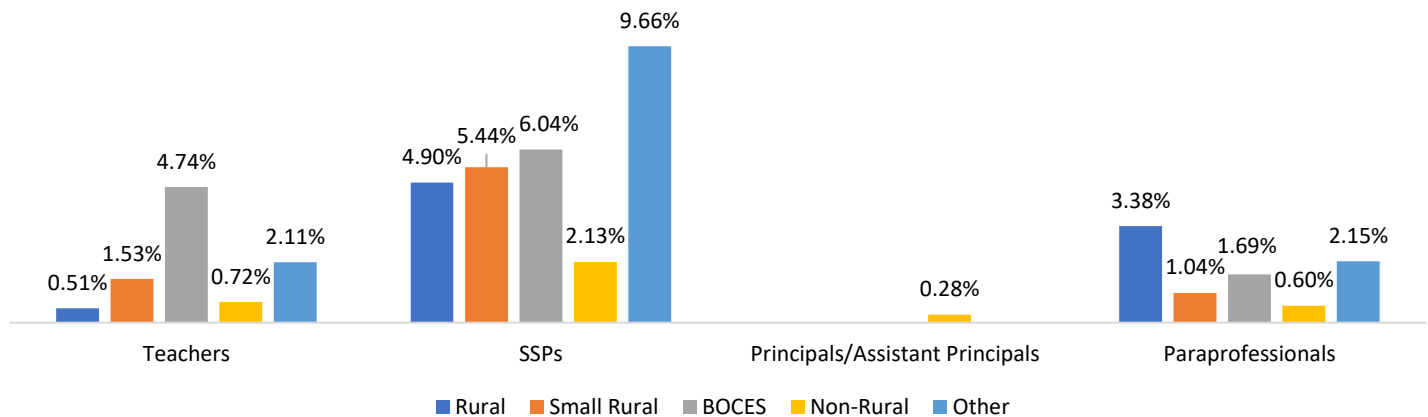
<sup>7</sup> 'Other' is comprised of the Colorado School for the Deaf and Blind, Charter School Institute, Division of Youth Services, and CMHI Pueblo. These LEAs serve students statewide and therefore are considered a separate category.

Among small rural, rural and non-rural districts, non-rural districts had the lowest percentage of positions filled through a shortage mechanism for teachers and SSPs. Generally, BOCES and small rural districts reported the most usage of shortage mechanisms, and 'other' LEAs reported the highest rate of unfilled SSP positions.

