American Speech-Language-Hearing Association

Technology Mini-Survey 2017

Summary Report: Number and Type of Responses

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Contents

Executive Summary

Children and Technology

- Respondents were asked to indicate what concerns they had about the effect of screen time and use of popular technology on the communication development of children. Overall, more than three-quarters of respondents selected *reduced opportunities for social interaction* and *impaired social development*.
- Respondents were asked to single out the best solution, at a household level, for managing too much use of popular technology by children. Overall, 34% of respondents selected *limiting the amount of screen time children can have daily, weekly, or monthly;* 23% of respondents selected *creating family rules about technology use that are decided on with appropriate input from children*.
- Respondents were asked to single out the best solution, at a broader societal level, for managing the potentially negative effects on children of too much popular technology use. Overall, 35% of respondents selected *initiatives by technology industry/companies to inform and protect the public (e.g., public education campaigns, product inserts, volume limiters);* 30% of respondents selected *public education campaigns by groups such as ASHA*.
- Overall, most respondents (63%) were likely to use printable handouts, brochures, or posters to get involved in ASHA's awareness campaigns on technology use and communication (and other topics); 50% of respondents were likely to use social media friendly videos (Qs. 2–5).

Social Networking Sites

- Most respondents who were audiologists (59%) used LinkedIn. Of these, 36% of audiologists updated their profile *regularly* or *from time to time*; 23% of audiologists indicated that their profile wasn't up to date.
- Most respondents who were SLPs (60%) didn't use LinkedIn. Of these, 8% of SLPs weren't sure what LinkedIn is; 16% of SLPs didn't think LinkedIn was relevant to their career; 36% of SLPs didn't use it for another reason.
- As for other social networking sites, overall, 77% of respondents used Facebook; 51% of respondents used Pinterest (Qs. 6–7).

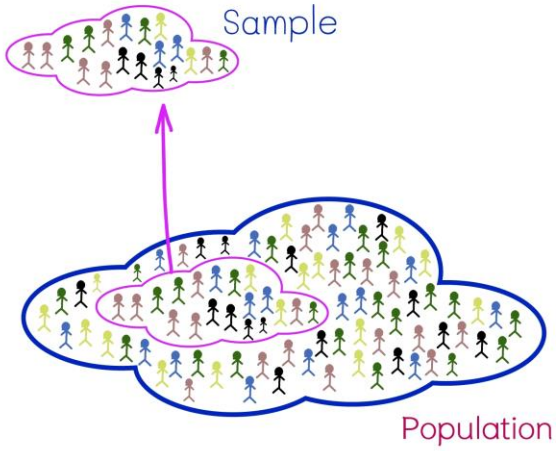
Demographics

- Overall, most respondents (82%) were primarily clinicians. Most of the remaining respondents (9%) held primarily administrative or supervisory positions.
- Overall, respondents had a median of 19 years' experience as an audiologist or speech-language pathologist (Qs. 8–9).

Methodology

In the fall of 2017, four short surveys were mailed to samples of ASHA constituents:

- *Technology Mini-Survey* (sample size = 1,500)
- *Early Intervention Mini-Survey* (sample size = 1,000)
- *School Practice Mini-Survey* (sample size = 1,000)
- *CCCs, Jobs, & Careers Mini-Survey* (sample size = 2,000)



The samples were drawn in the order shown above, with no one being selected for more than one mini-survey. This report provides data from the *ASHA 2017 Technology Mini-Survey*.

Samples were drawn from both SLPs and audiologists. Random sampling without replacement was used to select a sample of ASHA-certified constituents who lived in the United States and who were employed full time or part time. The sample was stratified by type of certification—that is, CCC-SLP or CCC-A and, for audiologists, by primary employment facility (see Table 1).

