

2020



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# 2020 SUMMARY OF PROFESSIONALS IN VISUAL IMPAIRMENT IN TEXAS

A review of education professionals who work with Texas students with visual impairments, including a description of selected characteristics, projections of attrition, and projected future needs.



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## Introduction

Since 1996, the Texas School for the Blind and Visually Impaired has conducted an annual survey to assess the need for VI professionals in Texas. The term “VI professionals” is used to describe certified teachers of students with visual impairments (TVIs) and certified orientation and mobility (O&M) specialists (COMS). Individuals functioning in both roles are referred to as “dually certified.” This report will provide information about the results of the survey conducted in September 2020.

In order to assess the characteristics of and need for VI professionals in Texas, data was collected from the 20 Education Service Centers (ESCs), the two Texas university personnel preparation programs that prepare VI professionals, and TSBVI. Data from TSBVI include information about TSBVI professionals who provide direct services via the Comprehensive Program and those who provide statewide training, short-term services, and leadership via the Outreach and Short-Term Programs. (Note: More information about how data were collected is included in the Appendix).

The most striking findings of the 2020 survey include:

- The **total number of VI professionals**, including leadership positions, **decreased significantly** from 992 to 963, a loss of 29 individuals. The majority of this change was seen in the total number of TVIs working full-time. The number of full-time COMS increased and there was no change in the number working part-time.
  - The total number of **TVIs** was **669**, a **loss** of 25 individuals.
    - **Part-time** total **fell** by 10, from 168 to **158**
    - **Full-time** total **decreased** by 15, from 526 to **511** individuals.
    - **Full-time equivalent** total **dropped** a bit less (by 20) from 610 to **590 FTEs**.
  - There are **315 COMS** providing direct service, equaling **250 FTEs**. The total **increased** by 9 individuals, all in the full-time category.
  - **Seventy-six VI professionals are dually certified**, providing both TVI and O&M services. This is the **highest total ever reported** by the ESCs.
  - **Approximately 23%** of the total number of VI professionals serving students are **contract service providers**.
- **Cultural diversity** of VI professionals showed both signs of growth and decline.
  - The number of **VI professionals who are African-American increased** by 15, or a 27 percent increase.
  - The number of **VI professionals fluent in Spanish increased** from 96 to 104, still less than the 106 in 2018.
  - The number of **VI professionals who are Hispanic or Asian American decreased** in 2020.

- **Attrition** in the previous year **increased slightly** from 44 to **49** individuals. ESC consultants anticipate that 100 TVIs and 45 COMS (the highest projection on record for COMS), or **13% of existing VI professionals**, will retire or otherwise leave the field over the next 3 years.
- **The number of students with visual impairments grew** by 3.5%, greater than the 2.7% average increase typically seen each year.
  - In 2020, the total number of students reported to the *Annual Registration of Students with Visual Impairments* was **11,125**, adding **372 students**.
  - An **increase in caseloads** was reported by 65% of the ESCs. An increase in caseloads is an unsurprising result of this student growth paired with the fact that there are fewer TVIs available.
- The **total number of university students statewide** entering VI and O&M certification programs at Stephen F. Austin State University and Texas Tech University **increased by 18%**; however, **fewer** students **completed** their program.
  - There are **180 future VI professionals** in a program leading to certification as either a TVI or COMS. One hundred twelve students are working toward their TVI certification and 68 are enrolled in an O&M program.
  - **Forty-nine individuals** (34 TVIs and 15 COMS) **completed a VI certification program in 2020**, 14% fewer than in 2019. Last year's total of 57 was 30% less than the year prior.
  - The majority (**70%**) of students enrolled in SFASU and TTU TVI and O&M certification training programs **receive funding support** for coursework.
- **Anticipated Need for VI Professionals**
  - It is projected that Texas will need up to 71 additional full-time equivalent TVI new positions and 57 full-time equivalent COMS new positions by 2023 to accommodate **student growth alone**.
  - Texas is estimated to need an additional 157-171 full-time equivalent TVIs and 86-102 full-time equivalent COMS in the next 3 years to replace those who are likely to leave the field **and** respond to anticipated student growth.
  - If the university TVI program completion rates continue to reflect the 3-year average of 40 completers, the number of newly certified TVIs **will fall well below the range of anticipated need**.
  - Presuming that O&M students continue to find challenges in completing their programs, and the number of completers continues at the same rate over the next 3 years, **it is likely that the need for a minimum of 86 new COMS by 2023 will not be met**.

## Characteristics of VI Professionals in Texas

The survey asked about the number of people *functioning* as VI professionals. While many professionals may hold certification as a teacher of students with visual impairments (TVI) or as an orientation and mobility specialist (COMS or O&M specialist), this report summarizes data on those with a *current job assignment* as a TVI or COMS. Although some VI professionals hold *both* TVI and O&M certifications, only those professionals whose current job assignment includes ***functioning*** in both roles are considered dually certified for this report.

It is important to note that most VI professionals are not classroom teachers; they are primarily itinerant specialists in visual impairment who work in a variety of schools, community settings, and homes. In addition to direct services, they also provide critical consultations to other team members about the functional impact of specific visual impairments on students in a range of settings, and ensure that appropriately modified materials are available. Additionally, they must travel to their students and provide instruction in the home, school, and community environments, not in a single classroom. Understanding the difference between classroom teachers and VI professionals is crucial when assessing the current and future need for specialists in visual impairment (Correa-Torres & Johnson Howell, 2004).

### Number of VI professionals in Texas

***The number of VI professionals decreased by 3% in the Fall of 2020. The majority of the decrease was seen in those providing direct TVI services.***

This information has been gathered annually for 24 years. Over that time the number of VI professionals has generally risen with an occasional drop in numbers. This year was an exceptional one, with the COVID-19 pandemic affecting the VI field in multiple ways including adding another drop in the number of VI professionals to the record. The 2020 total number of VI professionals in Texas is 963 individuals, or approximately 887 full-time equivalents (FTEs). This is a decrease of 29, the largest drop ever reported by the ESCs. A similar decrease in numbers was reported in 2013 (a loss of 26 individuals) and another in 2017 (-18 individuals). It was encouraging to see that totals increased significantly in both cases the following year. We can remain hopeful that this trend will continue and the field will grow again next year; however, it is important to consider that in January of 2020 the *Annual Registration of Students with Visual Impairments* identified 372 additional students, a 3.5% increase in the student population (TSBVI, 2020). This is higher than the average annual student increase of 2.8 percent seen in previous years.

The graph that follows displays the changes in the number of VI professionals over ten years, from 2010-2020.

Number of VI Professionals in Texas

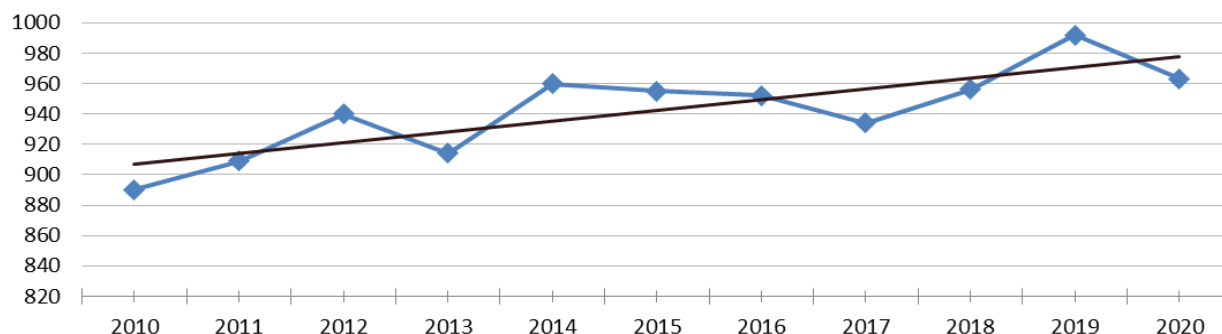


Table 1 below provides further details about VI professionals in Texas within the last 3 years. The term “individuals” includes both full- and part-time VI professionals. The full-time equivalent (FTE) data adjusts for the part-time VI professionals, including those who are dually certified.

**Table 1: Total VI Professionals Statewide**

	2018		2019		2020	
	Individuals	FTE <sup>2</sup>	Individuals	FTE <sup>2</sup>	Individuals	FTE <sup>2</sup>
ESC leadership <sup>1</sup>	24	19.3	27	23.5	25	21.1
TSBVI statewide <sup>1</sup>	29	24.8	28	23.8	30	25.8
VI and O&M service providers (adjusted for dually certified professionals)	903	834.5	937	851	908	840
<b>Total VI professionals</b>	<b>956</b>	<b>878.6</b>	<b>992</b>	<b>898.3</b>	<b>963</b>	<b>886.9</b>

<sup>1</sup> TSBVI statewide consulting staff (Outreach and Short-Term Programs) and ESC consulting VI staff provide leadership/technical assistance statewide or within their organization. Educators at TSBVI or at ESCs who provide direct educational service to students with visual impairments are counted as "VI and O&M direct-service providers."