Percentage of Positions Filled Through a Shortage Mechanism by Rural Designation

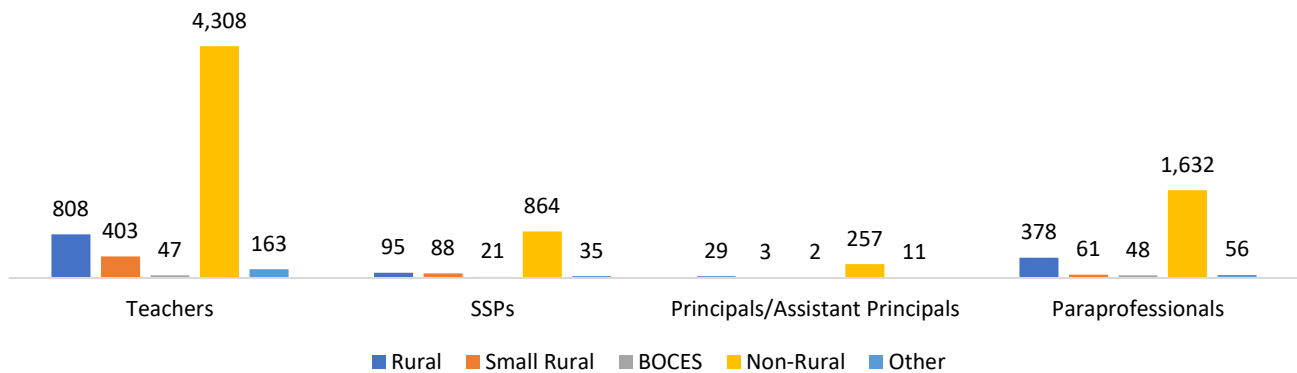


Percentage of Positions that Remained Unfilled by Rural Designation



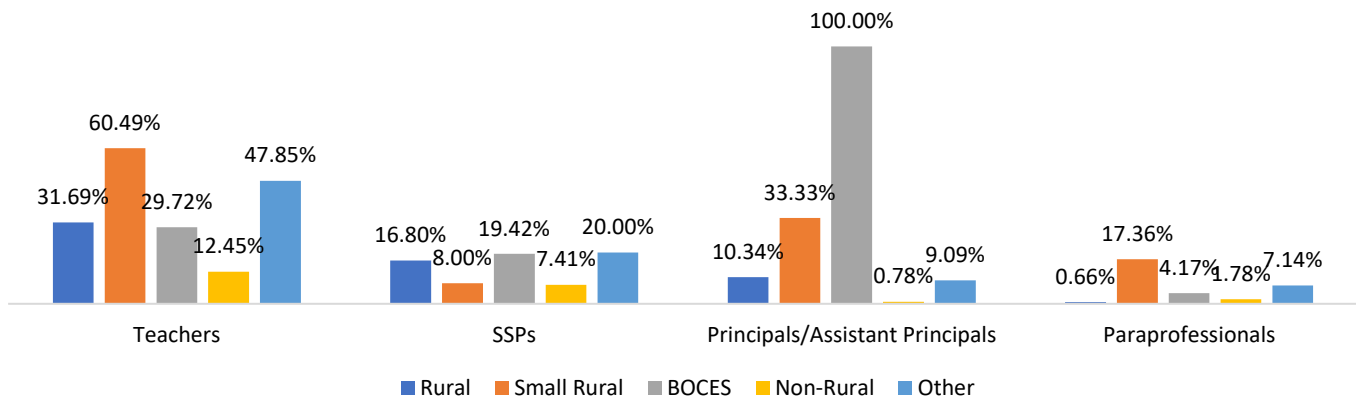
It is important to note that positions in non-rural locations comprised over 75% of all positions to hire in Colorado for the 2021-2022 school year ( $n = 7060$ ), which is consistent with the fact that non-rural districts have more staff overall than rural ( $n = 1310$ , 14%) or small rural ( $n = 554$ , 6%) locations; however, as illustrated in the following charts, hiring mechanisms employed by districts varied drastically by rural designation.

### Number of Positions to Hire by Rural Designation

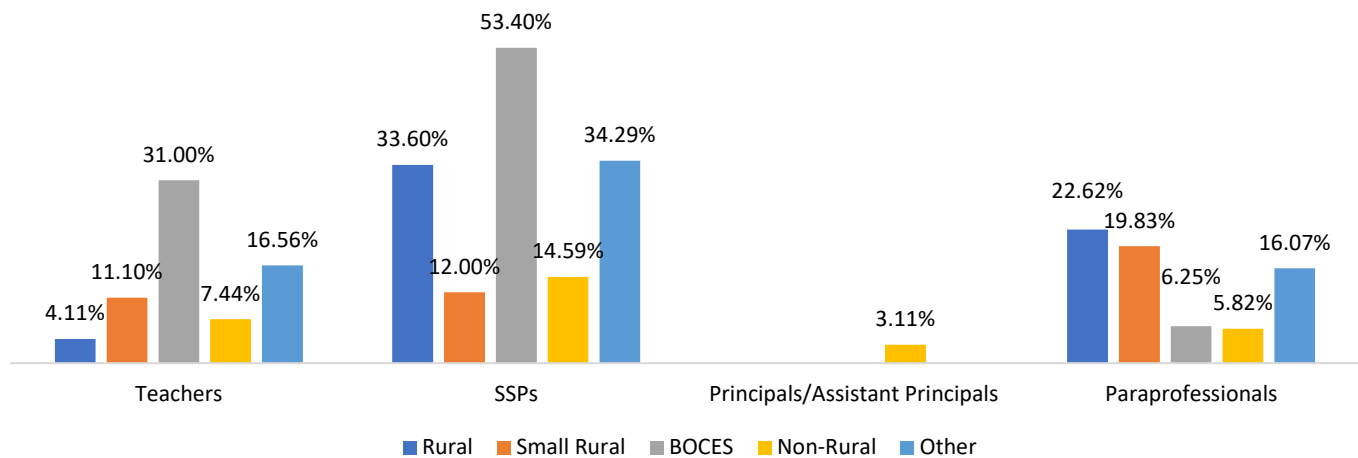


The percentages of positions to hire that were filled through a shortage mechanism were generally higher in rural and small rural areas than in non-rural areas. Over half of the teaching positions to hire and one third of principal and assistant principal positions to hire in small rural districts were filled through a shortage mechanism. Overall, BOCES had the highest proportion of unfilled positions to positions available. Further, the proportion of unfilled teaching positions is higher in every rural designation region when compared the the 2020-2021 shortage data. The higher percentage of principal/assistant principal positions filled through a shortage mechanism among BOCES is likely a result of there being fewer principal and assistant principal positions in BOCES (which only operate programs or alternative or online schools when needed by their member districts).