Table 1. Sampling

Strata	Population Size	Sample Size	Completed Surveys
CCC-SLP	111,286	800	375
CCC-A, schools	803	300	136
CCC-A, pediatric hospital	438	200	59
CCC-A, other, excluding skilled nursing facilities	6,650	200	67
Subtotal	119,177	1,500	637
One audiologist removed the facility identifier	—	—	1
Total	119,177	1,500	638

The mini-surveys were fielded via postal mail. The first fielding was sent to sample members on September 13, 2017. Second (October 11) and third (November 7) mailings were smaller because respondents and refusals were removed from the list. 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 first-class rate.

The overall response rate was 43%, ranging from 30% among certified audiologists in pediatric hospitals to 47% among SLPs (see Table 2).

Table 2. Calculation of Response Rate

Disposition	Total	CCC-SLP	CCC-A, Schools	CCC-A, Pediatric Hospital	CCC-A, Other
Original (gross) sample size	1,500	800	300	200	200
Deceased	2	2	—	—	—
No longer employed in the field	1	1	—	—	—
Undeliverable addresses	2	2	—	—	—
Retired	—	—	—	—	—
Ineligible for other reasons	1	1	—	—	—
Net sample size	1,494	794	300	200	200
Number of respondents	638*	375	136	59	67
Response rate	**42.7**	**47.2**	**45.3**	**29.5**	**33.5**

*One audiologist removed the facility identifier.

To ensure the highest quality data reasonably possible, each of the 638 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 January 16, 2018.

All data in the following report have been weighted unless otherwise noted. Weighting was used to adjust representation from each area of certification and facility type to its actual proportion within the Association.

Tests of statistical significance are presented throughout the report as appropriate. Conclusions are not presented with each question in order to keep the data tables as uncluttered as possible. However, the following conclusions can be used, depending on the result of the significance testing (see Table 2 for examples). In the first row, where the probability is less than .05 and is bolded, it is possible to discuss differences in responses by area of certification; in the second and third rows, that is not the case.

Table 2. Significance Tests and Conclusions	
Sample Significance Test	**Sample Conclusion**
Statistical significance: $\chi^2(2) = 114.9$, ***p* = .000**, Cramer's $V = .336$	Conclusion: There is adequate evidence from the data to say that the responses vary by area of certification.
Statistical significance: $\chi^2(2) = 2.3$, $p = .320$	Conclusion: There is not enough evidence from the data to say that the responses vary by area of certification.
Too many cells (25%) have an expected count of fewer than 5.	Conclusion: Too little data are available in some certification categories to test whether responses vary by area of certification.

Further information is available from Jeanette Janota at jjanota@asha.org or (301) 296-8738.

A description of statistical terms used in the report can be found at the end of the report.

Children and Technology

1. Which ASHA Certificate of Clinical Competence do you currently hold? *Select all that apply.* (Percentages)	
Response (Unweighted)	**All (*n* = 638)**
CCC-A	41.2
CCC-SLP	58.8
Response (Weighted)	**All (*n* = 638)**
CCC-A	6.8
CCC-SLP	93.2

2. What concerns do you have about the effect of screen time and use of popular technology, excluding AAC devices, on the communication development of children? *Select all that apply*. (Percentages) Responses were in alphabetic order on survey instrument.			
Response	**Certification Status**		
	All (*n* = 638)	**CCC-A (*n* ≥ 43)**	**CCC-SLP (*n* ≥ 594)**
Reduced opportunities for social interaction	87.2	67.4	88.6
		Statistical significance: $\chi^2(1) = 16.0$, ***p* = .000**, *Phi* = .158	
Impaired social development	76.6	69.8	77.1
		Statistical significance: $\chi^2(1) = 1.2$, $p = .272$	
Delayed speech or language development	57.0	30.2	59.0
		Statistical significance: $\chi^2(1) = 13.5$, ***p* = .000**, *Phi* = .146	
Academic problems	36.7	31.8	37.0
		Statistical significance: $\chi^2(1) = 0.5$, $p = .488$	
Hearing loss	16.0	30.2	15.0
		Statistical significance: $\chi^2(1) = 7.0$, ***p* = .008**, *Phi* = .104	
Other, specify:	17.5	15.9	17.6
		Statistical significance: $\chi^2(1) = 0.1$, $p = .770$	
No concerns	3.3	9.1	2.9
		Too many cells (25%) have an expected count of fewer than 5.	

