Survey Methodology, Respondent Demographics, and Glossary

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Executive Summary

In Spring 2024, 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, telepractice offices, and a combination of types of facilities. 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 response rate was 26% for both SLPs and for audiologists.
- 52% of SLPs and 32% of audiologists who had received an electronic survey completed it on a mobile phone; 46% of SLPs and 64% of audiologists on a desktop/laptop.
- The most common facility was elementary schools for SLPs (59%) and combined school settings for audiologists (47%).
- 86% of SLPs and 92% of audiologists were salaried employees.
- 90% of SLPs and 70% of audiologists were clinical service providers.
- 87% of SLPs and 83% of audiologists worked full time.
- 85% of SLPs and 89% of audiologists received an annual salary; the rest were paid an hourly wage.
- 1% of SLPs held an SLPD or CScD degree, and 67% of audiologists held an AuD degree.
- SLPs had a median of 17 years of experience in the professions; audiologists had a median of 22 years.
- 48% of SLPs and 44% of audiologists worked in a suburban area.
- SLPs were more likely to work in the South (31%), and audiologists were more likely to work in the South (30%) or Midwest (30%) than in other regions of the country.

Survey Method-ology

We fielded the *2024 Schools Survey* on January 25, 2024, to a stratified random sample of 15,000 ASHA-certified speech-language pathologists (CCC-SLP) and to all 809 ASHA-certified audiologists (CCC-A) who were employed in school settings in the United States. We stratified the SLPs by state (50 states plus the District of Columbia). Individuals who returned their surveys were removed from second (February 22) and third (March 28) fieldings. In addition, a be-on-the-lookout email was sent to all sample members on February 15.

Response Rate

Of the original 15,809 members of the sample, 432 were ineligible because they had undeliverable addresses, were retired, or had other disqualifications. The number of respondents was 3,950, resulting in a 26% response rate overall (see Table 1). Response rates from the postal surveys exceeded those from the electronic surveys by 40% for SLPs and by 18% for audiologists. Of the 3,749 SLPs who responded, 58% were from the postal group, and 42% were from the SM group. Of the 201 audiologists who responded, 55% were from the postal group, and 45% were from the SM group.

Table 1: Calculation of Response Rate

Disposition	Total	CCC-SLP		CCC-A	
		Postal	SM	Postal	SM
Original sample size	15,809	7,500	7,500	405	404
Undeliverable mailing address	134	42	79	1	12
Opted out of SM	94	-	82	-	12
Ineligible: retired	33	28	1	3	1
Deceased	1	1	0	0	0
Ineligible: other reasons	170	122	35	13	0
Net sample size	15,377	7,307	7303	388	379
Number of respondents	3,950	2,188	1,561	110	91
Response rate	**25.7**	**29.9**	**21.4**	**28.4**	**24.0**
Response rate x CCCs		**25.7**		**26.2**	

Weighting

Because states with few SLPs (e.g., Montana) were oversampled and those with many (e.g., New York) were undersampled, weighting was used when presenting data to restore all groups to their actual proportion in the population of ASHA SLPs. All ASHA-certified audiologists who were employed in school settings were included, so no weighting was necessary for this group.

Nonresponse

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 3,749 SLPs who responded, only 3,669 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.

Experimental Design

We incorporated a methodological experiment into the survey. Half of the SLPs and half of the audiologists were randomly assigned to receive postal mailings; the remaining half received electronic surveys (i.e., SurveyMonkey or SM). We conducted the experiment to understand whether response rates would be different for the two modes.

Each postal survey had 29 questions in 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. Data for one of the questions were shared separately for internal purposes only. Surveys were designed in Teleform to be scannable. We personalized cover letters with the sample member's name and address and mailed them in window envelopes under the signature of ASHA's chief executive officer. Each postal 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.

The wording of the SM surveys was identical to that of the postal surveys with two exceptions: (a) a screener question was inserted to aid the flow of questions. This extra question was accommodated in the analyses and had no effect on the results. (b) A question was added to the end of the SM survey to ask about the device on which they had taken the survey. The SM surveys were sent on the same dates that the postal surveys were delivered to the post office. The sender was identified as "tsaintjean@asha.org via SurveyMonkey."

The response options for some questions on the audiologists' surveys were adapted from the SLPs' survey to more closely represent the work experience of audiologists.

Device

The SM version of the Schools Survey asked one additional question: On what type of device did you take this survey?