### Percentage of Positions to Hire Filled by a Shortage Mechanism by Rural Designation



### Percentage of Positions to Hire Unfilled by Rural Designation

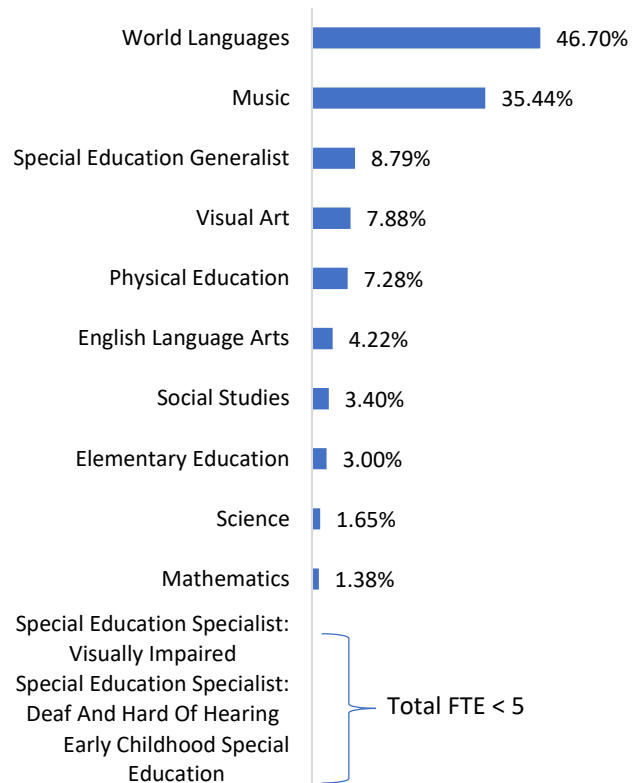


### Shortage Survey Results by Teaching Subject Area and Rural Designation

To understand how shortages vary by subject areas, shortages in elementary and secondary subject areas and kindergarten through twelfth grade (K-12) subject areas are presented for each rural designation: small rural, rural, non-rural, BOCES, and other. Because unfilled positions and positions filled through a shortage mechanism are both indicators of a shortage, the data are combined to determine the percentage of all teaching positions that remained unfilled or filled through a shortage mechanism for each subject area. Note that this is the percentage of all existing teaching positions for each subject area within the LEAs, not the percentage of positions to hire, that were filled through a shortage mechanism or remained unfilled. For teaching positions not aligned to a unique subject area (e.g., culturally and linguistically diverse educators), [please see additional tables here](#).

BOCES data are presented first due to their unique role in employing teachers. In addition to operating alternative or online schools and programs when needed by their member districts, BOCES also operate as Special Education Administrative Units. This means that a BOCES may be responsible for hiring special education teachers for its member districts. In most cases, BOCES engage in this role for small rural districts. As a result, shortage data for small rural districts and BOCES must be considered together. Due to the unique role BOCES have in employing teachers, shortage information is only displayed for subject areas for which BOCES reported employing teachers.

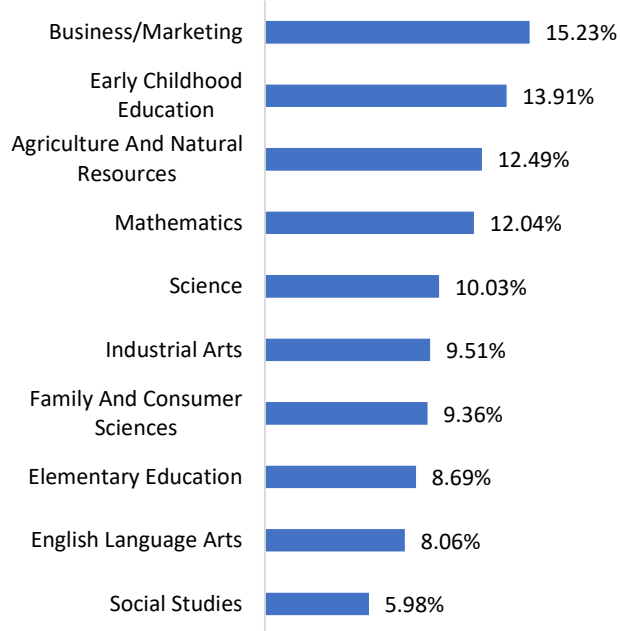
### BOCES Shortage Areas: Percent Positions Filled Through a Shortage Mechanism or Unfilled