<sup>2</sup> FTE = (part-time x .5) + full-time for all charts

## Direct-service providers

***The total number of direct-service providers in 2020 was 908 individuals or 840 FTEs (adjusted for dually certified professionals). There are currently 669 TVIs and 315 COMS providing services to students with visual impairments across the state.***

Below are data regarding full and part-time direct-service providers. The term “direct-service providers” includes teachers of students with visual impairments (TVIs), certified orientation and mobility specialists (COMS), and dually certified personnel who work with students on a regular basis, and/or are the teacher-of-record for issues related to visual impairments. This category does not include those who provide vision-related leadership, technical assistance, or

statewide services at ESCs or TSBVI through the Short-Term Programs and Outreach Programs.

This survey captures information about the number of individuals working with students with visual impairments in the state of Texas in either a full- or part-time capacity. It does not gather information on the number of districts that employ full- and/or part-time VI professionals. Full- and part-time status is broadly defined. The reference to “full-time” and “part-time” refers to the total employment of the VI professional, not to how long a specific district employs a VI professional. Individuals who work part-time in multiple districts are considered “full-time VI professionals.” As a result, the number of “full-time” VI professionals described may vary from the number of districts or co-ops that employ TVIs on a full-time basis.

For the purposes of this survey, professionals who are certified *and* employed in both visual impairments and orientation and mobility (dually certified) are counted as a part-time TVI and a part-time COMS. These specialists are embedded in both TVI and COMS data. Specific information on dually certified VI professionals is listed in Table 4. Information about the number of combined direct-service providers has been adjusted for dually certified professionals.

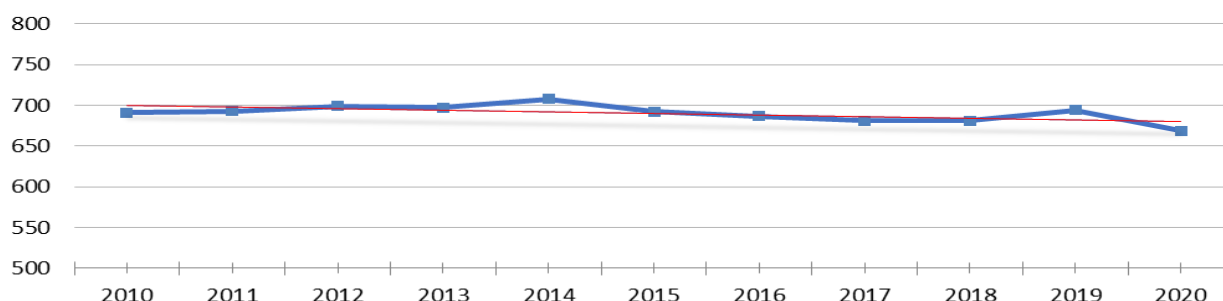
**Table 2: Direct-Service Providers: Teachers of Students with Visual Impairments (TVIs)**

	2018		2019		2020	
	Individuals	FTE <sup>1</sup>	Individuals	FTE <sup>1</sup>	Individuals	FTE <sup>1</sup>
<b>Full-time TVIs</b>	527		526		511	
<b>Part-time TVIs</b>	154		168		158	
<b>Total VI staff</b>	<b>681</b>	<b>604</b>	<b>694</b>	<b>610</b>	<b>669</b>	<b>590</b>

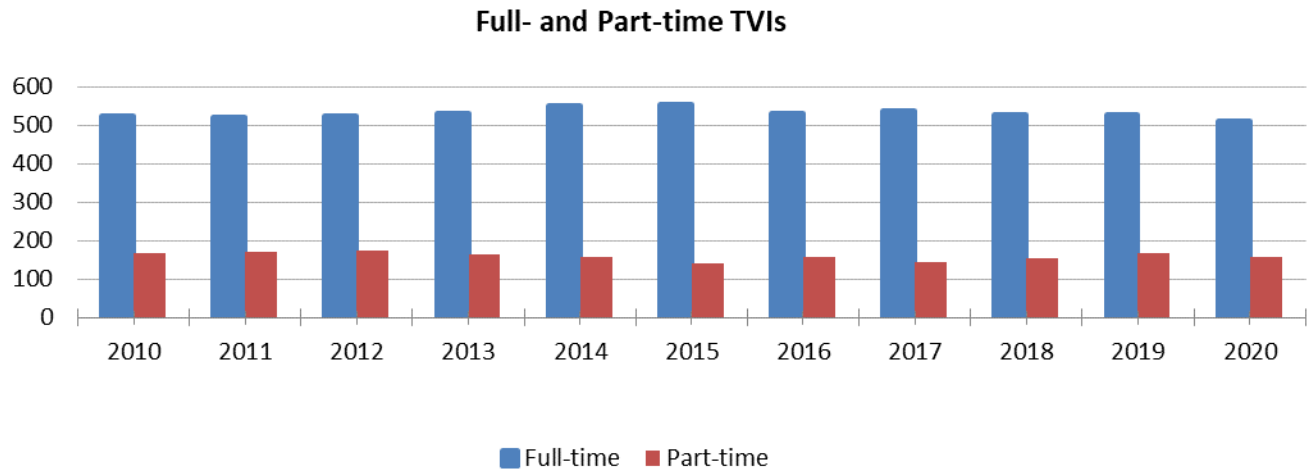
1. FTE = part-time x .5 + full-time for all charts

As the table above indicates, the total number of *individuals* (full and part-time) who work as a TVI decreased by 25 this year and by 20 FTEs.

**Teachers of Students with Visual Impairments in Texas**



The graph above shows the absence of significant increase, and at times a decline, in the total number of TVIs across the state. The graph below shows the full - and part-time TVI totals over recent years. The decrease in the availability of TVIs in 2020 is a concern given that 372 additional students were added to the *Annual Registration of Students with Visual Impairments* this year.

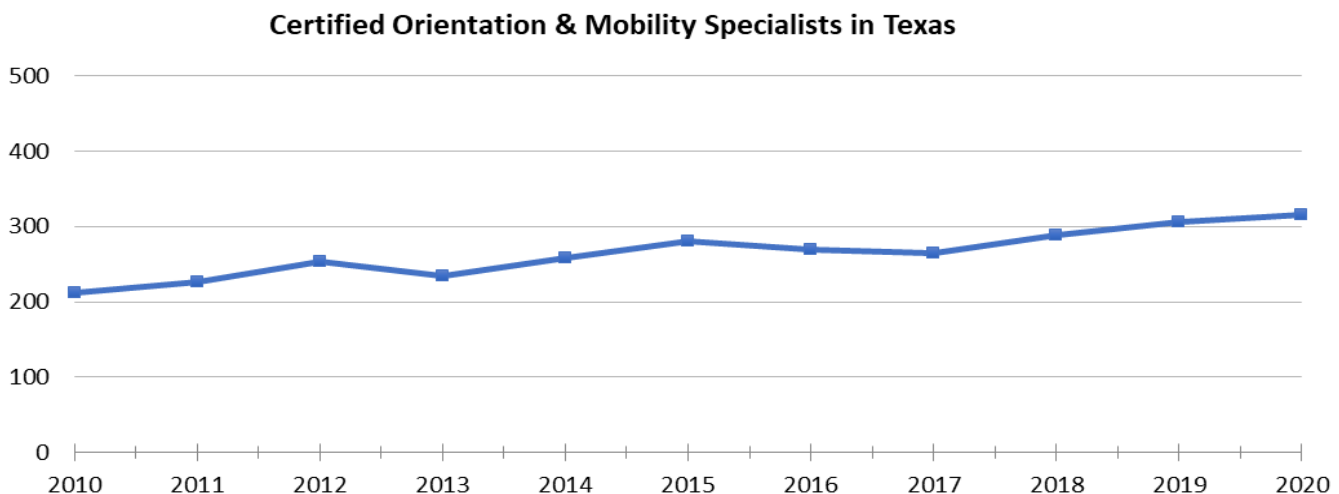


**Table 3: Direct-Service Providers: Orientation and Mobility Specialists (COMS)**

	2018		2019		2020	
	Individuals	FTE <sup>1</sup>	Individuals	FTE <sup>1</sup>	Individuals	FTE <sup>1</sup>
<b>Full-time COMS</b>	173		176		185	
<b>Part-time COMS</b>	115		130		130	
<b>Total O&amp;M staff</b>	<b>288</b>	<b>230.5</b>	<b>306</b>	<b>241</b>	<b>315</b>	<b>250</b>

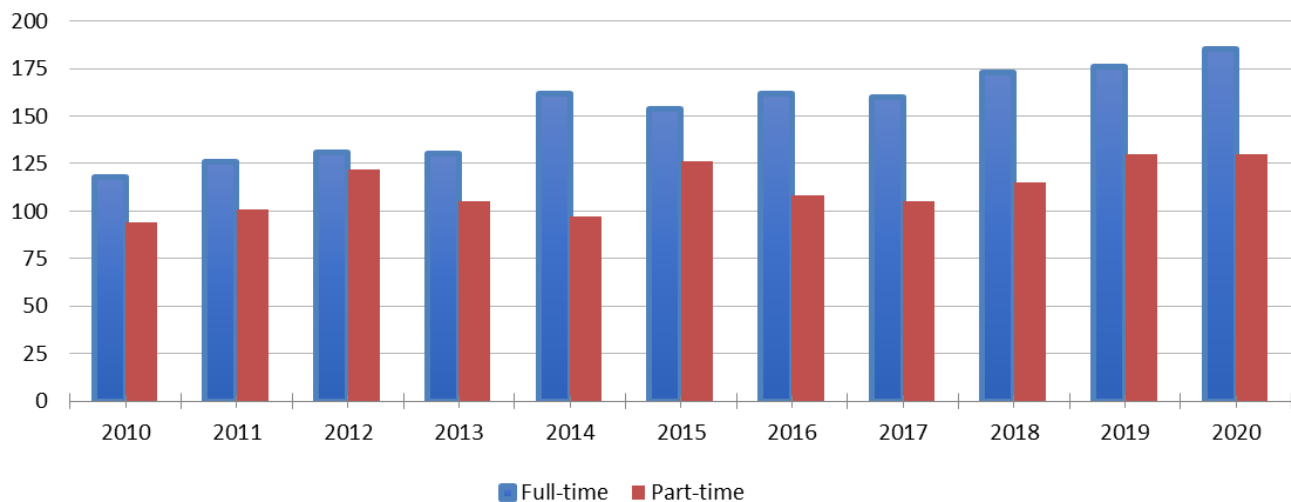
1. FTE = part-time x .5 + full-time for all charts

As noted in Table 3 above and the graphs that follow, the total number of O&M specialists increased this year by 9 individuals, or by 3%, with all growth in the full-time category. A total of 27 additional COMS have been added to the VI field between 2018 and 2020.





