



## **Survey Methodology, Respondent Demographics, and Glossary**

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## Executive Summary

In the spring of 2010, the American Speech-Language-Hearing Association (ASHA) conducted a survey of speech-language pathologists (SLPs) and 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 ASHA Omnibus and Schools Surveys.

The results are presented in a series of reports. This report is based on responses from *SLPs* in special day/residential, preschool, elementary, secondary, and combined schools and administrative offices and from *audiologists* in special day/residential, elementary, and combined schools, administrative offices, and other types of educational facilities.

### *Overall Findings:*

- ◆ The overall response rate was 65%: 66% for SLPs and 59% for audiologists.
- ◆ The most common facility was elementary schools for SLPs and combined school settings for audiologists.
- ◆ 80% of SLPs and audiologists were clinical service providers.
- ◆ 89% of SLPs and 95% of audiologists were salaried.
- ◆ 80% of SLPs and audiologists worked full-time.
- ◆ 88% of SLPs and 91% of audiologists received an annual salary.
- ◆ 1% of SLPs held a PhD, and 30% of audiologists held an AuD degree.
- ◆ 48% of SLPs worked in a suburban area; 46% of audiologists worked in an urban area.
- ◆ 3% of SLPs and 10% of audiologists were male.

**Survey Methodology**

*Sample Design*

The survey was mailed on February 23, 2010 to a random sample of 4,000 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 second (March 23) and third (April 14) mailings. 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 reminder postcard was mailed to all sample members on March 2.

*Response Rate*

Of the original 4,500 members of the sample, 141 were ineligible. The number of respondents was 2,826, resulting in a 65% response rate overall (see Table 1).

**Table 1. Calculation of Response Rate**

<b>Disposition</b>	<b>Total</b>	<b>CCC-SLP</b>	<b>CCC-A</b>
Original (gross) sample size	4,500	4,000	500
Bad mailing address	5	5	–
No longer employed in the field	1	–	1
Retired	21	17	4
Ineligible for other reasons	114	96	18
Net sample size	4,359	3,882	477
Number of respondents	2,826	2,544	282
Response rate	64.8%	65.5%	59.1%

*Experimental Design*

All surveys had 35 questions on 25.5-in. × 11-in. paper folded to 8.5 in. × 11 in. and printed two columns per page. Font was Arial 11. The final page contained a message about resources for school personnel on the ASHA web-site, contact information for the ASHA schools team members, and an announcement about the 2010 ASHA Schools conference, as well as a thank-you note and contact information should respondents have questions about the survey instrument.

A methodological experiment was designed into the survey to test the effect of including a sheet of stickers on response rates. Half of the SLPs and half of the audiologists were randomly selected to receive, in the first mailing only, a packet of 10 to 12 stickers that they might want to use as rewards with their students.

**Outcome of Methodological Experiment**

Adding stickers *increased* the response rate by 2.7% (see Table 2). (Eight respondents removed the identification number from their survey so it was not possible to establish whether they were in the control or experimental group.)

**Table 2. Response Rate by Sticker Experiment**

Disposition	Total		CCC-SLP		CCC-A	
	Without Stickers	With Stickers	Without Stickers	With Stickers	Without Stickers	With Stickers
Original (gross) sample size	2,250	2,250	2,000	2,000	250	250
Bad address	1	4	1	4	–	–
No longer employed in the field	1	–	–	–	1	–
Retired	6	15	5	12	1	3
Ineligible for other reasons	60	54	56	40	4	14
Net sample size	2,182	2,177	1,938	1,944	244	233
Number of respondents	1,381	1,437	1,246	1,291	135	146
Response rate	<b>63.3%</b>	<b>66.0%</b>	<b>64.3%</b>	<b>66.4%</b>	<b>55.3%</b>	<b>62.7%</b>
Statistical significance	$z = 1.87, p = .031$		$z = 1.39, p = .082$		$z = 1.63, p = .051$	

**Data Entry**

To ensure the highest quality data reasonably possible, each of the 2,826 completed surveys was checked, and erroneous responses were corrected or deleted by the ASHA staff member with primary responsibility for the survey. The forms were then sent to an outside firm for two-pass (key and verify) data entry. This process was completed by May 18.

