

Survey Methodology, Respondent Demographics, and Glossary

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Executive Summary

In Spring 2020, the American Speech-Language-Hearing Association (ASHA) conducted a survey of speech-language pathologists (SLPs) and educational audiologists in school settings. The survey was designed to provide information about school-based service delivery and to update and expand information gathered during previous *Schools Surveys*.

The results are presented in a series of reports. This report is based on responses from SLPs and audiologists in special day/residential schools, preschools, elementary schools, secondary schools, students' homes, administrative offices, and combined settings. Data are presented only for those subsets of data in which at least 25 individuals provided a response. Several groups are included as part of the *total* response, even though data are not presented for them in a separate category because fewer than 25 of them provided the necessary information.

Overall Findings

- ◆ The overall response rate was 40%: 40% for SLPs and 42% for audiologists.
- ◆ 88% of SLPs and 90% of audiologists were salaried employees.
- ◆ The most common facility was elementary schools for SLPs and combined settings for audiologists.
- ◆ 88% of SLPs and 76% of audiologists were clinical service providers.
- ◆ 83% of SLPs and 78% of audiologists worked full time.
- ◆ 88% of SLPs and 88% of audiologists received an annual salary; the rest were paid an hourly wage.
- ◆ 1% of SLPs held a PhD degree, and 59% of audiologists held an AuD degree.
- ◆ The mean age of SLPs was 44 years; the mean age of audiologists was 51 years.
- ◆ SLPs had a median of 16 years of experience in the professions; audiologists had a median of 26 years.
- ◆ 47% of SLPs worked in a suburban area; 41% of audiologists worked in an urban area.
- ◆ SLPs (32%) and audiologists (33%) were more likely to work in the South than in other areas of the country.

Survey Methodology

The survey was mailed on February 10, 2020, to a random sample of 4,500 ASHA-certified SLPs and 500 ASHA-certified audiologists who were employed in school settings in the United States. Individuals who returned their surveys were removed from the second (March 11) mailing. Each mailing consisted of a personalized cover letter, a numbered survey, and a #10 postage-paid business return envelope inserted into a #11 window envelope with an ASHA return address. Metered postage was at the full, first-class rate. In addition, a be-on-the-lookout email was sent to all sample members on February 12.

Sample Design

Under normal circumstances, the survey would have been fielded a third time to nonrespondents. However, the date of the planned third mailing coincided with the COVID-19 pandemic, and the staff made the decision to not burden members with a survey request when they were facing enormous personal and professional challenges.

Response Rate

Of the original 5,000 members of the sample, 71 were ineligible. One respondent ripped off his ID number, but his certification status (i.e., CCC-SLP) was revealed in his response to the certification question in the survey. The number of respondents was 1,987, resulting in a 40% response rate overall (see Table 1).

Table 1: Calculation of Response Rate

Disposition	Total	CCC-SLP	CCC-A
Original sample size	5,000	4,500	500
Respondent removed ID label	1	1	0
Total gross sample size	5,001	4,501	500
Undeliverable mailing address	13	8	5
Ineligible: retired	17	17	0
Ineligible: other reasons	41	39	2
Net sample size	4,930	4,437	493
Number of respondents	1,987	1,779	208
Response rate	40.3%	40.1%	42.2%

Each survey had 32 questions with Arial 11-point font on 11 in. × 17 in. white paper, folded to 8.5 in. × 11 in. and printed in a format of two columns per page on four pages. TeleForm was used to design the survey instrument and to scan and verify returned surveys.

Cover letters were personalized with the sample member’s name and address. The back of the cover letters included a thank-you note, information about ASHA Connect 2020 and Special Interest Groups, and contact information should respondents have questions about the survey instrument (see Appendix A for a sample of the first letter to the audiologists).