## Full- and Part-time COMS



All initial evaluations of students with visual impairments must include an O&M evaluation by a certified O&M specialist in the home, school and community setting per TEC 30.002. This year the *Annual Registration of Students with Visual Impairments* reported that 75.5% of all students with a visual impairment in Texas have been evaluated by a COMS and 160 additional students were identified as needing orientation and mobility services. Given that the number of students receiving O&M services grew by 335 in just the last three years, the increase of additional COMS during that same period was essential in order to ensure that all students have access to an O&M evaluation and, as indicated, receive needed orientation and mobility services.

### Part-time service providers

***There are 288 part-time VI professionals serving students with visual impairments in Texas. The number of part-time TVIs decreased and the number of part-time COMS remained the same in 2020.***

It is important to note that employing part-time VI professionals has advantages and disadvantages. Advantages include supporting districts with a small number of students with visual impairments to meet their local needs. Part-time VI professionals can increase flexibility in districts that have just a bit more, or a bit less, than a full-time VI professional can reasonably handle and still provide quality services. In addition, part-time VI professionals may either be employed by the district on a part-time, contractual basis for VI-only purposes, or may be hired full-time with duties unrelated to visual impairments.

Disadvantages include logistical challenges in meeting the needs of the students. Due to other commitments and/or responsibilities, part-time staff members are at risk for not being able to provide the full caseload management or comprehensive array of services necessary for even small caseloads.

Part-time contract employees may not function as full members of the collaborative educational team if their service hours are limited to only direct hours by the hiring district or co-op, as is frequently the case. It may be hard to carry out collaborative consultation to the

degree needed if service delivery time is limited. Without time for collaboration, such VI professionals may not be able to adequately ensure that other team members have the training to assist with generalization of skills learned from the VI specialist (TSBVI, n.d.).

**Contract service providers**

***Twenty-four percent of TVIs and COMS in Texas are contract service providers.***

Many VI professionals work for school districts throughout the state as contract service providers on either a part-time or full-time basis. According to ESC consultants, 221 VI professionals serve in this manner. This is a large increase from last year with the number of COMS contractors growing by 17 and the number of TVI contractors growing by 18 individuals.

The increase in contract service providers may be a culmination of several factors. The increase in charter schools, private staffing companies and retired VI professionals returning to the field as private contractors could all be considered contributing factors to the heightened totals seen over the last several years. It should be noted that VI professionals who serve as private contractors may be difficult for ESC consultants to accurately report on for the purpose of this document since these service providers may not be directly affiliated with a school district or regional co-op arrangement.

**Dually certified VI professionals**

***Seventy-six individuals are functioning in a dually certified role in 2020, providing both VI and O&M services to Texas students. This is the highest total ever reported.***

Dually certified VI professionals are those who are certified and function both as a COMS and as a TVI. While many professionals may hold both certifications, not all dually certified professionals function in both capacities. This survey gathers data only about those who currently *function* as a TVI and an O&M specialist.

**Table 4: Dually Certified Professionals**

	2018	2019	2020
Dually certified	66	63	76

Dually certified professionals are unique and offer districts maximum flexibility. Administrators are able to modify work assignments according to the needs of the district and the needs of students for a particular year. While these VI professionals may be employed full-time in a district, they must split their time and expertise between two different, although related, professions. An administrator must understand the challenges faced by these professionals to ensure that neither area is slighted.

## Direct services provided by ESCs

***Each regional education service center (ESC) provides an array of services to districts and for some, that includes direct TVI and O&M services. There are currently 412 students served directly by the ESCs.***

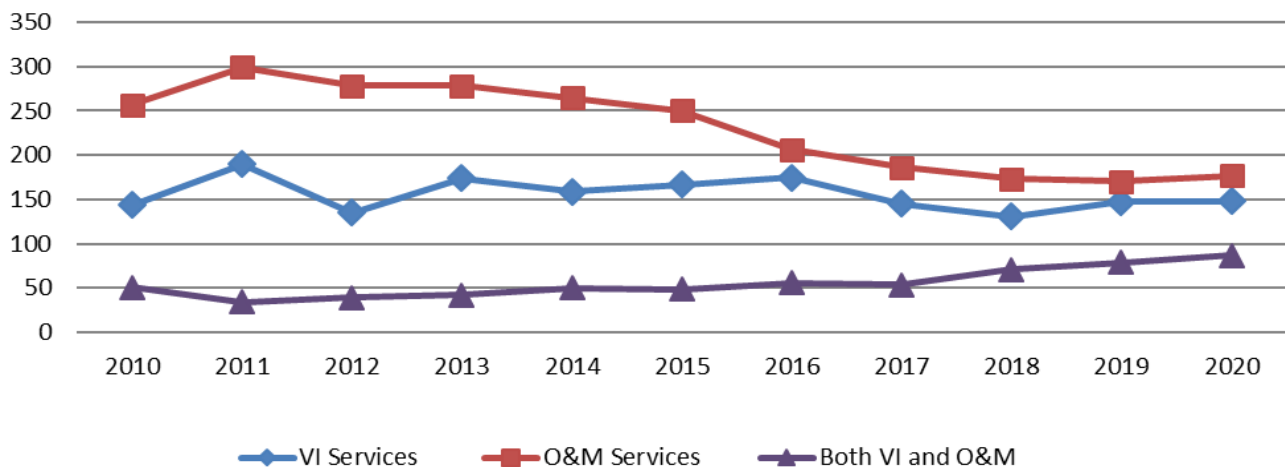
ESCs are a *major* part of the state's infrastructure that ensures access to high quality VI services. Regional specialists in visual impairments are critical players in the provision of technical assistance, leadership, workshops, and specialized materials for VI professionals, families, and students. They also assist TVIs and 107 braille transcribers within the state in braille production. They act as a vital source of information on VI-related issues for special education administrators in the region. A significant portion of Texas' reputation for leadership in visual impairments is due to the high level of skills and services provided by its VI specialists in regional education service centers.

In the regions where direct services are provided, the ESC staff members are listed on the student's individualized education program (IEP). ESCs are providing more direct services overall this year. Currently, 14 ESCs provide services to students for either VI services, O&M services or both. Table 5 reflects the number of students receiving direct services from the ESCs. The total number of students served grew between 2018 and 2020 and students receiving O&M-only services from the ESCs had the highest total each year.

**Table 5: Students Receiving Services from ESCs**

	2018	2019	2020
<b>VI-only services (4 regions)</b>	131	147	148
<b>O&amp;M-only services (7 regions)</b>	173	170	177
<b>Both VI and O&amp;M services (3 regions)</b>	71	79	87
<b>Total</b>	<b>375</b>	<b>396</b>	<b>412</b>

**Students Receiving Services from ESCs**



The provision of direct services from an ESC depends on many factors, including population size, region/district agreements, regional service delivery options, and fiscal constraints. While many factors can affect the number of students served by ESCs, the local districts' capacity to meet the needs of their students is a primary one. The increase in local COMS staff likely explains the decrease in O&M services from ESCs over the majority of the past decade.

### Overall perceptions of caseloads

***More than half (65%) of the ESCs reported an increase in caseloads for both their TVIs and COMS.***

Since 2010, this survey also asked about ESC specialists' perceptions of overall regional changes in caseloads. The survey did not ask about specific districts or how many districts in a region experienced a change. The VI consultants were asked to use their professional expertise in their estimates.

**Table 6: VI ESC Consultants' Perception of Regional Overall Changes in Caseloads**

2020 Caseloads	TVIs	COMS
Increases	13	13
Decreases	0	1
No significant change	6	5
Unknown	1	1

This year, 13 of 20 education service centers (ESCs) reported increased caseloads for TVIs and COMS. Others noted caseloads remained the same with only one ESC reporting that O&M caseloads have experienced a decrease in their region. The overall increase in caseloads correlates with the growth in the student population, decrease in the number of TVIs and only slight jump in the number of COMS available to serve them.