**Demo-graphics**

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 2,544 SLPs who responded, only 2,400 were included in

***Respondents  
Versus  
Population***

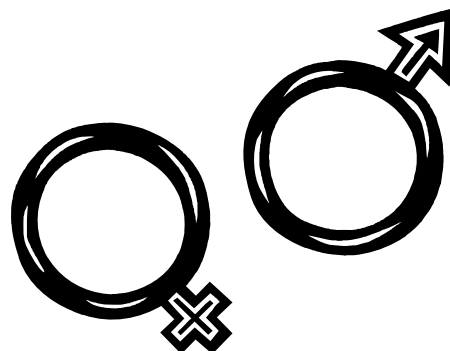
reporting on their primary employment facility because they

- ◆ indicated that they had ASHA certification in speech-language pathology (CCC-SLP);
- ◆ indicated that they were employed full-time or part-time;
- ◆ identified the type of employment facility where they were employed.

As is our practice, we do not report data for cells with fewer than 25 respondents.

Respondents to the 2010 Schools Survey were an exact representation of the population of ASHA-certified, school-based personnel from which they were selected with regard to gender.

- *CCC-SLP*. The vast majority of both the sample and the population were female (97%).
- *CCC-A*. Most of the audiologists in both groups were female (90%).



The respondents differed from the population on other characteristics such as the *type of school* in which they worked:

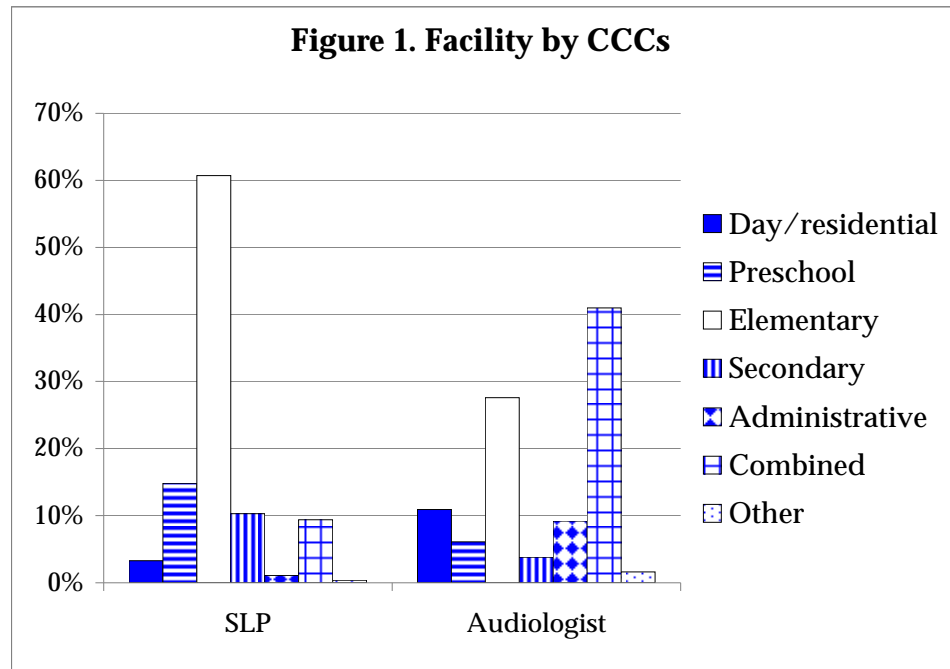
- In the population, 46% of SLPs and 7% of audiologists who worked in the schools were employed in *elementary schools*, compared with 61% and 28%, respectively, of the survey respondents.

Another difference was in their primary function:

- 80% of SLPs and 80% of audiologists in the population were *clinical service providers*, compared to 92% of SLPs and 89% of audiologists among the survey respondents.