- 2% of SLPs and 4% of audiologists said that they had taken the survey on a tablet.
- 46% of SLPs and 64% of audiologists took the survey on a desktop/laptop.
- 52% of SLPs and 32% of audiologists took the survey on a mobile phone.

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 can be compared because they appear in both the membership database and the survey include age, status, primary employment facility and function, highest earned degree, and region of the country.

We can compare the *ages* of respondents with the ages of the population.

- In the population, the mean age of SLPs was 44 years, the median age was 42, and the mode was 32 years, compared with a mean of 45, median of 45, and a mode of 41 years among the survey respondents. For audiologists, the mean, median, and mode ages were 47, 46, and 32 in the population, and 49, 49, and 53, respectively, among the respondents.

A second care of comparison is their employment *status.*

- In the population, 86% of SLPs and 84% of audiologists who worked in the schools were employed *full time,* compared with 87% and 83%, respectively, of the survey respondents.

A third area of comparison is their primary *employment facility*.

- In the population, 42% of SLPs and 3% of audiologists who worked full time or part time in the schools were employed in *elementary schools,* compared with 59% and 22%, respectively, of the survey respondents.

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

- 96% of SLPs and 90% of audiologists in the population who worked full time or part time in the schools were *clinical service providers,* compared with 90% of SLPs and 70% of audiologists among the survey respondents.

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

- 1% of SLPs and 50% of audiologists in the population who worked full time or part time in the schools reported having earned a *doctoral degree,* compared with 2% of SLPs and 68% of audiologists among the survey respondents.

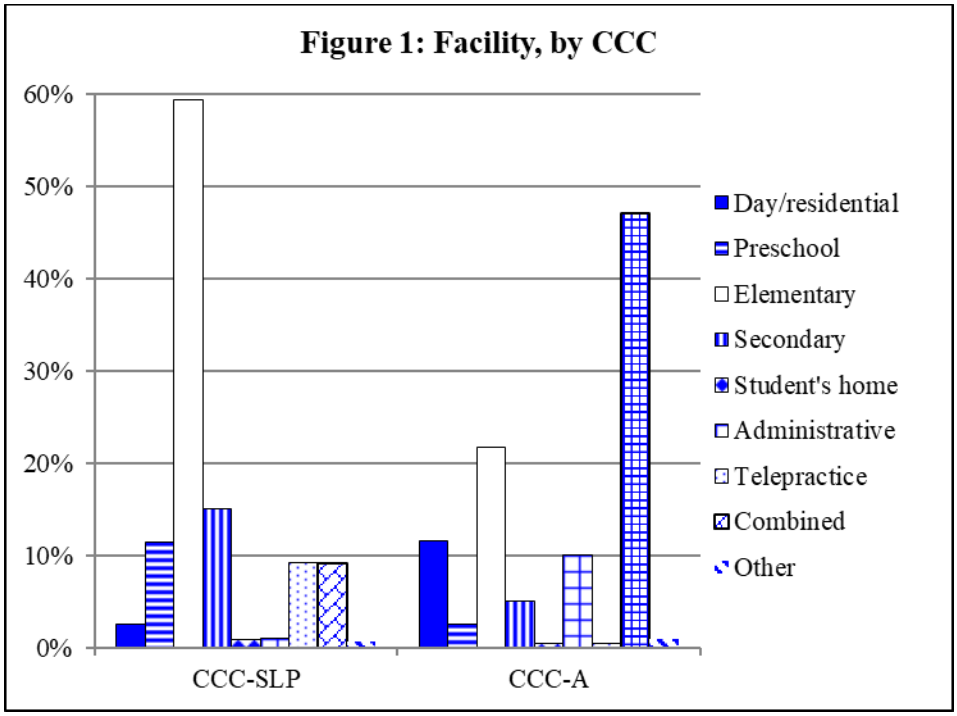
The survey sample was stratified by state; that is, states with small numbers of ASHA constituents were oversampled, and those with large numbers were undersampled.

- 26% of SLPs and 15% of audiologists in the population who worked full time or part time in the schools—compared with 27% of SLPs and 15% of audiologists who replied to the survey—worked in the *Northeast.*
- 23% of SLPs and 26% of audiologists in the population who worked full time or part time in the schools—compared with 24% of SLPs and 30% of audiologists who replied to the survey—worked in the *Midwest.*
- 33% of SLPs and 32% of audiologists in the population who worked full time or part time in the schools—compared with 31% of SLPs and 30% of audiologists who replied to the survey—worked in the *South.*
- 19% of SLPs and 27% of audiologists in the population who worked full time or part time in the schools—compared with 19% of SLPs and 25% of audiologists who replied to the survey—worked in the *West.*

Demographics

Primary Employment Facility

More SLPs were employed in *elementary* schools (59%) and more audiologists in *combined* school settings (47%) than in any other facility type, as shown in Figure 1.