### Cultural diversity

***Texas saw an increase in the total number of VI professionals who are African-American and a decrease in the number of VI professionals who are Hispanic and Asian-American.***

Texas is a diverse state and requires a diverse workforce to serve its citizens. This survey asks about African-American, Hispanic, and Asian-American VI professionals in relation to services provided. It also queries the number of VI professionals fluent in Spanish. The results from the survey follow.

**Table 7: Culturally Diverse VI Professionals**

**Hispanic VI Professionals**

	2018	2019	2020
<b>TVIs</b>	82	87	76
<b>COMS</b>	18	22	26
<b>Dually certified</b>	5	7	6
<b>Total</b>	<b>105</b>	<b>116</b>	<b>108</b>

**Spanish-Speaking VI Professionals**

	2018	2019	2020
<b>TVIs</b>	77	72	72
<b>COMS</b>	20	19	23
<b>Dually certified</b>	9	5	9
<b>Total</b>	<b>106</b>	<b>96</b>	<b>104</b>

**African-American VI Professionals**

	2018	2019	2020
<b>TVIs</b>	34	35	44
<b>COMS</b>	15	20	26
<b>Dually certified</b>	1	0	0
<b>Total</b>	<b>50</b>	<b>55</b>	<b>70</b>

**Asian-American VI Professionals**

	2018	2019	2020
<b>TVIs</b>	6	8	7
<b>COMS</b>	3	5	4
<b>Dually certified</b>	0	0	0
<b>Total</b>	<b>9</b>	<b>13</b>	<b>11</b>

This year there was not a large shift in the overall diversity of VI professionals in Texas. Looking at specific categories, the number of TVIs and COMS who are African-American did increase by fifteen, however; the number of VI professionals who are Hispanic decreased by 8 and the number of Asian-American decreased by 2 individuals. Those fluent in Spanish increased by 8 this year, however, only 10% of the VI field are fluent Spanish speakers. ESC consultants and TSBVI staff were also asked to provide the number of Native American and Caucasian VI professionals working in their region/school. Data provided showed that the majority of VI professionals in Texas are Caucasian and one VI professional is Native American. Recruiting and retaining ethnically and culturally diverse educators continues to be an important goal in Texas to reflect the student demographics.

**VI professionals who have a visual impairment**

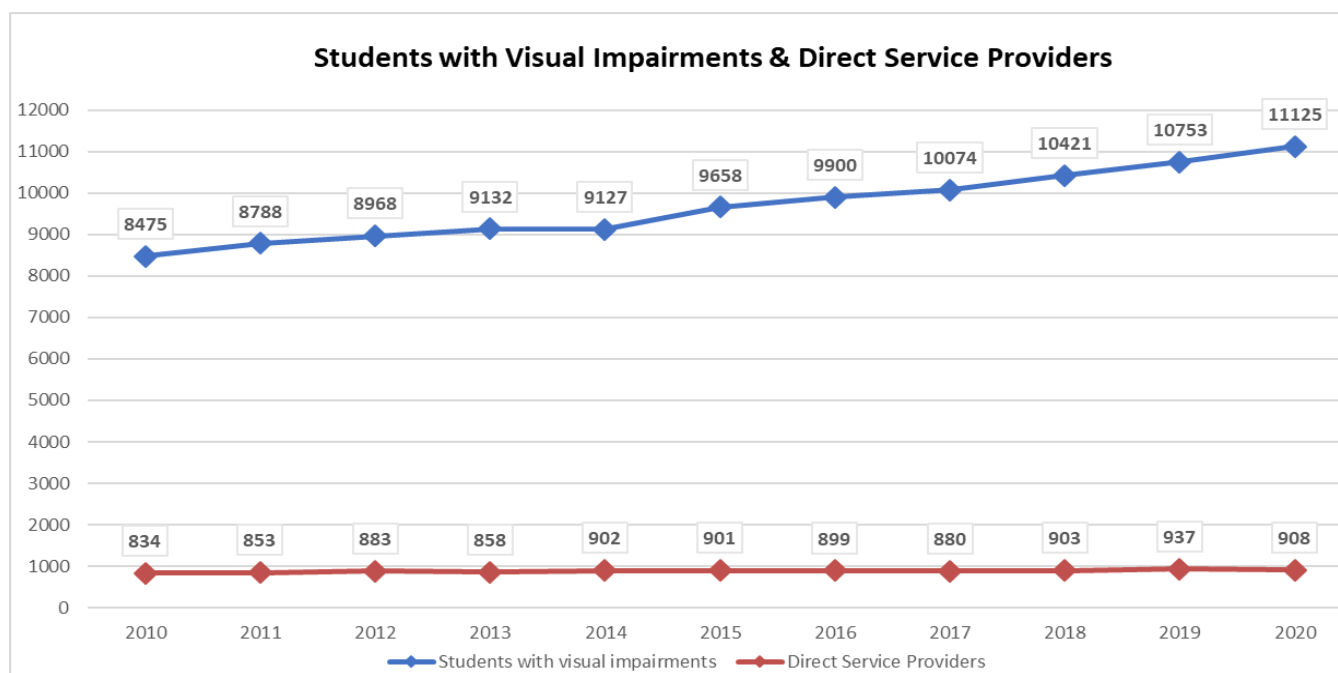
***Currently, twenty-four VI professionals who are blind or visually impaired provide VI/O&M leadership or direct services to students in Texas.***

The ESCs were asked how many VI professionals within their regions have a visual impairment. In 2020, they reported that a total of 24 VI professionals in Texas are blind or have a visual impairment. This includes direct service providers, ESC leadership, and TSBVI statewide consultants.

## Growth in Population of Students with Visual Impairments and Impact on VI Professionals

In January, 2020 there were 11,125 students with visual impairments in Texas, an increase of 3.5% in just one year. Although Texas has seen considerably higher increases over the last two years (over 3%), data collected since 2000 project that the student population will increase by an average of approximately 2.7% per year over the next 3 years (an additional 912 students) for a total of 12,037 students by 2023.

Below is a graph that displays the growth in the number of students with visual impairments and the number of direct service providers (TVIs and COMS) over a 10-year span. Texas has seen a trend of an increase in students each year with a slight drop only in 2014. Totals climbed once again in 2015 with the largest amount of growth seen since data has been reported (5.8%). Totals have continued to rise over the last 5 years while the number of service providers available to support them has either decreased or lacked much change.



### Impact on teachers of students with visual impairments

***It is projected that Texas will need approximately 57 additional full-time equivalent TVIs (or 71 individuals) by 2023 to accommodate student growth alone.***

Statewide, the student-to-teacher ratio grew in 2020 to almost 19 students per TVI full-time equivalent (FTE) position. Looking back over the past 10 years, caseloads have averaged 16 students per TVI FTE. If this average ratio is applied to the number of expected new students, it is projected that Texas will need approximately 57 additional FTEs by 2023 to accommodate student growth. However, given that only 76% of TVIs are full-time, it will take more individuals

to meet the expected need of 57 FTEs. If the current average ratio of full- to part-time teachers continues, the number of TVIs needed to total 57 FTEs will be closer to 71 individuals.

### **Impact on O&M specialists**

***It is projected that Texas will need a minimum of 41 additional full-time equivalent (57 individuals) orientation and mobility specialists to meet expected student growth over the next three years.***

Information about students with visual impairments is collected each January and includes information related to orientation and mobility services. The 2020 *Annual Registration of Students with Visual Impairments* indicated that the percentage of students who were receiving O&M services is approximately 40%, about the same percentage seen over the last several years. The number of O&M service providers increased only slightly this year as an additional 297 students were evaluated for services and 160 students were added to caseloads. It is anticipated that by 2023, 5,128 students will be receiving O&M services, an additional 691 students.

Although the total number of COMS increased this year statewide, the average student-to-COMS caseload stayed at just under 18 students per FTE. Approximately seventeen students per COMS is the average ratio seen over a 10-year period. Using this average ratio to help predict need, by 2023 Texas will need an additional 41 full-time equivalent (FTE) orientation and mobility specialists to meet expected student growth.

In Texas, full-time equivalent positions can be quite different from the number of individuals needed to equal the FTEs, especially with O&M specialists. In 2020, 58.7% of COMS were employed full-time. These O&M specialists work full-time in a single district or contract with several districts. If the current ratio of full- to part-time individuals is applied, the number of individual O&M specialists needed to result in 41 FTEs is likely to be closer to 57 individuals.

### **Variance in growth of students with visual impairments and O&M services**

***It is unknown how many of the projected 12,037 students with visual impairments may need O&M services by 2023.***

The gap in the average growth rate of students (2.7% per yr.) and the lack of change seen in O&M average caseloads is a concern. Although the number of students receiving O&M services increased slightly this year, the number of students with visual impairments who will be eligible to receive O&M services over the next three years cannot be determined. As of January 2020, approximately 25% of current students had not ever been evaluated by an O&M specialist.

## Attrition

It should be noted that the attrition data collected in this survey specifically addresses those who have left the field. The data do not include those who move from school employment to private contractual work, change districts, or retire and re-hire in the same or a different district.

Attrition increased slightly in 2020 for VI professionals as a whole, by a total of 5 individuals. Specifically, the ESCs reported that 8 COMS, 35 TVIs and 6 dually certified VI professionals left the field in 2020. This year's attrition total of 49 individuals is among the highest reported by the ESCs, with the same number leaving the field in 2014 and 54 individuals leaving in 2012.