**Primary  
Employment  
Facility**

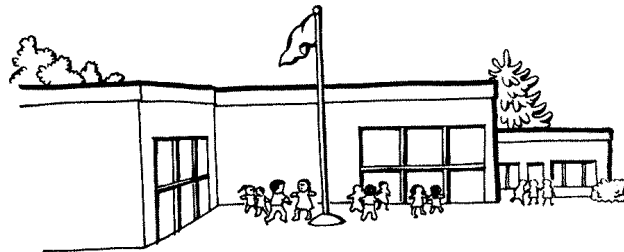
More SLPs were employed in *elementary* schools and more audiologists in *combined* settings than in any other facility type, as shown in Figure 1.



*n* = 2,408 CCC-SLP; *n* = 270 CCC-A

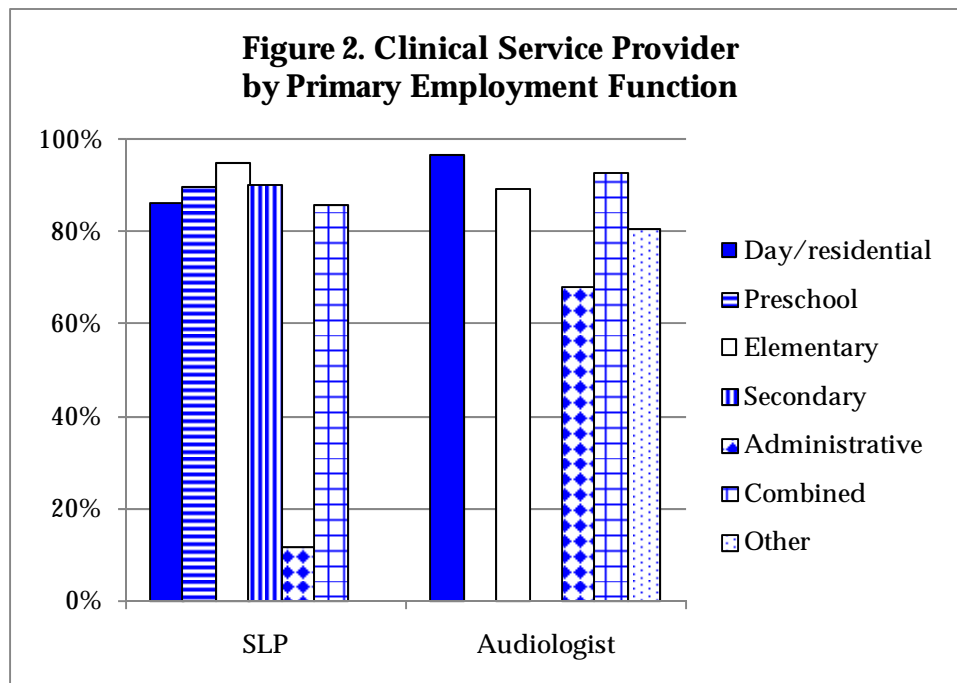
**Excluding  
“Other”**

Individuals who work in an “other” type of facility have been included in the 2010 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. Also included in the “total” are the small groups of audiologists who work in preschools (*n* = 17) or secondary schools (*n* = 10). There were 85 SLPs and nine audiologists who did not identify a primary employment facility, some because they were not currently employed.



**Primary  
Employment  
Function**

The vast majority of respondents in all types of facilities were clinical service providers (see Figure 2). For SLPs, the highest proportion was in *elementary schools* (95%) and the lowest in *administrative offices* (12%). For audiologists, the highest proportion was in *day/residential schools* (97%).