Note. For CCC-SLP, *n* = 3,669. For CCC-A, *n* = 198.
CCC-SLP = Certificate of Clinical Competence in Speech-Language Pathology;
CCC-A = Certificate of Clinical Competence in Audiology.

Excluded Facilities

We included individuals who worked in an *other* type of facility in the *2024 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* = 9 SLPs).

We also included the small groups of audiologists who worked in special day/residential schools (*n* = 23), preschools (*n* = 5), secondary schools (*n* = 10), student's home (*n* = 1), administrative offices (*n* = 20), office for telepractice (*n* = 1), and other (*n* = 2) in the total.

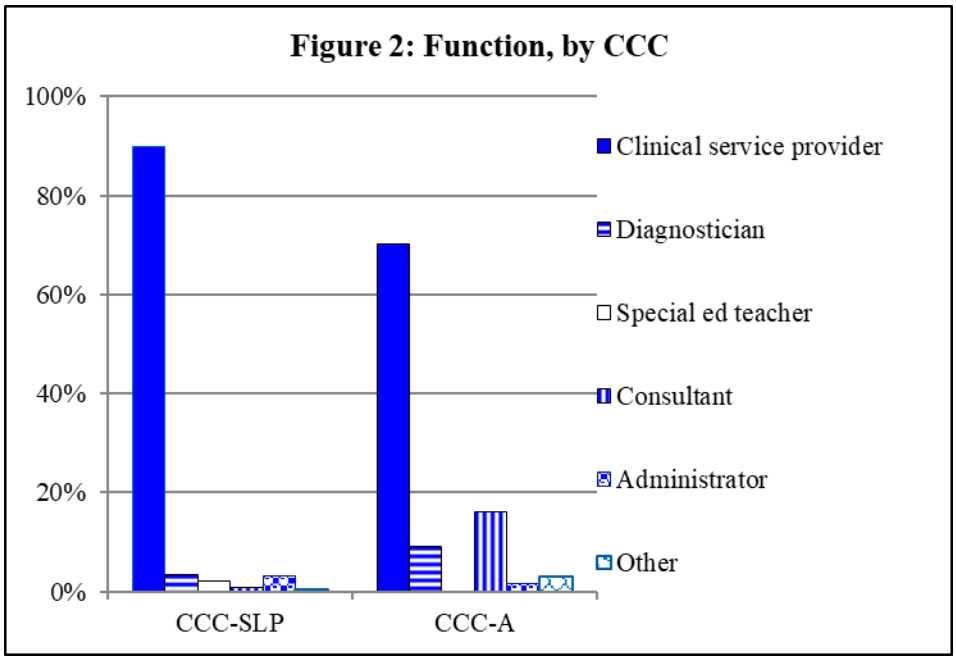
Sixty-four SLPs and three audiologists did not identify a primary employment facility despite being employed full- or part time.

Employment Situation

Both SLPs (86%) and audiologists (92%) were more likely to be salaried employees than either contract employees or self employed.

Primary Employment Function

The vast majority of respondents were clinical service providers, including 90% of SLPs and 70% of audiologists (see Figure 2).



Note. For CCC-SLP, *n* =3,629. For CCC-A, *n* = 197. Special ed teacher was not a response option for audiologists.
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 *2024 Schools Survey.* Among those who responded, 87% of the SLPs and 83% of the audiologists worked full time. An additional 13% of SLPs and 17% of audiologists were employed part time.

Salary Basis

Most of the SLPs (85%) and most of the audiologists (89%) were paid an annual salary. The rest received an hourly wage.

Highest Degree

Few SLPs (0.6%) or audiologists (0.5%) had earned a PhD, but audiologists were much more likely than SLPs to have earned a clinical doctorate.

- 67% of audiologists had earned an AuD degree as their highest degree.
- 0.8% of SLPs had earned an SLPD or CScD degree.
- 98% of SLPs and 23% of audiologists had earned a master's as their highest degree.