The VI field's 5% attrition rate in 2020 is significantly lower than the steady 10% annual attrition rate of certified teachers as a whole for the state. Although the VI field includes O&M specialists who do not have to be a certified teacher, this comparison is still a good indicator of the high commitment VI professionals have to the VI field and the students they serve. In addition, VI professionals in Texas have the added benefit of being paired with a trained, experienced mentor. Support is also offered at both the region and statewide level through education service centers and the Texas School for the Blind and Visually Impaired Outreach Programs. All of these factors may help explain the lower attrition rate in Texas for VI professionals compared to other teaching fields.

**Table 8: Actual Attrition within the Past Year (1-Year Attrition)**

	2018	2019	2020
TVIs	33	31	35
COMS	2	8	8
Dually certified	4	5	6
Total	39	44	49

### Attrition factors

***Students with visual impairments are a low-prevalence and extremely diverse population. VI professionals are critical to student learning, therefore, a change of just one VI professional in a single district can have a dramatic effect on the annual yearly progress of their students.***

Retention of VI professionals is of critical concern. Unlike other disciplines, even in other high-need subject areas, when a VI professional is unavailable, often there is no one else in the district with the specific expertise needed to assess and meet the unique educational needs of students with visual impairments.



Factors that consistently impact recruitment and attrition of general and special education classroom teachers influence VI professionals as well. Administrative support, workload, working conditions and support in their new role are among attrition factors reported in the most current research. Additional considerations unique to the attrition and retention of the VI professional are:

- VI professionals have a unique skill-set and can be difficult to find.
- TVIs make up less than 0.2% of certified teachers in Texas and O&M Specialists are an even smaller group. Consequently, most administrators and educators are unaware of the VI field and the specialized services that a VI professional provides.
- Most VI professionals are mid-career professionals and are likely to have shorter careers in their second field.

As mentioned previously, the current attrition rate for VI professionals is 5%. This might sound small, however, the loss of 49 individuals this year can have a critical impact on students with visual impairments as there is a limited number of qualified individuals to replace them.

### **Projected 3-year attrition**

***ESC consultants project that, overall, 129 VI professionals will leave the field within the next 3 years.***

Projected attrition data is valuable for predicting and preparing for the VI professionals needed in the near future. VI consultants at the ESCs are the best and only source for information on future attrition for VI professionals. Gathering accurate data regarding a VI professional's retirement plans can be challenging. In general, VI consultants at the ESCs must rely on others for the information. Some people may be reluctant to share their plans or their plans may change in the interim period. Others may retire from their job, but take another contractual job in another district. Historically, projection totals are below actual attrition, especially for TVIs. ESCs tend to project that a higher number of COMS will leave the field than actually do, however, this year was an exception. In 2018 ESCs estimated that 28 COMS would leave the field by 2020 and 33 ended up leaving this year. Still, the estimate was a very close projection.

Individuals who function as dually certified have both VI and O&M expertise. Projecting the attrition of dually certified personnel appears to be especially difficult with a reliable degree of accuracy. This is a fluid group. Based on district need, an individual may function as dually certified one year but not the next. The information below includes individuals who are dually certified in both categories (and cannot be added). The "Overall" data reflects all VI professionals and has been adjusted for dually certified VI professionals. It is important to note that the data addresses individuals who will leave the field. The data do not include those who move from school employment to private contractual work, change districts, or retire and re-hire in the same or a different district.

**Table 9: Projected 3-Year Attrition**

Projections made in:	2018	2019	2020
<b>TVIs<sup>1</sup></b>	91	92	100
<b>COMS<sup>1</sup></b>	28	40	45
<b>Overall<sup>1</sup></b>	109	120	129

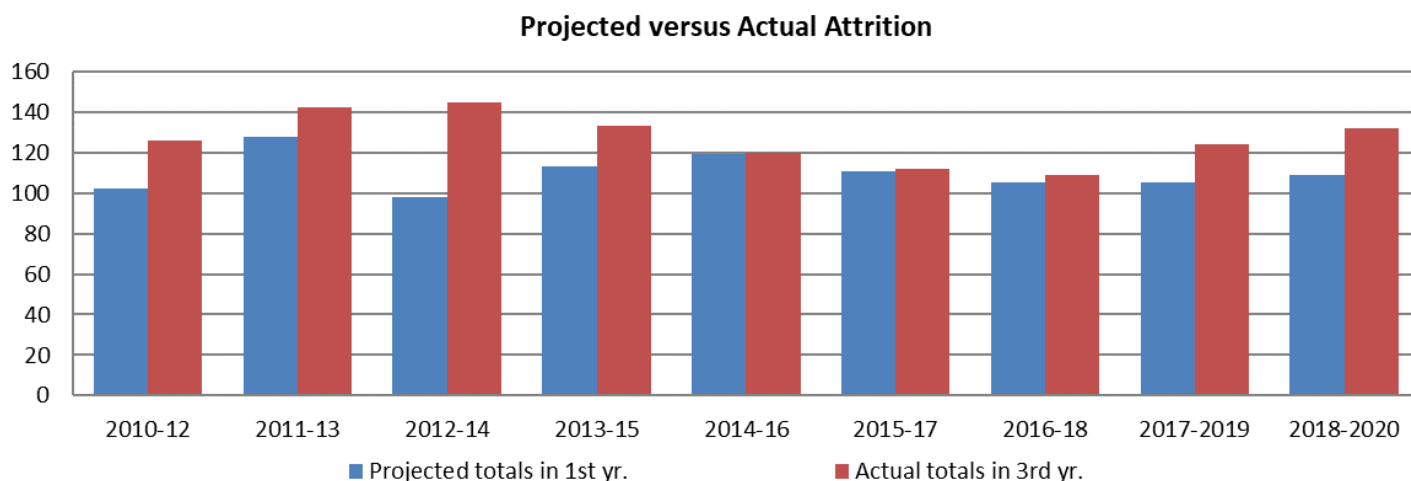
<sup>1</sup>Projections by ESC consultants reflect job expertise, not assignment. As a result, TVIs and COMS include data for dually certified staff and cannot be totaled. "Overall" includes all VI professionals and is adjusted for dually certified VI professionals.

In 2020, VI consultants at the ESCs estimate 45 COMS will leave the field over the next 3 years, **the highest projected total on record**. Consultants project that 100 TVIs will leave and that overall, 129 VI professionals will leave the field within the next 3 years. If the 129 projection is accurate, we can expect that 13% of *existing* VI professionals will retire or otherwise leave the field prior to 2023.

### Projected vs. actual attrition

***VI professionals at the ESCs are the best and only source for statewide information on attrition over the past year and projected attrition over the next three years.***

Although ESC projections are the most accurate source available, real attrition has often been underestimated. As illustrated in the graph below, ESC-estimated three-year attrition numbers are typically under the actual totals; however, projections were extremely close to the actual number of VI professionals who left the field between 2014 and 2016. Looking at the most recent 3-year time frame, in 2018 it was projected that 109 people would leave the field by 2020. The field actually lost 132 VI professionals this year, a difference of 23 individuals. It is likely that the unexpected circumstances of the year contributed to the larger gap in the most recent projected vs. actual attrition data.



\* 2018–2020 is the last time frame for which a complete set of data is available.

## Anticipated Need

Interpreting and understanding the need for educational professionals traditionally relies on several factors, including the number of posted positions and recommendations from knowledgeable professionals. Below (Table 10 and the graph that follows) are data from each of these areas. The expected student growth of 912 students over the next 3 years should be kept in mind when considering the anticipated need for VI professionals who will serve them.

### Posted positions

***This year the number of existing vacancies, after all typical hiring had been completed, increased significantly once again from 31 to 47.***

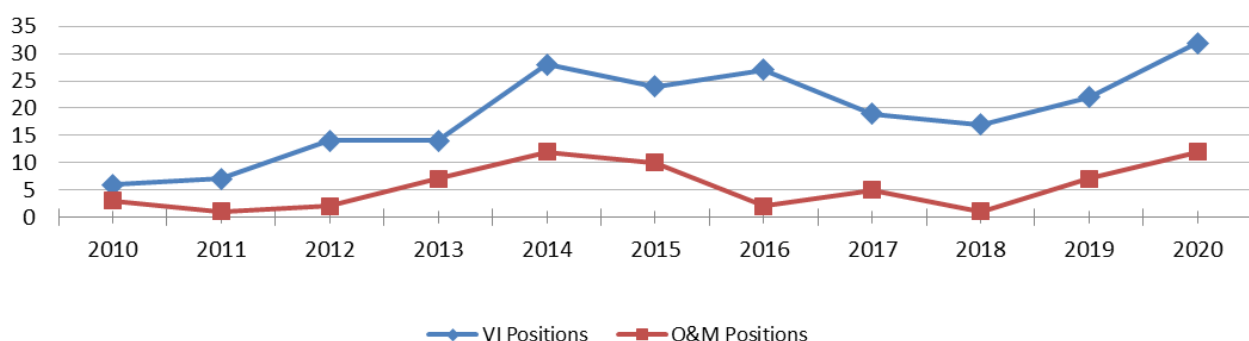
The respondents at each ESC and at TSBVI were asked how many part- or full-time positions were posted in their regions or at TSBVI in September 2020. These data were collected in September and reflect numbers after all regular hiring for the academic year had been completed. These positions remained unfilled and active because districts were unable to find a VI professional or the positions were opened after the start of the school year.