Not only is it typically the case that some individuals who receive a survey do not complete it (unit nonresponse), but it is likewise true that some who return their surveys do not answer every question (item nonresponse) and thus do not qualify for inclusion in portions of a report. They may be excluded from analyses because they did not answer a question at all or because their answer disqualified them (such as stating that they were employed part time when a particular analysis was limited to full-time employees). For example, among the 1,779 SLPs who responded, only 1,717 were included in reporting on their primary employment facility (see Figure 1) because they

- ◆ indicated that they had ASHA certification (i.e., the Certificate of Clinical Competence) in Speech-Language Pathology (CCC-SLP);
- ◆ indicated that they were employed full time or part time; and
- ◆ identified the type of employment facility where they were employed.



Demo- graphics

Respondents Versus Population

The closer the match between survey respondents and the population of ASHA school-based constituents from which they were drawn, the more validity there is in generalizing from the sample to the population—that is, the more truth there is in saying that the people who answered the survey questions represent the broader group from which they were selected. Demographic variables that appear in both the membership database and the survey include primary employment facility and function, highest earned degree, sex, age, and region of the country.

Comparisons between the respondents and the population can be made for several characteristics, the first being the *type of school* in which they worked.

- In the population, 46% of SLPs and 4% of audiologists who worked in the schools were employed in *elementary schools*, compared with 59% and 23%, respectively, of the survey respondents.

A second area of comparison is their primary *function*.

- 75% of SLPs and 83% of audiologists in the population were *clinical service providers*, compared with 88% of SLPs and 76% of audiologists among the survey respondents.

Another characteristic to be compared is the *highest earned degree*.

- 1% of SLPs and 37% of audiologists in the population reported having earned a *doctoral degree*, compared with 2% of SLPs and 60% of audiologists among the survey respondents.

A fourth characteristic to be compared is *sex*.

- 3% of SLPs and 5% of audiologists in the population were *male*, compared with 2% of SLPs and 4% of audiologists among the survey respondents.

Age is another characteristic that can be compared.

- The median age of SLPs who were employed full- or part time was 43 years in both the population and among the survey respondents. The median age for audiologists was 51 years in the population and 52 years among the survey respondents.

The survey sample was stratified by state; that is, states with small numbers of ASHA constituents were oversampled, and those with large numbers were undersampled. Despite the stratification, SLPs and audiologists who responded to the survey almost perfectly mirrored those in the population of professionals who work in the schools on *region of the country* where they were employed.

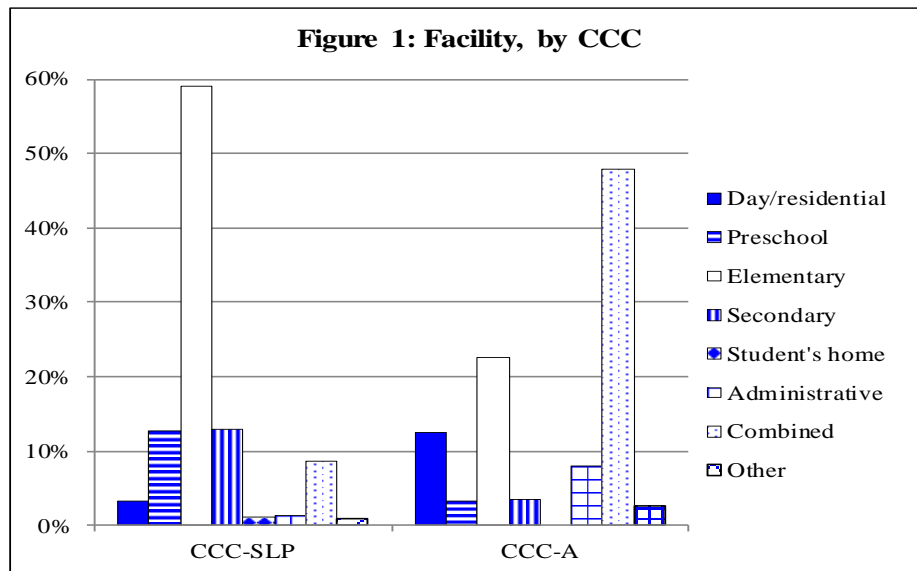
- 27% of SLPs and 17% of audiologists in the population—compared with 26% of SLPs and 17% of audiologists who replied to the survey—worked in the Northeast.
- 24% of SLPs and 25% of audiologists in the population—compared with 24% of SLPs and 26% of audiologists who replied to the survey—worked in the Midwest.
- 31% of SLPs and 33% of audiologists in the population—compared with 32% of SLPs and 33% of audiologists who replied to the survey—worked in the South.
- 18% of SLPs and 25% of audiologists in the population—compared with 18% of SLPs and 25% of audiologists who replied to the survey—worked in the West.