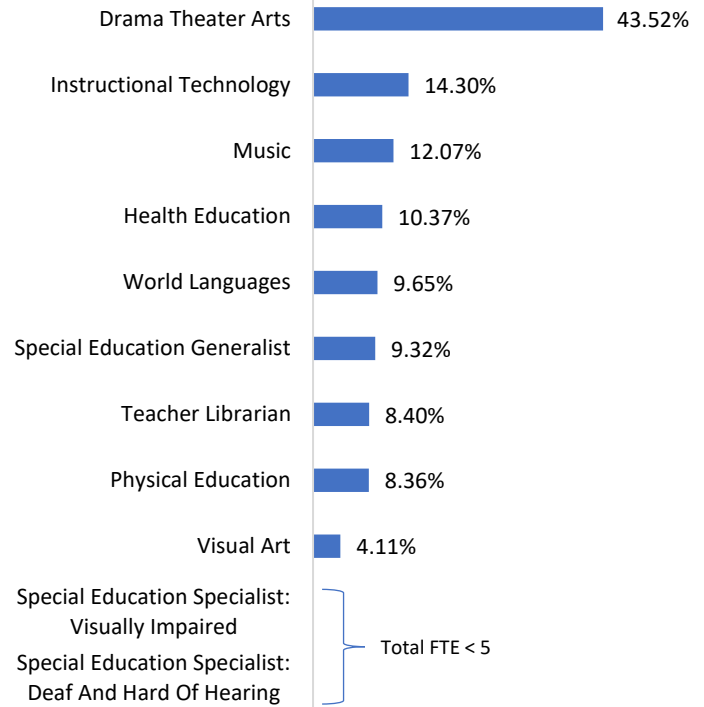
In small rural districts, early childhood education and business/marketing had the highest percentage of positions unfilled or filled through a shortage mechanism among elementary and secondary subject areas. This is consistent with the 2020-2021 academic year data.



### Small Rural Shortage Areas: Elementary & Secondary Subject Area Positions Filled Through a Shortage Mechanism or Unfilled