**Table 10: Posted Positions**

	2018	2019	2020
<b>TVIs</b>	17	22	32
<b>COMS</b>	1	7	12
<b>Dually certified</b>	0	2	3
<b>Total</b>	<b>18</b>	<b>31</b>	<b>47</b>

Previous formal and informal data indicates that vacancies alone are not a strong indicator of actual need. The reasons vary. Many administrators will identify a need and encourage an existing educator to become VI certified rather than post a vacancy. Likewise, the need for a private contract TVI or O&M position may not necessarily be posted. Although at times the number of posted positions has matched or has not been far off from the number of VI professionals who left the field, data collected over the past 25 years indicates a poor correlation between vacancies in September and the actual need for VI professionals.

**Posted Vacancies for VI Professionals**



## Recommendations by knowledgeable professionals

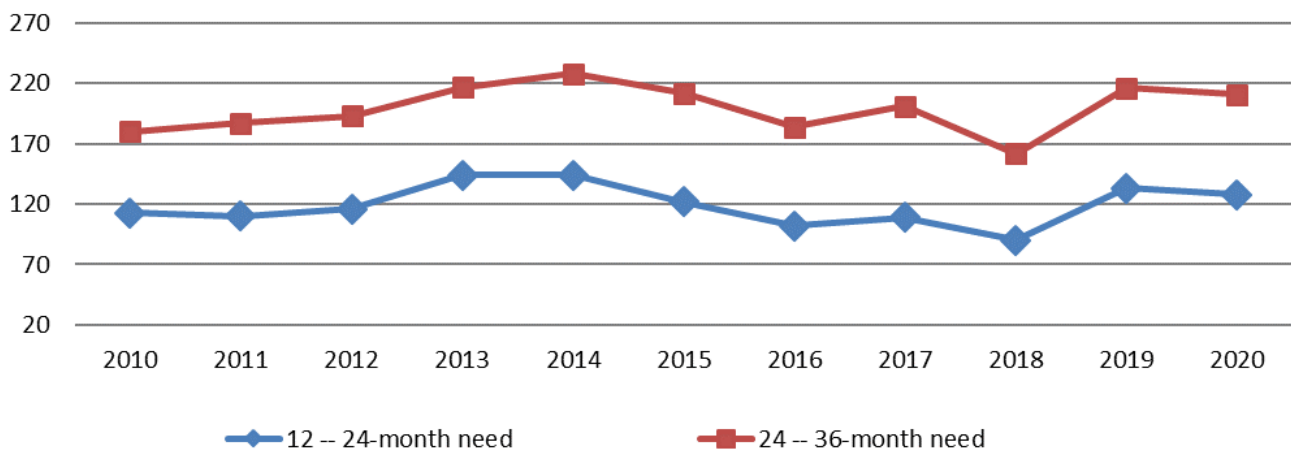
***In 2019, ESCs anticipated needing 42% more COMS (81 individuals) across the state over the next three years. The projected need for additional COMS continues to grow with ESCs estimating a long-term need of 87 additional COMS by 2023.***

Regional VI consultants are the experts in visual impairments for their region. VI consultants and TSBVI staff were asked how many TVIs, O&M specialists, and dually certified personnel were needed in their area based on projected student growth and how many staff are expected to leave the field. The survey asked about projected need, not about positions available. However, historically, positions follow the availability of VI professionals.

There are two ways to assess the shorter- and longer-term projected needs: either by job assignment or by professional expertise. The terms “TVI” or “COMS” indicate a type of expertise as expressed through the certification in a professional discipline. Those in the “dually certified” category hold both certifications and function in both professional disciplines.

Functioning as a dually certified VI professional primarily reflects district need and therefore is a job assignment and not a unique discipline. Dually certified assignments are also very fluid and vary from year to year. For the purposes of this section of the report, the data reported will be by professional expertise, not by job assignment. Understanding need by expertise informs future training and funding needs. Dually certified VI professionals function as part-time TVIs and part-time COMS. As such they will be added to both areas as part-time TVIs and O&M specialists.

**Projected Shorter- and Longer-Term Need for VI Professionals**



**Table 11: Projected Short-Term Need: 12–24 Months**

	2018	2019	2020
<b>TVIs<sup>1</sup></b>	69	103	99
<b>COMS<sup>1</sup></b>	33	52	47
<b>Overall<sup>1</sup></b>	<b>90</b>	<b>133</b>	<b>128</b>

<sup>1</sup> Projections reflect job expertise, not assignment. As a result, “TVIs” and “COMS” include data for dually certified staff in both categories and cannot be totaled. “Overall” includes all VI professionals and is adjusted for dually certified VI professionals.

**Table 12: Projected Longer-Term Need: 24–36 Months**

	2018	2019	2020
<b>TVIs<sup>1</sup></b>	125	168	159
<b>COMS<sup>1</sup></b>	57	81	87
<b>Overall<sup>1</sup></b>	<b>162</b>	<b>216</b>	<b>211</b>

<sup>1</sup> Projections reflect job expertise, not assignment. As a result, “TVIs” and “COMS” include data for dually certified staff in both categories and cannot be totaled. “Overall” includes all VI professionals and is adjusted for dually certified VI professionals.

Both the projected short-term and longer-term need for VI professionals increased significantly in 2019. This year, totals decreased a bit with ESCs projecting a need for 128 VI professionals within one to two years and 211 within the next three years. It should be noted that the projected longer-term need of 87 COMS is the second-highest total on record; second to projections made in 2014 (94) when ESCs were likely considering TEC 30.002, a newly enacted state law requiring that initial evaluations of students with visual impairments include an O&M evaluation.

The ESCs’ long-term need estimation peaked last year with totals equaling the highest on record. Given the anticipated student growth, it is good to see that projections by the ESCs did not change significantly in 2020.

### **Discussion of projected need and teachers of students with visual impairments (TVIs)**

***Texas is projected to need between 157 and 171 TVIs in the next 3 years to accommodate both attrition and student growth.***

As discussed in the Growth of Students with Visual Impairments and Impact on VI Professionals (pages 14-15), Texas will need between 57 and 71 additional TVIs to meet the anticipated growth in the number of students with visual impairments.

In addition to meeting the needs related to expected demographic increases, Texas will need to replace TVIs who leave the field. It is projected that 100 individuals with VI expertise (TVIs

and dually certified professionals) will leave the field prior to 2023. Although ESC consultants have at times projected closer to actual numbers, the average 3-year attrition ratios for those with VI expertise have exceeded projections up to almost 19 percent. Therefore, it is possible that attrition could be closer to 119 full- and part-time individuals certified as TVIs.

Combining projected growth and attrition, Texas will need between 157 and 171 new teachers of students with visual impairments in the next 3 years to replace those who are likely to leave and respond to anticipated growth. The ESC projection of 159 TVIs needed in that time period falls within the lower end of this range.

**Table 13: Projected Need and TVIs**

Number of TVIs needed to meet student growth	57 - 71
Number of TVIs needed due to attrition	100
<b>Total FTE needed by 2023</b>	<b>157 - 171</b>

In the Fall of 2020, 112 people were seeking VI certification through a university program in Texas. Thirty-six were working under an emergency permit. Consequently, these TVIs are already working with students and included in this count as TVIs. If the university TVI program completion rates continue to reflect the 3-year average (2018-2020) of 40 completers, the number of newly certified TVIs (120) ***will fall well below the range of anticipated need.***

### Discussion of projected need and O&M specialists

***Texas is projected to need up to 102 additional O&M specialists over the next three years to accommodate both attrition and student growth.***

The projected need for orientation and mobility specialists (COMS) increased in the longer-term category and decreased slightly in short-term need. It is important to consider the following factors when estimating the future need for O&M specialists:

- \* TEC 30.002 requires that initial evaluations of students with visual impairments include an O&M evaluation.
- \* Approximately 25% of current students with visual impairments have not had an O&M evaluation to determine whether they need O&M services.
- \* Currently, there are no reliable statistical projections on the percentage of students with visual impairments who will need O&M services *at any given time.*

**Table 13: Projected Need and COMS**

Number of COMS needed to meet student growth	41 - 57
Number of COMS needed due to attrition	45
Total FTE needed by 2023	86-102

As discussed in the Growth of Students with Visual Impairments and Impact on VI Professionals (pages 14-15), Texas will need between 41 and 57 additional O&M specialists to meet the anticipated growth in the number of students with visual impairments.

Regional VI consultants project that 45 people with O&M expertise (O&M specialists and dually certified professionals) will leave the field by 2023. If the expected student growth is combined with the 3-year projected attrition and based on statewide average student-to-teacher ratios, it is likely that Texas will need between 86 and 102 additional full- and part-time O&M specialists over the next 3 years. The projected longer-term need of 87 made by the ESC consultants, who know their regions best, falls within the lower end of this range. As previously mentioned, the 2020 statewide projected need for COMS has not been this high in six years. It is imperative for districts to ensure that all students with visual impairments receive an initial orientation and mobility evaluation and consideration by an O&M specialist of their need for an evaluation every three years. Only then can the educational team members be assured that those who need O&M instruction are receiving it.