Employment Situation

Both SLPs (88%) and audiologists (90%) were more likely to be salaried employees than contract employees or self employed.

Primary Employment Facility

More SLPs were employed in *elementary* schools (59%) and more audiologists in *combined* settings (48%) than in any other facility type, as shown in Figure 1.



Note. For CCC-SLP, $n = 1,717$. For CCC-A, $n = 200$.
 CCC-SLP = Certificate of Clinical Competence in Speech-Language Pathology;
 CCC-A = Certificate of Clinical Competence in Audiology.

Excluded Facilities

Individuals who worked in an *other* type of facility have been included in the 2020 Schools Survey reports only as part of the total—not as a separate category of facility—because of the ambiguous nature of this small group of individuals ($n = 21$). The few SLPs who worked in students’ homes ($n = 18$) and in administrative offices ($n = 24$) are also included in the total data but are not broken out or shown separately.

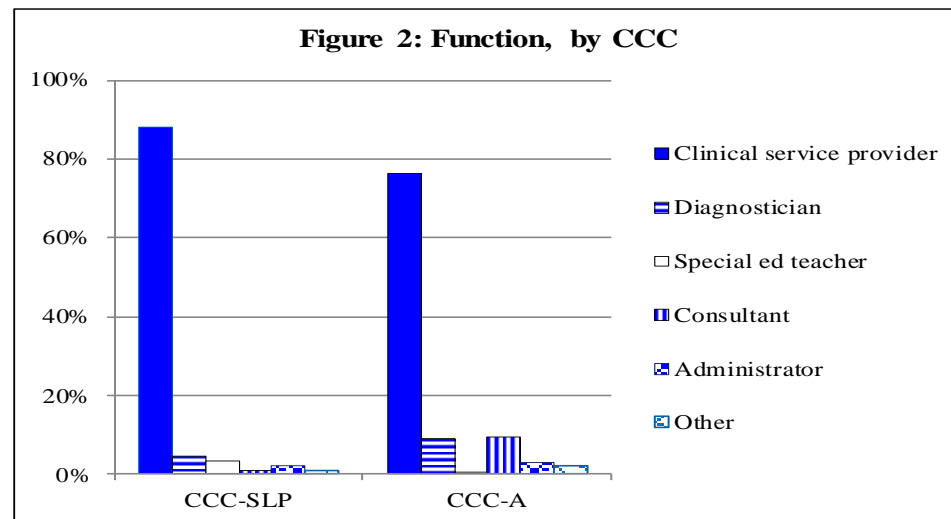
Also included in the total are the small groups of audiologists who worked in preschools ($n = 6$), secondary schools ($n = 7$), and administrative offices ($n = 16$).

Three SLPs did not identify a primary employment facility, despite being employed full- or part time.



Primary Employment Function

The vast majority of respondents were clinical service providers, including 88% of SLPs and 76% of audiologists (see Figure 2).



Note. For CCC-SLP, $n = 1,700$. For CCC-A, $n = 197$.
 CCC-SLP = Certificate of Clinical Competence in Speech-Language Pathology;
 CCC-A = Certificate of Clinical Competence in Audiology.

Employment Status

Being identified as employed full time or part time in the ASHA member database was one of the requirements for being included in the sample of ASHA constituents who received the 2020 Schools Survey. Among those who responded, 83% of the SLPs and 78% of the audiologists worked full time. An additional 14% of SLPs and 18% of audiologists were employed part time. The remaining respondents identified themselves as currently unemployed.

Salary Basis

Most of the SLPs (88%) and most of the audiologists (88%) were paid an annual salary. The rest received an hourly wage.