n = 2,178 CCC-SLP; n = 240 CCC-A

**Employment  
Situation**

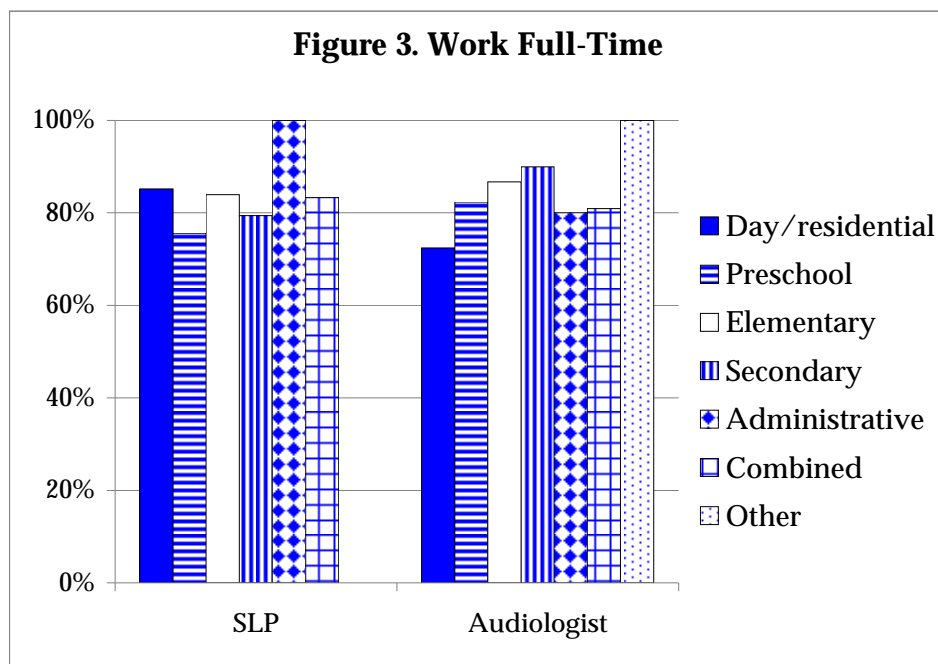
More audiologists (95%) than SLPs (89%) were full-time or part-time *salaried* employees.

- 9% of SLPs and 3% of audiologists were *contract* employees (e.g., per diem, temporary).
- 2% of both SLPs and audiologists were *owners* (e.g., office-based or contract-based private practice).



**Employment Status**

Overall, 80% of both the SLPs and the audiologists worked full-time. The highest percentage of full-time SLPs was in administrative offices (100%), and the lowest was in preschools (76%;  $p = .001$ ; see Figure 3). Of the audiologists, the highest percentage of full-time employees was in “other” types of facilities and the lowest in day/residential schools.



$n = 2,392$  CCC-SLP;  $n = 270$  CCC-A

**Salary Basis**

Most SLPs (88%) and most audiologists (91%) were paid an annual salary.

- SLPs in administrative offices were least likely to receive an hourly wage (0%); those in preschools (16%) and combined settings (16%) were the most likely groups to be paid on an hourly basis ( $p = .007$ ).
- The only facility in which 100% of the audiologists received an annual salary was secondary schools.



**Highest Degree**

Audiologists (2%) were slightly more likely than SLPs (1%) to hold a PhD as their highest degree.

- 99% of SLPs had a master's as their highest degree.
- 67% of audiologists had a master's as their highest degree, and 30% had an AuD degree.

**Years of Experience**

*SLPs* averaged 17 (mean) or 15 (median) years of experience in the *professions*. Their mean years varied from 16 in preschools and elementary schools to nearly 25 in administrative offices ( $p = .004$ ).

When experience was limited to years in the *schools*, *SLPs* averaged 14 (mean) or 11 (median) years, with the mean number of years being lowest in preschools and secondary schools (nearly 14) and the highest in administrative offices (nearly 22;  $p = .005$ ).

*Audiologists* averaged more years of experience than did the *SLPs*. The mean number of years of experience they had in the *professions* was 21 (mean) or 22 (median), and the differences among types of facilities were not significant ( $p = .165$ ).