An average of 23 individuals received orientation and mobility certification through a Texas university over the last three years. In addition to the decline in O&M completers seen in 2019, this year brought highly unforeseen challenges and the total number of O&M completers dropped once again. The COVID-19 pandemic halted orientation and mobility internships and prevented students from completing their program and the certification process. Presuming that orientation and mobility students continue to find challenges in completing their programs, and the number of completers continues at the same rate over the next 3 years (68), ***it is likely that the need for a minimum of 86 new COMS by 2023 will not be met.***

## **Enrollment to Prepare VI Professionals**

Texas is fortunate to have two collaborative partners who train VI professionals: Texas Tech University (TTU) and Stephen F. Austin State University (SFASU). Both schools have graduate programs for TVIs and O&M specialists. SFASU also has an undergraduate program for orientation and mobility specialists. In fact, SFASU's undergraduate O&M program is the only one of its kind in the country. Both schools support and provide courses for VI and O&M students using a combination of distance-learning and face-to-face courses.



The combination of distance-learning options and supportive funding has had a major impact on the number of VI professionals in Texas. Enrollment increased substantially with the development of distance-learning options in 1998 and proved to be essential in 2020.

### Students registered in Texas programs

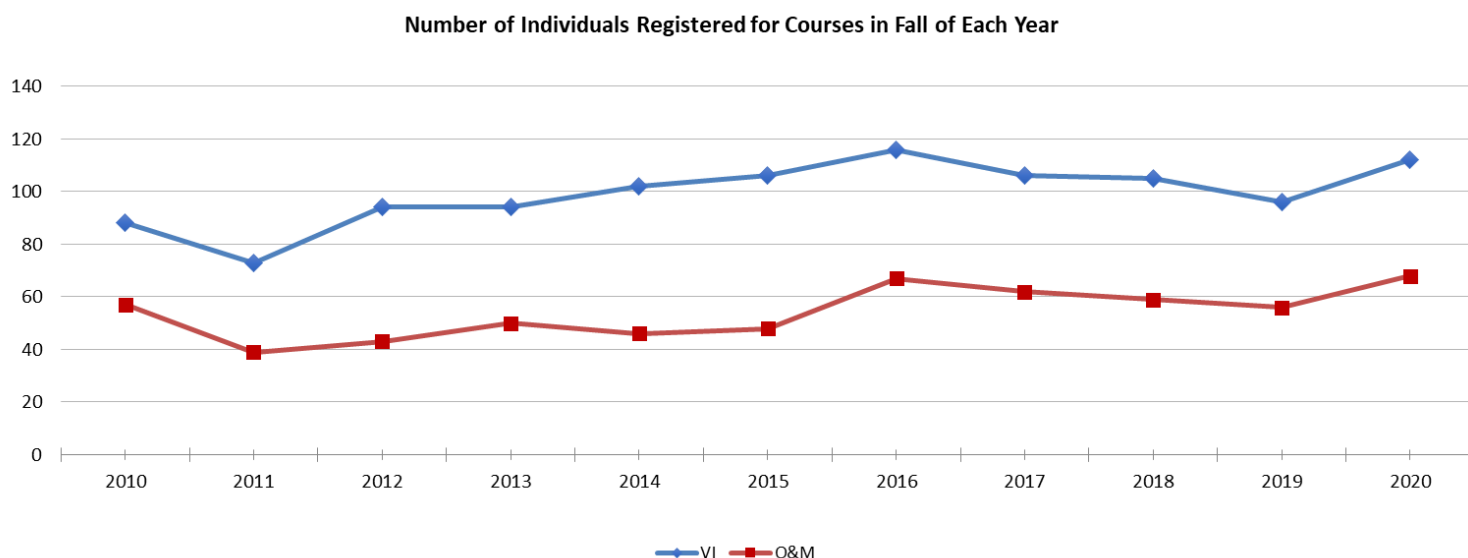
***The total number of Texas students registered for courses leading to VI or O&M certification increased significantly in 2020.***

As noted in the chart below and graph that follows, a total of 180 students were registered for courses leading to certification in 2020. The total number of students grew this year in both the VI and O&M programs, well above that of the 5-year average (169). One hundred twelve individuals are seeking VI certification and 68 are en route to O&M certification. This is positive and encouraging data as it reflects both a growth in awareness of the VI field and an increase in knowledge of the preparation programs available in Texas that lead to VI and O&M certification.

**Table 14: Number of Students in Training Programs**

	2018	2019	2020
<b>Visual impairments</b>	105	96	112
<b>Orientation and mobility</b> (incl. undergraduates)	59	56	68
<b>Total</b>	<b>164</b>	<b>152</b>	<b>180</b>

The data for TVIs reached a peak in 2009 then declined through 2011. It increased in 2012 and continued to rise before decreasing by 10 in 2017 and again by 1 in 2018. The data for COMS reached a peak in 2016 at 67 and the low point in 2011 at 39. In 2018 there are 105 enrolled in the TVI programs and 59 in the O&M programs.





## Students completing Texas certification programs

***Thirty-four individuals completed VI training and 15 completed their O&M program in 2020, preparing 14% fewer new VI professionals than the year before.***

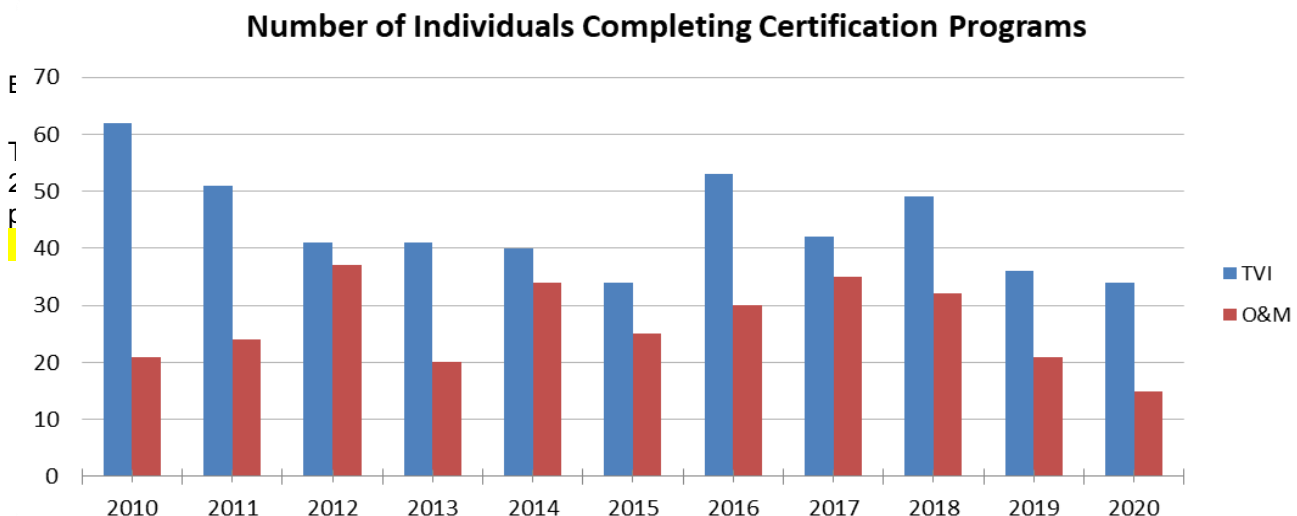
As can be seen in Table 15 and the graph below, over the past year, a total of 49 Texas residents completed their certification programs. This is another significant drop and is a concern after the 30% decline in completers seen last year, despite rising student numbers in the public schools.

It should be noted that unlike students seeking VI certification, who may be eligible to work as a TVI under an emergency permit before completing their program, COMS candidates must complete their entire program and obtain certification before they can start working as an O&M specialist in Texas public schools. This is especially important to consider during the COVID-19 crisis when orientation and mobility students may be unable to complete their internships, their university programs and, essentially, the certification process that would allow them to support the growing number of students eligible for orientation and mobility services.

In addition, O&M certification is a national certification and valid in any state. It is also applicable for all age groups, not just for the birth through twenty-one population served by the public school system in Texas. It is hoped that school districts will be able to consistently hire graduating O&M specialists, otherwise positions could be filled outside of education and/or the state.

**Table 15: Number of Individuals Completing Certification Programs**

	2018	2019	2020
<b>Visual impairments</b>	49	36	34
<b>Orientation and mobility</b> (incl. undergraduates)	32	21	15
<b>Total</b>	<b>81</b>	<b>57</b>	<b>49</b>



**University students receiving financial assistance in Texas certification programs**

***The majority of students enrolled in the SFASU and TTU VI and O&M training programs received financial support through Texas grants.***

In 2020, the percentage of students in personnel preparation programs (VI Certification and O&M) receiving financial assistance was seventy percent. Although this may seem a bit of a drop from last year, there are only 5 fewer students receiving grants than in 2019. Eighty-three percent of those in the TVI certification programs and almost half in the O&M programs received assistance. Tuition support is a strong incentive for enrollment especially considering that gaining a certification to work with students with visual impairments does not typically lead to an increase in salary.

**Table 14: Percentage of Students Receiving Support through Texas Grants**

	2018	2019	2020
Percentage of students receiving TX stipends	79%	76%	70%

It is encouraging to see enrollment in the VI and O&M university programs grow by a significant 18% this year. Given that stipends currently support most of those enrolled, funding will remain an essential factor in the training of new TVIs and COMS. In addition to the need for continued funding for student tuition going forward and as the university programs continue to grow to meet statewide shortages, there is also a need for increased program operation funding, particularly funds to hire additional full-time faculty to improve program quality and meet teacher candidate needs.