Highest Degree

SLPs (1%) and audiologists (1%) were equally likely to have earned a PhD, but audiologists were much more likely than SLPs to have earned a clinical doctorate.

- 98% of SLPs and 41% of audiologists had earned a master’s as their highest degree.
- 59% of audiologists had earned an AuD degree as their highest degree.

Sex

Most of the SLPs (98%) and most of the audiologists (96%) were female. The rest, 2% of the SLPs and 4% of the audiologists, were male.

Age

The mean age of the SLPs who responded to the survey was 44 years, and the median age was 43 years. The mean age of the audiologists who responded was 51 years, and the median was 53 years.

- Mean ages for SLPs were lowest in elementary schools (43) and highest in secondary schools and combined settings (46; $p = .002$).

Years of Experience

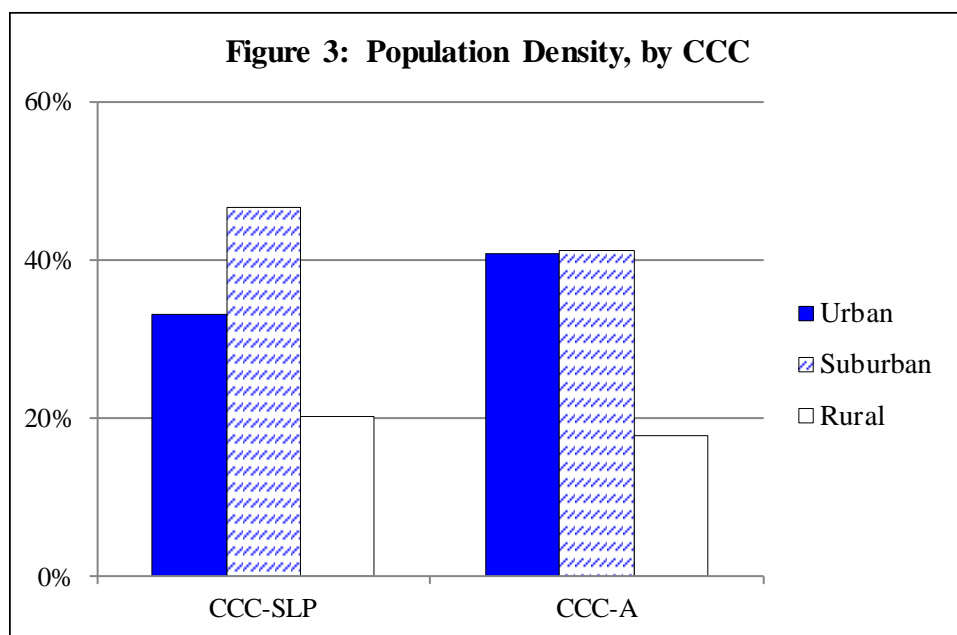
SLPs averaged 17 (mean) or 16 (median) years of experience in the *professions* and 15 (mean) or 13 (median) years of experience in the *schools*.

Audiologists averaged more years of experience than did the SLPs. The mean number of years of experience that audiologists had in the *professions* was 25, and the median was 26 years. Audiologists averaged 17 years of experience in the *schools*. The median was also 17 years.

Population Density

Nearly half (47%) of the SLPs who were employed either full time or part time worked in a suburban area (see Figure 3). The type of school setting was related to the locale in which SLPs worked ($p = .000$).

- More than half of the SLPs in preschools (55%) worked in suburban areas.
- SLPs who worked in secondary schools (42%), combined settings (42%) and special day/residential schools (43%) were more likely than SLPs in other types of facilities to work in cities/urban areas.
- SLPs in elementary schools (46%) were more likely to work in suburban areas than in other types of areas.