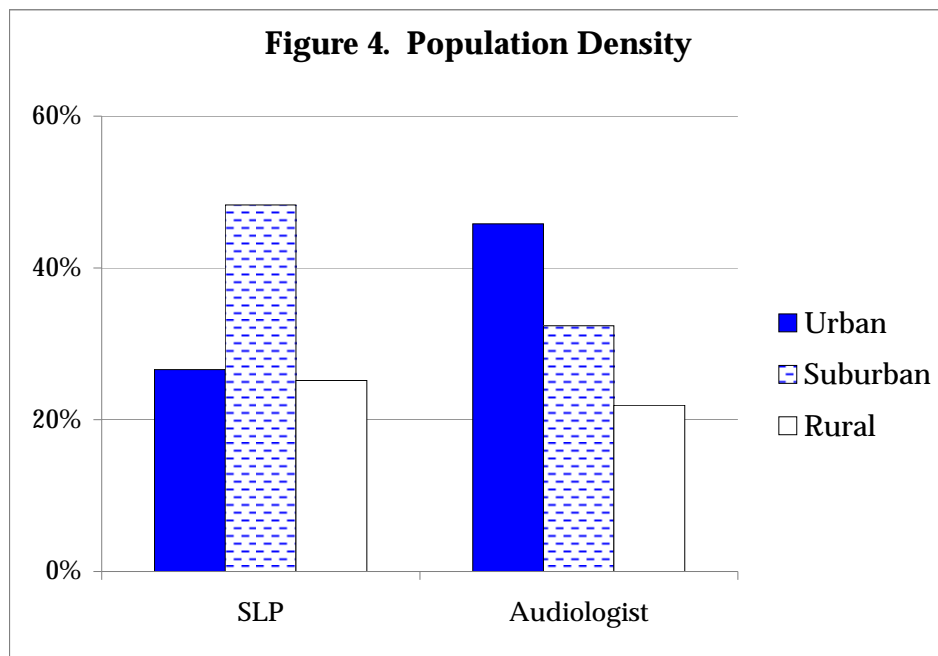
Experience in the *schools* averaged 16 (mean) or 15 (median) years for the audiologists, and again, differences among types of schools were not significant ( $p = .535$ ).

**Population Density**

Nearly half (48%) of the *SLPs* who were employed either full-time or part-time worked in a suburban area (see Figure 4). The type of school setting was related to the locale in which *SLPs* worked ( $p = .000$ ):

- ◆ 24% of *SLPs* in elementary schools and 52% in administrative offices worked in metropolitan/urban areas.
- ◆ 24% of *SLPs* in administrative offices and 61% in special day/residential schools worked in suburban areas.
- ◆ 9% of *SLPs* in special day/residential schools and 34% in combined school settings worked in rural areas.

Although *SLPs* were more likely to work in suburban areas than in other locales, *audiologists* were most likely to work in metropolitan/urban areas (46%). The type of school setting did not quite meet statistical significance for audiologists ( $p = .05$ ).



*n* = 2,385 CCC-SLP; *n* = 266 CCC-A

**Geographic Distribution**

SLPs and audiologists were equally likely to work in the South (32% and 31%, respectively). However, SLPs (24%) were much more likely than audiologists (15%) to work in the Northeast and much less likely to work in the West (18% and 25%, respectively; see Figure 5).