**Summary**

This report reviewed characteristics of and indicators of need for VI professionals. In September 2020, Texas had 963 individuals (886.9 FTEs) providing vision-related services, either directly to students or in a leadership and/or technical-assistance capacity. After adjusting for dually certified professionals (76), there are 908 individuals providing direct service either on a full- or part-time basis. The total includes the following full- or part-time individuals:

- 669 teachers certified in visual impairments (TVIs) or 590 FTEs; a decrease of 25 individuals or 20 FTEs in one year.
- 315 certified orientation and mobility specialists (COMS) or 250 FTEs; an increase of 9 individuals and 9 FTEs from 2019.

- 76 dually certified professionals; up by 13 this year and the highest total on record.

In addition, there are:

- 55 regional or statewide leadership or technical-assistance specialists; approximately 47 FTEs.
  - 25 individuals or 21.1 FTEs are at the regional education service centers (ESCs)
  - 30 individuals or 25.8 FTEs are at the Texas School for the Blind and Visually Impaired either in Outreach or Short-Term Programs

With a current total of 25, the number of individuals providing leadership and technical assistance at the ESCs decreased by two individuals in 2020. The time available to assist districts and families dropped slightly; ESCs reported 21 FTEs this year and 23.5 in 2019.

The total number of VI providers available to serve students in 2020 decreased to 908 individuals (adjusted for dually certified professionals), from 937 in 2019. The number of individual TVIs decreased by 25 (20 FTEs), while the number of students increased by 372 across the state. The number of COMS increased from 306 to 315 individuals, or by approximately 3 percent, as 25% of the current number of students with a visual impairment are still in need of an O&M evaluation.

The VI field saw an increase in the number of VI professionals who are African-American (+15) and those who are fluent in Spanish (+8) and a decrease in the number of VI professionals who are Hispanic (-8) and Asian-American (-2). Although there were indications of some growth in the cultural diversity of the VI field in 2020, continued efforts to expand diversity to reflect the student demographic are still needed.

This report uses a knowledgeable informant model and considers the recommendations of the VI specialists at the regional ESCs to be the best indicators of real need in Texas. These professionals have extensive knowledge of their districts and region. ESC estimates continue to indicate a growing need for additional VI professionals over the next three years. Specifically, their projected longer-term need overall for VI professionals is 211 (adjusted for dually certified professionals). This is only slightly lower than the longer-term need of 216 made by the ESCs last year, the highest total ever reported.

An examination of attrition, projected attrition, student population growth and need within the past year yielded striking results. This year's attrition total is among the highest reported by the ESCs, increasing from 44 to 49 individuals which falls above the 5-year average of 41 and the 10-year average of 45 across all VI professionals.

The projected 3-year attrition is estimated at 129, or 13% of all VI professionals. This is a much higher number than seen over the last two years, with the majority of the increase projected for TVIs and those who are functioning in a dually certified role. Although the regional VI consultants are the best predictors for attrition and we have seen the projected vs. actual attrition gap almost close, even they have significantly underestimated attrition for VI professionals over the past two years. Therefore, it is likely that as retirements are realized, attrition over the next 3 years will continue to be a pertinent factor in planning for an adequate number of VI professionals.

A long-term examination of growth patterns predicts that the number of students with visual impairments needing services will increase by at least 2.7% each year, or by 912 additional students over the next three years. It is expected that Texas will have at least 12,037 students with visual impairments by 2023. Therefore, Texas could see a need for 71 additional full-time equivalent TVIs and 57 full-time equivalent COMS by 2023 to **accommodate student growth alone**.

Considering the average projected increase in the statewide student population each year in addition to anticipated attrition, Texas could see a need for **157-171** additional full-time equivalent TVIs and **88-102** full-time equivalent COMS by 2023. Although falling into the lower end of the range, the longer-term need estimated by the ESCs closely parallels these projections for both TVIs and COMS.

Clearly, based on student growth and projected attrition, Texas has a growing need for VI professionals. University certification programs are working diligently to meet that need. The statewide total number of students entering VI and O&M certification programs at Stephen F. Austin State University and Texas Tech University increased this year by 18 percent. The majority of students are receiving financial support. This increase is good news; however, the total number of those completing VI and O&M programs dropped by 30% in 2019 and that total dropped by an additional 14% this year. The decline in those completing their programs in 2020 can certainly be related to challenges brought on by the COVID-19 pandemic. Consequently, these unforeseen challenges and overall drop in the number of students completing their university programs over the last two years are indications of a likely significant shortage of new VI professionals available to serve the growing number of children with visual impairments across the state.

# Appendix

## Methodology

The ESC consultant and TSBVI survey asked about the number of people *functioning* as VI professionals. These individuals may be TVIs, O&M specialists, or both. Those *functioning* in both roles are referred to as being dually certified. The VI professionals provide instruction to students in a direct or consultative capacity and/or provide leadership or technical assistance from regional education service centers (ESCs) or Texas School for the Blind and Visually Impaired (TSBVI). Those who provide leadership or technical assistance may have full- or part-time positions.

TSBVI serves as a statewide resource, with a concentration of students and VI professionals. As a result, TSBVI data were collected separately from that of the ESCs. Unless otherwise noted, TSBVI data are included in the data presented in this report. Data from TSBVI include information about TSBVI professionals who provide direct services via the Comprehensive Program and who provide statewide training, short-term services, and leadership via the Short-Term Programs and Outreach Programs.

This survey captures information about the number of individuals working with students with visual impairments in the state of Texas in either a full- or part-time capacity. It does not gather information on the number of districts that employ full- and/or part-time VI professionals.

Individuals who work part-time but in multiple districts are considered “full-time VI professionals.” The reference to “full-time” or “part-time” refers to the total employment of the VI professional, not to how long a specific district employs a VI professional.

Texas employs both full- and part-time VI professionals. Full-time professionals are those who work at least .6 FTE or more. Part-time professionals are those who work .5 FTE or less. This method has been used by TEA and is considered to be an adequate estimate of the number of full-time equivalent VI professionals. Part-time VI professionals are a significant proportion of the Texas VI workforce (24% of the TVIs and 41% of the O&M specialists).

When relevant, information about full-time equivalent (FTE) positions is also presented. The number of FTE staff was determined by multiplying the number of people employed in part-time positions by .5 and adding the result to the number of people employed as full-time VI professionals (part-time X .5 + full-time = FTE).

The descriptive and need data reflect statewide totals of a combination of TVIs and O&M professionals. Data on each profession are also included separately. When appropriate, data on dually certified VI professionals are also presented.

For the purposes of this survey, professionals who provide both O&M and VI services (dually certified) are counted as part-time TVI and part-time O&M. Although they may be full-time

employees of a district or cooperative, dually certified professionals are considered part-time TVIs and part-time O&M specialists. As a result, dually certified individuals appear on both the TVI and O&M tables as part-time professionals. This results in a variance between the data listed in the Statewide Totals table (Table 1) and the combined totals of the Direct-Service Provider tables (Tables 2 and 3). Simply adding together the discipline-specific totals would result in double-counting some individuals. Statewide totals are adjusted for dually certified professionals.

## References

Correa-Torres, M., & Johnson Howell, J. (2004). Facing the challenges of itinerant teaching: Perspectives and suggestions from the field. *Journal of Visual Impairment & Blindness*, 98, 420–433.

DiSchiano, Zach (October 2017). 4 Key Factors Impacting Teacher Retention. Retrieved from <https://www.tasb.org/Services/HR-Services/HRX/Recruiting-and-Hiring/4-Key-Factors-Impacting-Teacher-Retention.aspx>

Griffin-Shirley, N., Pogrund, R., & Grimmet, E. (2011). View of dual-certified vision education professionals across the United States. *Insight*, 4, 15–21.

Ingersoll, R., & Merrill, L. (updated 2014). *Seven trends: The transformation of the teaching force*. Retrieved from [http://repository.upenn.edu/cgi/viewcontent.cgi?article=1261&context=gse\\_pubs](http://repository.upenn.edu/cgi/viewcontent.cgi?article=1261&context=gse_pubs).

Morath, Mike, TEA Commissioner of Education. Pocket Edition 2018-19 Texas Public School Statistics. Retrieved from [https://tea.texas.gov/sites/default/files/2018-19%20Pocket\\_Edition\\_Final.pdf](https://tea.texas.gov/sites/default/files/2018-19%20Pocket_Edition_Final.pdf)

Smith, Todd G., Ph.D. (April 2020). Employed Teacher Demographics 2014-15 through 2018-19. TEA PEIMS data. Retrieved from <https://tea.texas.gov/sites/default/files/Employed%20Teacher%20Demographics%202014-15%20through%202018-19.pdf>

Texas School for the Blind and Visually Impaired. (n.d.) *Administrator's Toolbox, Chapter 7: Hiring and Employment Options*. Austin, TX

Texas School for the Blind and Visually Impaired. (2020). *Annual registration of students with visual impairments*. Austin, TX

U.S. Department of Education, National Center for Education Statistics, Institution of Education Sciences. (2014). *Teacher attrition and mobility: Results from the 2012–13 teacher follow-up survey* (NCES Publication No. 2014-077). Retrieved from <https://nces.ed.gov/pubs2014/2014077.pdf>