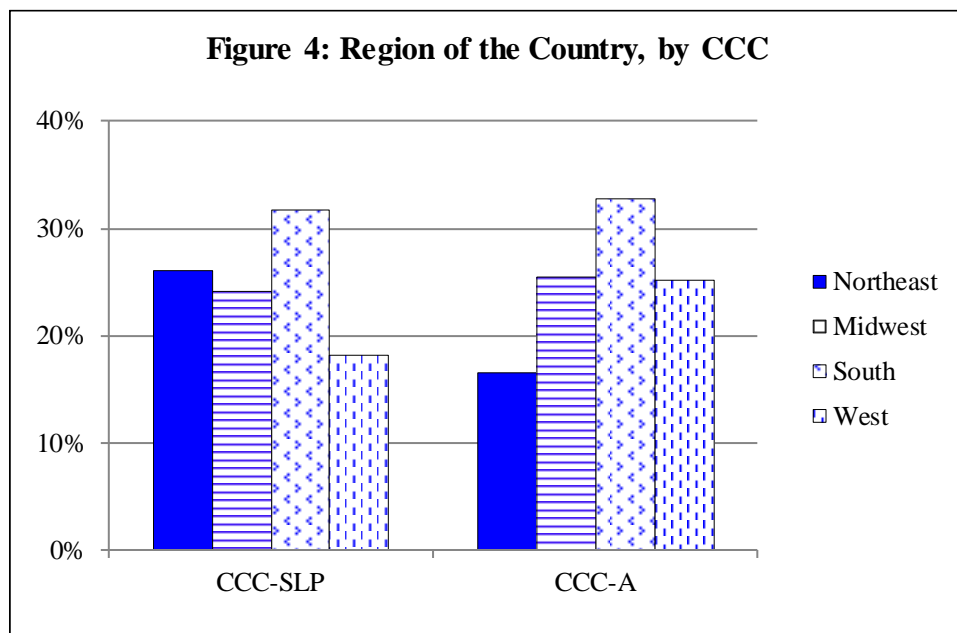


Note. For CCC-SLP, $n = 1,701$. For CCC-A, $n = 192$.
 CCC-SLP = Certificate of Clinical Competence in Speech-Language Pathology;
 CCC-A = Certificate of Clinical Competence in Audiology.

Audiologists were evenly divided between cities/urban areas and suburban areas (41%; see Figure 3).

Geographic Distribution

As noted on page 4, the survey sample was stratified by state, but the respondents mirrored the population from which they were drawn almost identically on this demographic measure. Among the respondents, both SLPs and audiologists were more likely to work in the South (32% and 33%, respectively) than in other regions of the country. However, SLPs (26%) were much more likely than audiologists (17%) to work in the Northeast and were much less likely to work in the West (18% and 25%, respectively; see Figure 4).



Note. For CCC-SLP, $n = 1,720$. For CCC-A, $n = 200$.
 CCC-SLP = Certificate of Clinical Competence in Speech-Language Pathology;
 CCC-A = Certificate of Clinical Competence in Audiology.

Geographic distribution was related to type of facility for SLPs ($p = .000$). Ranges for SLPs were between

- a low of 23% in elementary schools and a high of 53% in special day/residential schools for those who work in the Northeast;
- 21% who work in secondary schools and 32% who work in preschools in the Midwest;
- 16% of SLPs who work in special day/residential schools and 36% who work in elementary schools in the South; and
- 6% who work in special day/residential schools and 22% who work in secondary schools and a combination of schools in the West.

Geographic distribution was related to type of facility for audiologists ($p = .030$).

- 4% in elementary schools, 21% in a combination of schools, and 33% in special day/residential schools work in the Northeast;
- 21% in special day/residential schools, 24% in elementary schools, and 28% in a combination of schools work in the Midwest;
- 27% in a combination of schools and 38% in special day/residential and elementary schools work in the South; and
- 8% in special day/residential schools, 24% in a combination of schools, and 33% in elementary schools work in the West.

Reports

Results from the *2020 Schools Survey* are presented in a series of reports for SLPs:

- *SLP Caseload and Workload Characteristics*
- *SLP Workforce and Work Conditions*
- *SLP Annual Salaries and Hourly Wages*
- *Survey Summary Report: Numbers and Types of Responses, SLPs*
- *Survey Methodology, Respondent Demographics, and Glossary*

Results from the educational audiologists are presented in a separate report: *Survey Summary Report: Numbers and Types of Responses, Educational Audiologists*.