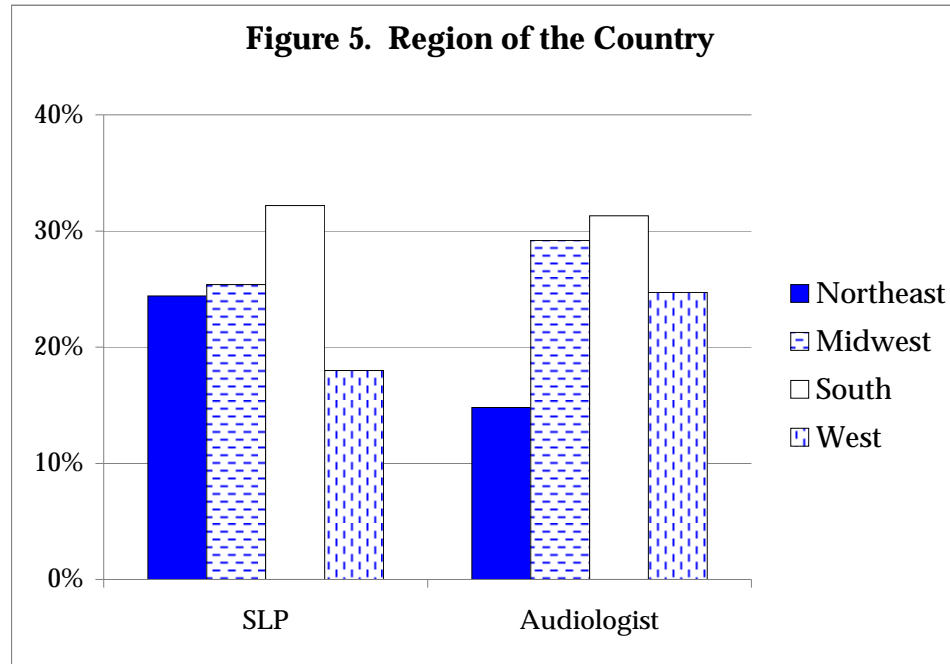
Geographic distribution was related to type of facility for both SLPs (*p* = .000) and audiologists (*p* = .004). Among the SLPs:

- ◆ 17% of SLPs in combined settings worked in the *Northeast* as did 49% in special day/residential schools.
- ◆ Between 10% of SLPs in special day/residential schools and 27% in preschools worked in the *Midwest*.
- ◆ 22% of SLPs in preschools compared with 36% in combined settings worked in the *South*.
- ◆ A low of 9% of SLPs in special day/residential schools to a high of 27% in administrative offices worked in the *West*.

Among the audiologists:

- ◆ 0% of audiologists in administrative offices to 31% in special day/residential schools worked in the *Northeast*.
- ◆ 12% of audiologists in administrative offices to 35% in combined school settings were employed in the *Midwest*.
- ◆ 21% of audiologists in special day/residential schools to 48% in administrative offices worked in the *South*.

- ◆ 20% of audiologists in combined settings compared with 40% in administrative offices worked in the *West*.