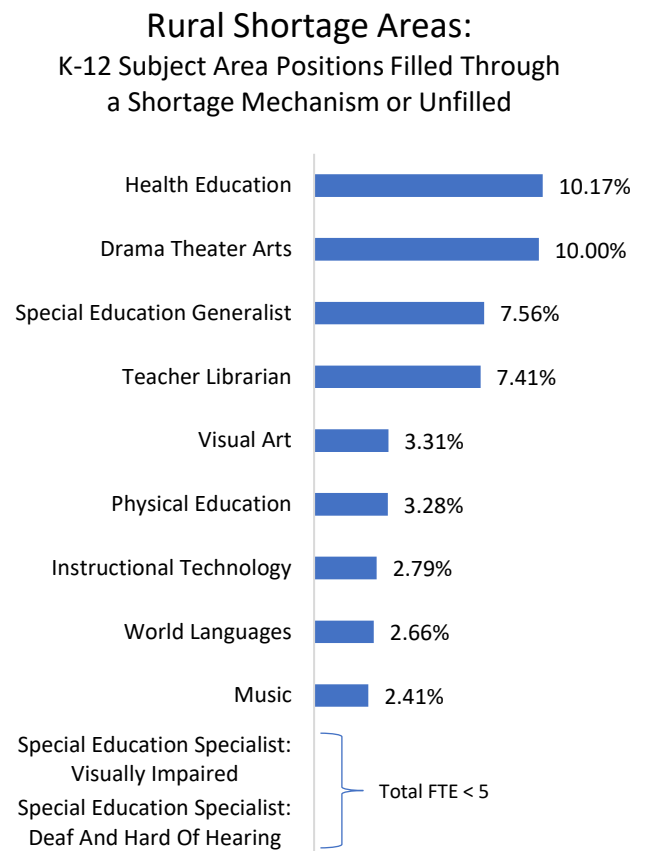
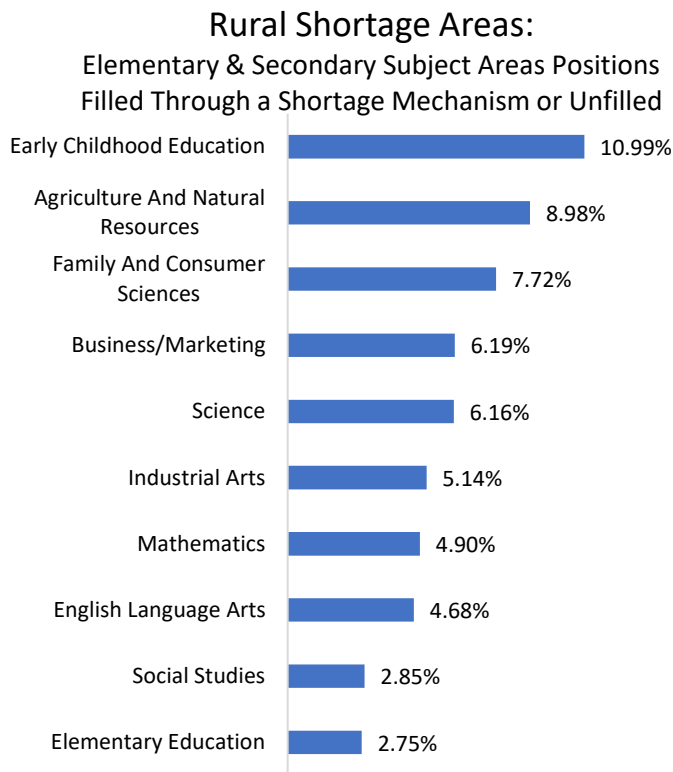


### Small Rural Shortage Areas: K-12 Subject Area Positions Filled Through a Shortage Mechanism or Unfilled



Among K-12 subject areas, drama theater arts and instructional technology had the highest percentage of positions unfilled or filled through a shortage mechanism in small rural districts. There were less than five FTE positions for either Special Education Specialists for the Visually Impaired or for the Deaf and Hard of Hearing, and so these proportions were not reported.

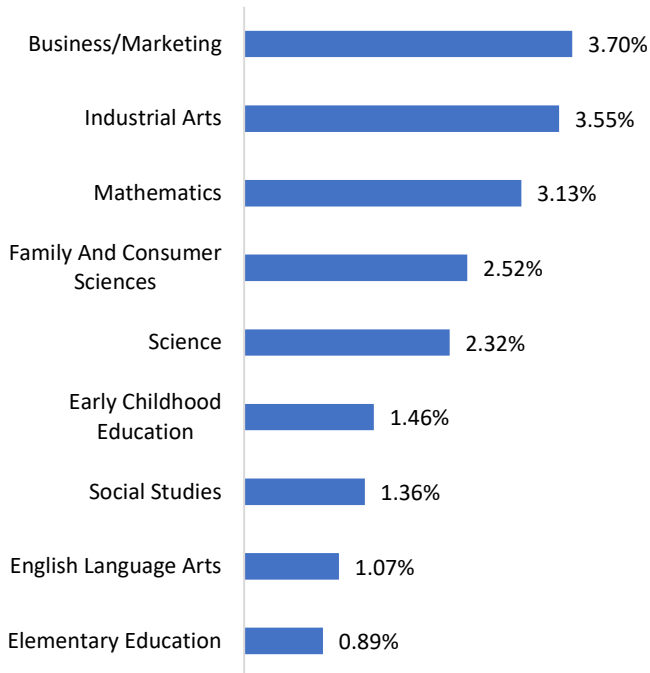
As illustrated in the charts below, shortages in rural districts are not as severe as those in small rural districts. Early Childhood Education ranked first among the elementary and secondary shortage areas, followed by Agriculture and Natural Resources.