Years of Experience

SLPs averaged 18 (mean) or 17 (median) years of experience in the *professions* and 15 (mean) or 13 (median) years of experience in the *schools.*

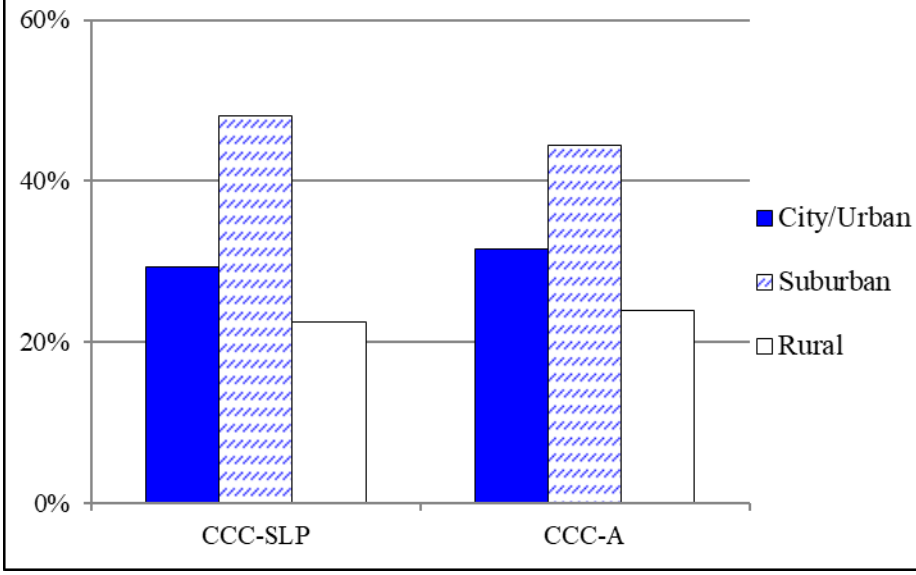
Audiologists averaged more years of experience than did the SLPs. The mean number of years of experience that audiologists had in the *professions* was 22, and the median was 22 years. Audiologists averaged 15 years of experience in the *schools.* The median was 14 years.

Population Density

Nearly half (48%) 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 ($p < .001$; not shown in any figure).

- More than half of the SLPs in preschools (51%), secondary schools (53%), students' homes (66%), and administrative offices (67%) worked in suburban areas.
- SLPs in special day/residential schools (46%), elementary schools (48%), telepractice offices (38%), and in combined school settings (38%) were more likely to work in suburban areas than in other types of areas.

Figure 3: Population Density, by CCC



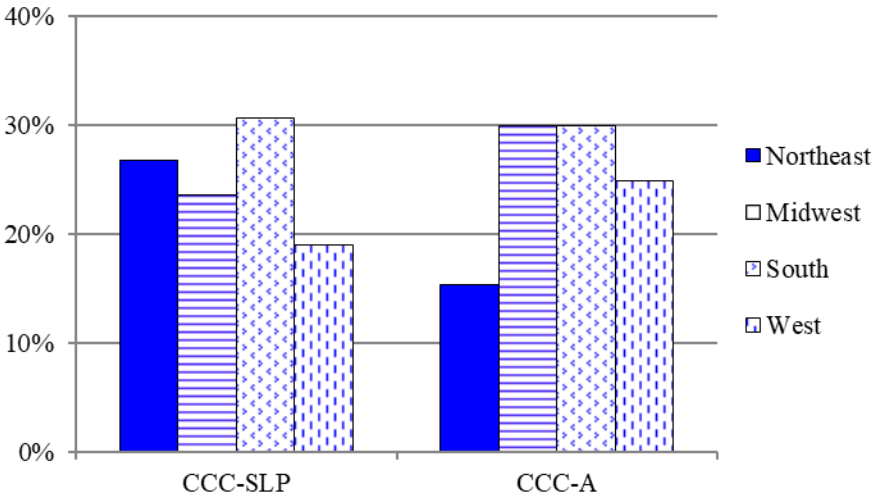
Note. For CCC-SLP, $n = 3{,}350$. For CCC-A, $n = 117$.
CCC-SLP = Certificate of Clinical Competence in Speech-Language Pathology;
CCC-A = Certificate of Clinical Competence in Audiology.

Of the audiologists, 44% worked in suburban areas, 32% in city/urban areas, and 24% in rural areas. The type of school setting was not significantly related to the locale in which audiologists worked ($p = .156$).

Geographic Distribution

Remember that the sample was a stratified random sample, with strata based on state. Small states were oversampled, and large ones were undersampled. Among the respondents, SLPs were more likely to work in the South (31%) and audiologists in the South (30%) or Midwest (30%) than in other regions of the country. Moreover, SLPs (27%) were much more likely than audiologists (15%) to work in the Northeast and were much less likely than audiologists to work in the West (19% and 25%, respectively; see Figure 4).