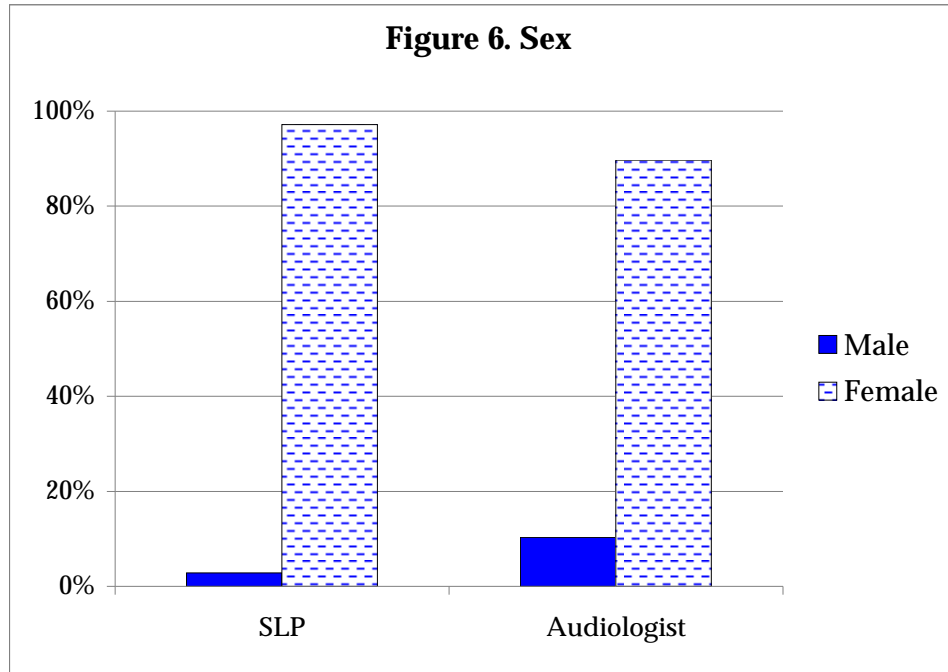
*n* = 2,418 CCC-SLP; *n* = 271 CCC-A

**Sex**

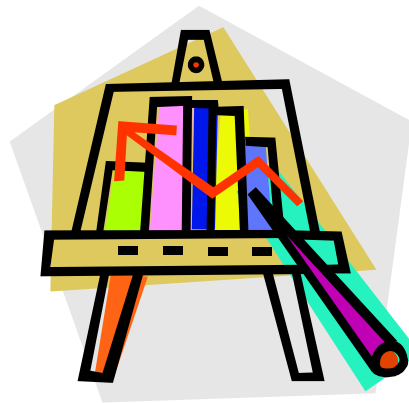
The likelihood of *SLPs* in the schools being *male* was very low: only 3%, on average (see Figure 6). A higher proportion of males worked in administrative offices (12%) than in other settings, and the fewest were employed in preschools (1%; *p* = .000).

While the likelihood of *audiologists* being male was also low, it was higher (10%) than for *SLPs*. There was no relationship between sex and type of facility.





$n = 2,489$  CCC-SLP;  $n = 279$  CCC-A



## Glossary

The following is a glossary of terms used in the 2010 Schools Survey Reports.

### *Types of Facilities*

School: Special day/residential  
 Pre-elementary (preschool)  
 Elementary  
 Secondary school (middle school, junior high, senior high)  
 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, administrative office, combined school settings, or other. Individuals from the “other” category are included when total responses are discussed, but they are not discussed as a separate type of facility because their numbers were fairly small (nine SLPs and four audiologists) and because of the uncertain nature of the category.

### *Random Sample*

A stratified sample of 4,000 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:

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

where RR = Response rate  
 C = Number of completed surveys  
 P = Number of partial surveys  
 S = Sample size  
 Ret = Ineligible because of retirement  
 I = Ineligible for other reasons (e.g., does not work in a school, no longer in the field, or on a leave of absence)

*Measures of Central Tendency*

$$RR = \frac{2,826}{4,500 - (21 + 120)} = 64.8\%$$

**Mean:** Add the total of all the values and divide by  $n$  (the number of items).

**Median:** Arrange the values in order, from lowest to highest. Select the value in the middle position.

**Mode:** The value that occurs more often than any other value

**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 2010 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 means.



*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

West

- ◆ Mountain
  - Arizona
  - Colorado
  - Idaho
  - Montana
  - Nevada
  - New Mexico
  - Utah
  - Wyoming
- ◆ Pacific
  - Alaska
  - California
  - Hawaii
  - Oregon
  - Washington

## Other Reports

Results from the 2010 Schools Survey are presented in a series of reports:

- Survey Methodology, Respondent Demographics, and Glossary
- SLP Workforce/Work Conditions
- SLP Caseload Characteristics
- SLP Annual Salaries and Hourly Wages
- Survey Summary Report: Number and Type of Responses, SLPs
- Survey Summary Report: Number and Type of Responses, Educational Audiologists

## Suggested Citation

American Speech-Language-Hearing Association. (2010). *2010 Schools Survey report: Survey methodology, respondent demographics, and glossary*. Available from [www.asha.org/research](http://www.asha.org/research).

## Supplemental Sources

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

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



## Thank You!

Without the generous cooperation of the members who participate in our surveys, ASHA could not fulfill its mission to provide vital information about the professions and discipline to the Association membership and public. Thank you!

## Additional Information

For additional information regarding the 2010 Schools Survey, please contact Deborah Adamczyk, Director of ASHA's School Services, at 800-498-2071, ext. 5690; e-mail: [dadamczyk@asha.org](mailto:dadamczyk@asha.org). To learn more about how the Association is working on behalf of school-based ASHA-certified members, visit ASHA's web-site at [www.asha.org/slp/schools](http://www.asha.org/slp/schools).