3. At a household level, what is the best solution for managing too much use of popular technology by children? (Percentages) Responses were in alphabetic order on survey instrument.			
Response	**Certification Status**		
	All (*n* = 468)	**CCC-A (*n* = 34)**	**CCC-SLP (*n* = 435)**
Limit the amount of screen time children can have daily, weekly, or monthly.	34.3	29.4	34.7
Create family rules about technology use that are decided on with appropriate input from children.	23.0	26.5	22.5
Cultivate activities for the family that are not focused on technology (e.g., outdoor activities).	18.6	17.6	18.6
Create times or places in the home where technology is not allowed (e.g., at dinner or in the bedroom).	6.7	8.8	6.7
Delay the age when young children can use or have their own devices.	5.2	5.9	5.1
Model good technology habits by parents.	5.1	5.9	5.1
Allow young children to use technology only *with* parents (co-view).	4.9	2.9	5.1
Strictly monitor content accessed on devices to ensure that it is educational.	0.5	2.9	0.5
Other, specify:	1.0	0.0	1.1
None of the above.	0.7	0.0	0.7
		Too many cells (50%) have an expected count of fewer than 5.	

4. At a broader societal level, what is the best solution for managing the potentially negative effects on children of too much popular technology use? (Percentages) Responses were in alphabetic order on survey instrument.			
Response	**Certification Status**		
	All (*n* = 559)	**CCC-A (*n* = 38)**	**CCC-SLP (*n* = 521)**
Initiatives by the technology industry/companies to inform and protect the public (e.g., public education campaigns, product inserts, volume limiters)	34.7	39.5	34.4
Public education campaigns by groups such as ASHA	29.9	31.6	29.8
Federal recommendations or guidelines to parents	13.5	7.9	14.0
Federal oversight of technology companies that further regulates the way technology products are marketed or designed for children	9.8	2.6	10.4
Other, specify:	3.5	5.3	3.3
None of the above.	8.5	13.2	8.3
		Too many cells (25%) have an expected count of fewer than 5.	

5. ASHA implements awareness campaigns on early identification of communication disorders, technology use and communication, and the importance of seeking ASHA-certified professionals if someone has concerns. What grassroots tools are you likely to use to get involved in these campaigns? *Select all that apply*. (Percentages) Responses were in alphabetic order on survey instrument.

Response	**Certification Status**		
	All (*n* = 638)	**CCC-A (*n* = 43)**	**CCC-SLP (*n* ≥ 594)**
Printable handouts, brochures, or posters	62.6	58.1	63.0
		Statistical significance: $\chi^2(1) = 0.4$, $p = .528$	
Social media friendly videos	50.3	37.2	51.3
		Statistical significance: $\chi^2(1) = 3.2$, $p = .075$	
Infographics	9.4	18.6	8.8
		Too many cells (25%) have an expected count of fewer than 5.	
Draft blog posts	7.7	14.0	7.2
		Too many cells (25%) have an expected count of fewer than 5.	
Draft press releases	6.1	14.0	5.5
		Too many cells (25%) have an expected count of fewer than 5.	
Other, specify:	5.3	4.7	5.4
		Too many cells (25%) have an expected count of fewer than 5.	
None of the above.	13.0	16.3	12.8
		Statistical significance: $\chi^2(1) = 0.4$, $p = .509$	

Social Media Platforms

6. Do you use LinkedIn? (Percentages)			
Response	**Certification Status**		
	All (*n* = 634)	**CCC-A (*n* = 44)**	**CCC-SLP (*n* = 593)**
No. I'm not sure what that is.	7.5	4.5	7.8
No. I don't think it is relevant to my career.	15.5	11.4	15.9
No, for another reason.	35.2	25.0	35.9
Yes, but my profile is not up to date.	24.3	22.7	24.3
Yes, I update my professional profile from time to time.	15.9	34.1	14.5
Yes, I update my professional profile regularly.	1.7	2.3	1.7
		Statistical significance: $\chi^2(5) = 12.5$, ***p* = .028**, Cramer's *V* = .140	