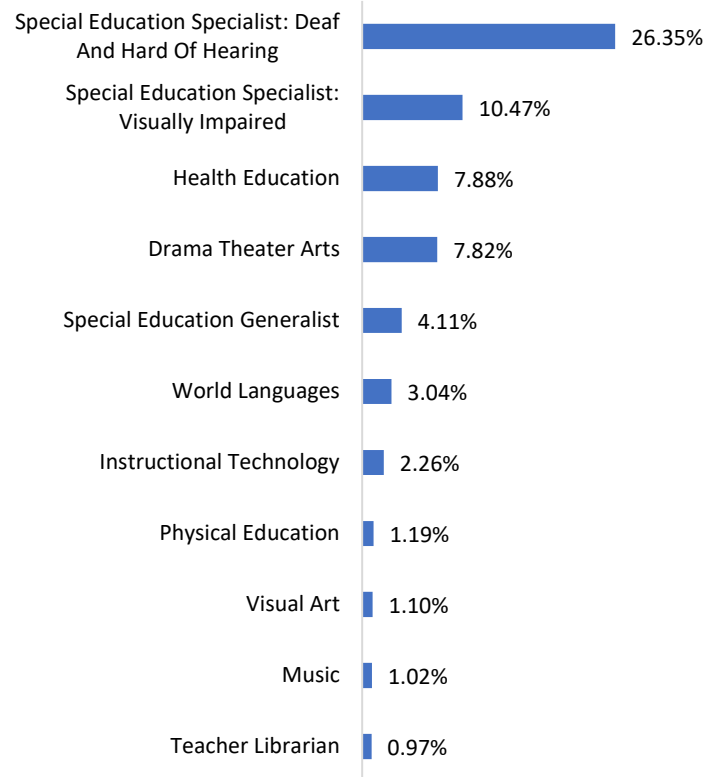
Among K-12 subject areas, health education and drama theater and arts had the highest shortage rates by around 2.5 percentage points, followed by special education generalists and teacher librarians.

In non-rural districts, business/marketing and industrial arts had the highest percentage of positions unfilled or filled through a shortage mechanism among elementary and secondary subject areas.

**Non-Rural Shortage Areas:  
Elementary & Secondary Subject Area  
Positions Filled Through a Shortage  
Mechanism or Unfilled**

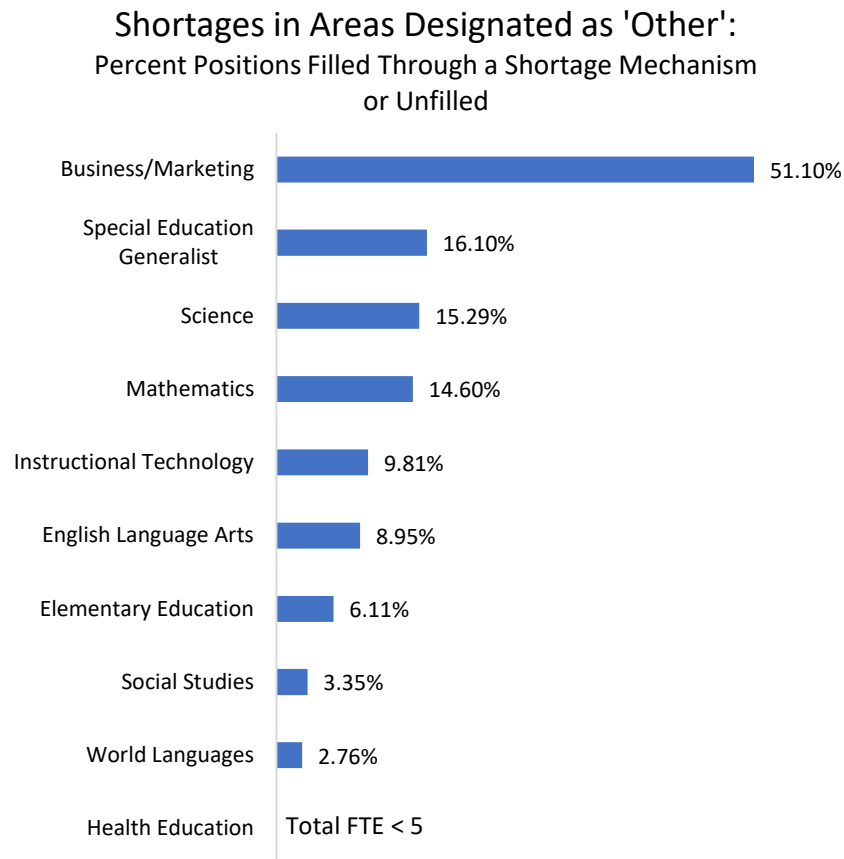


**Non-Rural Shortage Areas:  
K-12 Subject Area Positions Filled Through a  
Shortage Mechanism or Unfilled**



For K-12 subject areas in non-rural districts, special education specialist for the visually impaired, special education specialist for the deaf and hard of hearing and health educators had the highest percentages of unfilled positions or positions filled through a shortage mechanism.