Suggested Citation

American Speech-Language-Hearing Association. (2020). *2020 Schools Survey report: Survey methodology, respondent demographics, and glossary*. www.asha.org/research/memberdata/schools-survey/

Resources

Agresti, A., & Finlay, B. (1986). *Statistical methods for the social sciences* (2nd ed.). Dellen.

Dillman, D. A. (2000). *Mail and Internet surveys: The tailored design method* (2nd ed.). Wiley.

Thank You!

ASHA would like to thank the SLPs and audiologists who completed the *2020 Schools Survey*. Reports like this one are possible only because people like *you* participate.

Is this information valuable to you? If so, please accept invitations to participate in other ASHA-sponsored surveys and focus groups. You are the experts, and we rely on you to provide data to share with your fellow members. ASHA surveys benefit *you*.



Additional Information

If you would like to speak with a member of the ASHA School Services Team about the survey, please send a message to schools@asha.org or call ASHA's Action Center (800-498-2071) and ask to be connected to a School Services staff member. To learn more about how the Association is working on behalf of school-based ASHA Certified Members, visit the ASHA Schools webpages at www.asha.org/slp/schools/.

Glossary

Types of Facilities

The following is a glossary of terms used in the *2020 Schools Survey* reports.

- School:
- Special day/residential
 - Pre-elementary (preschool)
 - Elementary
 - Secondary school (middle school, junior high, senior high)
 - Student’s home
 - Administrative office
 - Combination from the above list
 - Other

Respondents self-identified their primary employment facility as one of the following types of schools: special day/residential; pre-elementary (preschool); elementary; secondary (middle school, junior high, senior high); student’s home; administrative office; combination from the above list; or other. Individuals from the *other* category are included when total responses are discussed, but they are not presented as a separate type of facility because their numbers were fairly small (16 SLPs and five audiologists) and because of the uncertain nature of the category.



Random Sample

A stratified sample of 4,500 ASHA-certified SLPs and 500 ASHA-certified audiologists was randomly selected to participate in this survey. A *random sample* is a probabilistic sample in which each person has an equal chance of being selected. A sample is stratified when the population is divided into separate groups (i.e., strata), and a random sample is drawn from each stratum. In this survey, there were 51 strata: the 50 U.S. states plus the District of Columbia.

Response Rate

The response rate was calculated using the following equation:

$$RR = \frac{(C + P)}{(S + ID) - (Ret + I)}$$

- where
- RR = Response rate
 - C = Number of completed surveys
 - P = Number of partial surveys
 - S = Sample size
 - ID = Ripped off identification number
 - Ret = Ineligible because of retirement
 - I = Ineligible for other reasons (e.g., does not work in a school, is no longer in the discipline)

$$RR = \frac{1,987}{(5,000 + 1) - (17 + 54)} = 40.3\%$$

Measures of Central Tendency

Mean: To find the mean, add the total of all the values, and divide by n (the number of items).

Median: To find the median, arrange the values in order, from lowest to highest. Then, select the value in the middle position.

Mode: The mode is the value that occurs more often than any other.

Example: Sample data set

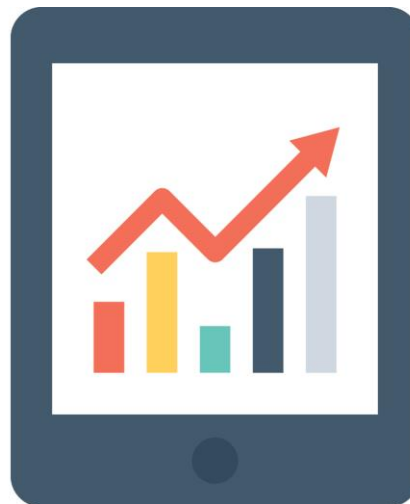
1, 1, 7, 34, 88

Mean: $(1 + 1 + 7 + 34 + 88) / 5 = 26.2$

Median: 7

Mode: 1

The statistic that is reported most often in the *2020 Schools Survey* is the median (middle) statistic unless otherwise noted. Median statistics are presented because they are more stable and less sensitive to extreme values than are mean values.