Figure 4: Region of the Country, by CCC



Note. For CCC-SLP, n = 3,731. For CCC-A, n = 201.
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 ($p < .001$). Ranges for SLPs were between

- a low of 7% in telepractice offices and a high of 54% in special day/residential schools for those who work in the Northeast;
- 14% who work in special day/residential schools and in administrative offices and 38% who work in students' homes in the Midwest;
- 17% of SLPs who work in special day/residential schools and 53% who work in administrative offices in the South; and
- 12% who work in students' homes and 40% who work in telepractice offices in the West.

Geographic distribution was not related to type of facility for audiologists ($p = .477$).

Mode Comparisons

As we mentioned earlier in this report, we conducted an experiment to understand whether response rates would be different for the two modes (i.e., postal and electronic). We were also interested in whether there would be differences in the demographics of the individuals who chose to respond to each mode. For example, might the average age of respondents be younger for SLPs who completed the SM survey than the postal version?

SLPs

When we looked at age of the SLPs who responded, we found that there was a statistically significant difference in their mean (average) ages, although the difference of 1.4 years was of no practical significance (see Table 2).

Table 2: Mode Comparisons for SLPs, by Age

Age	Total	CCC-SLP		
		Postal	SM	*p* value
Mean	3,400	45.6	44.2	.<.001
Median		45.6	43.7	
Mode		49.3	51.3	

Other findings include two variables that were significant and three that were not.

- Highest degree (masters or doctorate; $p = .004$), but there were only 68 doctoral holders.
- Geographic unit based on nine census divisions ($p = .021$)
- Number of years of experience in the professions ($p = .451$)
- Number of years of experience in the schools ($p = .897$)
- Population density (city, suburban, rural; $p = .596$)

Audiologists

When we looked at the same predictors for the educational audiologists, we found that none of them were significant.

- Age ($p = .356$)
- Highest degree ($p = .796$)
- Geographic unit ($p = .378$)
- Number of years of experience in the professions ($p = .165$)
- Number of years of experience in the schools ($p = .232$)
- Population density ($p = .545$)

Reports

We have presented results from the *2024 Schools Survey* in a series of reports for SLPs:

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

Results from the educational audiologists are presented in two separate reports: *Survey Summary Report: Numbers and Types of Responses, Educational Audiologists* and *Schools Survey Report: Trends in Educational Audiology 2010–*2024.

Suggested Citation

American Speech-Language-Hearing Association. (2024). *2024 Schools Survey report: Survey methodology, respondent demographics, and glossary.* https://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 *2024 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 in Speech-Language Pathology 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 https://www.asha.org/slp/schools/.

Glossary

Types of Facilities

The following is a glossary of terms used in the *2024 Schools Survey* reports.

School:
- Special day/residential
- Pre-elementary (preschool)
- Elementary
- Secondary school (middle school, junior high, senior high)
- Student's home
- Administrative office
- Office for telepractice
- 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; office for telepractice; 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 (9 SLPs and 2 audiologists) and because of the uncertain nature of the category.

Random Sample

We selected a random, stratified sample of 15,000 ASHA-certified SLPs who were school-based to participate in this survey. We also selected all 809 ASHA-certified school-based audiologists. 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 for the SLPs: the 50 U.S. states plus the District of Columbia.

Response Rate

We calculated the response rate 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)

$$RR = \frac{3950}{(15{,}809) - (32 + 382)} = 25.7\%$$

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

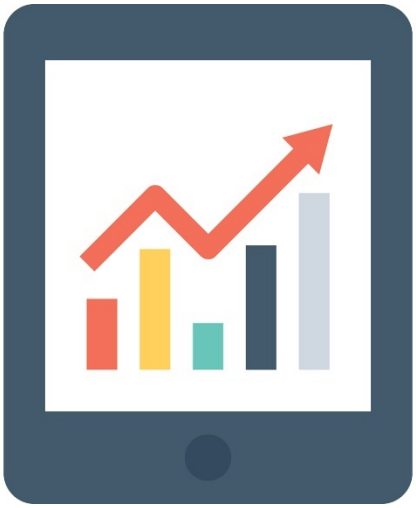
1, 1, 7, 34, 88

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

Median: **7**

Mode: **1**

The statistic that is reported most often in the *2024 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* = .040, 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.

Appendix

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