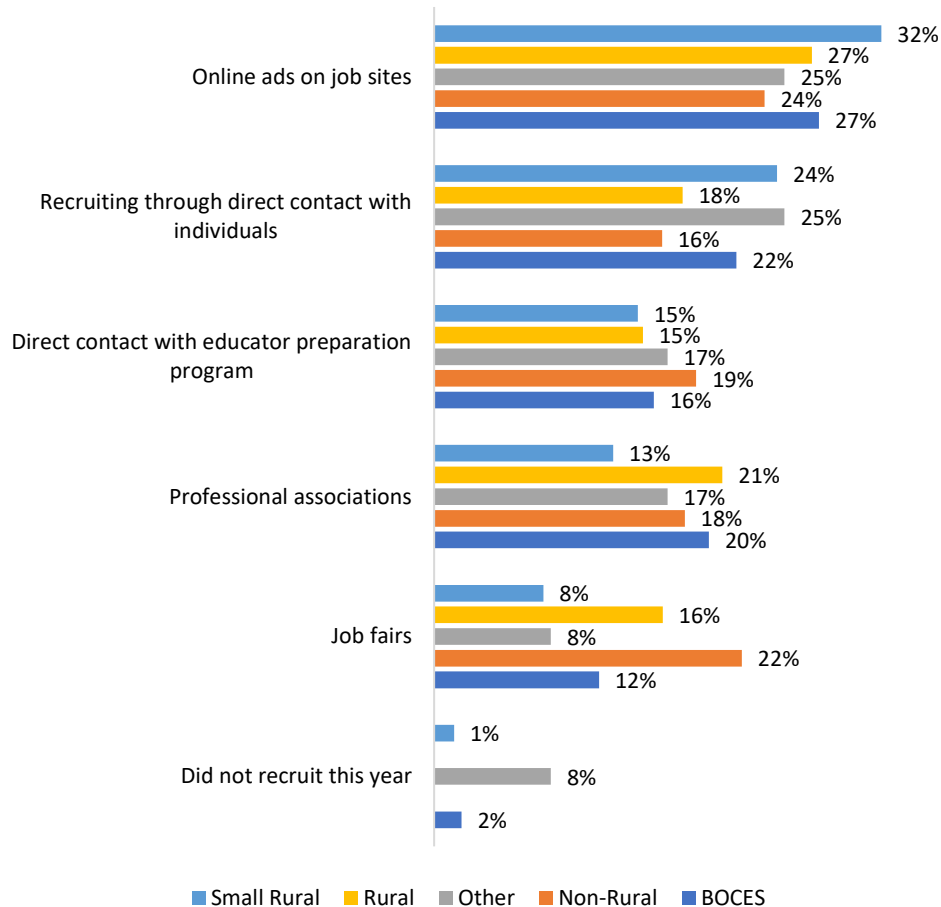
Shortage areas in the 'other' category are reported together due to the smaller number of shortage areas. In the 'other' category, comprised of the Division of Youth Services, Charter School Institute, Colorado School for the Deaf and Blind and CMHI Pueblo, business/marketing educators had the highest percentage of positions unfilled or filled through a shortage mechanism by more than three times the shortage rate of other subject areas across all subject areas (K-12 and Elementary/Secondary).



## Recruitment Methods

Most LEAs reported recruiting through online ads and job sites, followed by recruiting through direct contact with individuals. Very few districts reported that they did not do any type of recruitment. Of those that indicated an alternative to the provided options, most cited word-of-mouth and direct recruitment of retired educators. For more information on recruitment methods, [please see additional tables here](#).

### Recruitment Methods by Rural Designation



## WHERE CAN I LEARN MORE?

- For additional information about Colorado's teacher shortage, see the [strategic plan](#) or the [full report](#) developed in response to House Bill 17-1003.
- For questions about the survey and/or to provide feedback, contact Educator Development staff at [Educator\\_Development@cde.state.co.us](mailto:Educator_Development@cde.state.co.us).
- [View all CDE fact sheets: www.cde.state.co.us/communications/factsheetsandfaqs](http://www.cde.state.co.us/communications/factsheetsandfaqs)