Statistical Significance

p value refers to probability. It is found in expressions such as $p = .04$, meaning “There is a 4% chance of observing a difference as large as the one that you observed even if the two population means are identical (the null hypothesis is true).” The smaller the number, the less likely that the result was due to chance.

A z -score (also known as a standard score) indicates how many standard deviations a score is from the mean.

Appendix A

First Cover Letter to Audiologists



February 12, 2020

SeqID
Name
Company
Address 1
Address2
Address3
City, State Zip

Dear Salutation Name:

Why should I participate? You have been chosen as part of a statistically selected, representative sample of school-based educational audiologists to receive the *2020 ASHA Schools Survey*.

Bonus reason: One of the audiologists who responds to the survey will be randomly chosen to receive a free membership to a 2021 Special Interest Group of their choice.

Are my answers confidential? Your answers will be released only as summaries in which no individual's responses can be identified.

How quickly should I respond? Surveys have been numbered only to enable us to send reminders to individuals who do not return their completed forms. Follow-up requests will be mailed to sample members who do not respond by the end of the month.

How can I help? If, for some reason, you prefer not to respond, please return the blank questionnaire, and let us know why. By doing this, you will not receive any follow-up requests.

Questions? If you have any questions, please contact Jeanette Janota in the National Office's Science and Research Unit at jjanota@asha.org or at 800-498-2071, ext. 8738.

Thank you very much for participating in this important data collection effort.

Sincerely,

A handwritten signature in black ink that reads "Arlene A. Pietranton". The signature is written in a cursive, flowing style.

Arlene A. Pietranton, PhD, CAE
Chief Executive Officer
American Speech-Language-Hearing Association

Schools CONNECT
Health Care CONNECT
Private Practice CONNECT



ASHA
CONNECT
2020

July 9*
Pre-Conference
Workshop

MARK YOUR CALENDAR!

JULY 10-12 | SHERATON DALLAS HOTEL

Essential topics include AAC, speech sound disorders, fluency, service delivery, coding, the new SLPA certification program, and more.



on.asha.org/Connect20

* Pre-conference workshops hosted by the Texas Speech-Language-Hearing Association and ASHA Professional Development

121526

Go further together.

Start your journey in a Special Interest Group.
Join today. www.asha.org/SIG



121501

Thank you for participating!

Return your completed questionnaire in the enclosed self-addressed, postage-paid envelope within 2 weeks of receiving it.

Questions? Contact Jeanette Janota
800-498-2071, ext. 8738; jjanota@asha.org

Mail to: Surveys and Analysis
American Speech-Language-Hearing Association
2200 Research Boulevard
Rockville, MD 20850-3289

Appendix B

States by Regions and Divisions

Regions of the Country

Northeast

- ◆ Middle Atlantic
 - New Jersey
 - New York
 - Pennsylvania
- ◆ New England
 - Connecticut
 - Maine
 - Massachusetts
 - New Hampshire
 - Rhode Island
 - Vermont

South

- ◆ East South Central
 - Alabama
 - Kentucky
 - Mississippi
 - Tennessee
- ◆ South Atlantic
 - Delaware
 - District of Columbia
 - Florida
 - Georgia
 - Maryland
 - North Carolina
 - South Carolina
 - Virginia
 - West Virginia
- ◆ West South Central
 - Arkansas
 - Louisiana
 - Oklahoma
 - Texas

Midwest

- ◆ East North Central
 - Illinois
 - Indiana
 - Michigan
 - Ohio
 - Wisconsin
- ◆ West North Central
 - Iowa
 - Kansas
 - Minnesota
 - Missouri
 - Nebraska
 - North Dakota
 - South Dakota
- ◆ Mountain
 - Arizona
 - Colorado
 - Idaho
 - Montana
 - Nevada
 - New Mexico
 - Utah
 - Wyoming

West

- ◆ Pacific
 - Alaska
 - California
 - Hawaii
 - Oregon
 - Washington