7. What other social media platforms do you use? (Percentages)			
Response	**Certification Status**		
	All (*n* = 638)	**CCC-A (*n* ≥ 43)**	**CCC-SLP (*n* ≥ 594)**
Facebook	77.1	79.1	77.1
		Statistical significance: $\chi^2(1) = 0.1$, $p = .767$	
Instagram	37.3	37.2	37.3
		Statistical significance: $\chi^2(1) = 0.0$, $p = .989$	
Pinterest	51.2	39.5	51.9
		Statistical significance: $\chi^2(1) = 2.5$, $p = .116$	
Snapchat	15.7	23.3	15.2
		Statistical significance: $\chi^2(1) = 2.0$, $p = .158$	
Twitter	14.3	16.3	14.1
		Statistical significance: $\chi^2(1) = 0.2$, $p = .695$	
Other, specify:	1.6	2.3	1.7
		Too many cells (25%) have an expected count of fewer than 5.	
I do not use social media platforms.	15.2	16.3	15.2
		Statistical significance: $\chi^2(1) = 0.0$, $p = .842$	

Demographics

8. Select the one position that best describes how you spend most of your time. *Multiple responses will be excluded from analyses*. (Percentages)			
Response	**Certification Status**		
	All (*n* = 631)	**CCC-A (*n* = 43)**	**CCC-SLP (*n* = 589)**
Primarily clinical service provider (e.g., audiologist or SLP)	82.1	76.7	82.3
Primarily administrative or supervisory position	9.4	9.3	9.5
Primarily research	0.5	0.0	0.5
Other, specify:	2.8	11.6	2.2
Not currently employed	5.1	2.3	5.4
		Too many cells (50%) have an expected count of fewer than 5.	

9. How many years of experience do you have as an audiologist or SLP?			
Response	**Certification Status**		
	All (*n* = 628)	**CCC-A (*n* = 258)**	**CCC-SLP (*n* = 370)**
25th percentile	10.0	15.0	10.0
50th percentile (**Median**)	19.0	22.0	18.5
75th percentile	30.0	30.3	30.0
Mean	20.2	22.8	20.1
Standard deviation	11.5	10.4	11.5
Mode	20.0	20.0	20.0
		Statistical significance: $F(1, 625) = 1.0$, $p = .323$	

Appendix

Statistics used in the frequency report include the following notation and description:

Notation	Description
Response rate	The percentage of individuals who were included in the sample, minus any who were ineligible $RR = \frac{(C + P}{S - (Ret + I)}$ 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., no longer in the field, on leave of absence) $RR = \frac{638}{1{,}500 - (6)} = 42.7\%.$
n	The number in the sample. In this report, the number of people who answered a particular question.
Mean	A measure of central tendency; an average. Add all the values, and divide the total by the number of items. Example: (1 + 1 + 7 + 34 + 88) / 5 = 26.2 Mean = 26.2
Standard deviation	A statistic that shows the spread of scores in a distribution. Used with means. The larger the standard deviation, the more widely the scores are spread out around the mean.[1] About 68% of the measurement is between 1 standard deviation greater than and 1 standard deviation smaller than the mean; 95% are plus/minus 2 standard deviations. Example: (1 + 1 + 7 + 34 + 88) Standard deviation = 37.1 Therefore, 68% of the responses are between –10.9 and 63.3 in the example.
Median	A measure of central tendency. Arrange the values in order, from lowest to highest. Select the value in the middle position. Example: 1, 1, 7, 34, 88 Median = 7
Mode	A measure of central tendency. The value that occurs more frequently than any other value. Example: 1, 1, 7, 34, 88 Mode = 1
Statistical significance	Describes whether a value is larger or smaller than would be expected by chance alone. Note that a large sample size can lead to results that are “statistically significant” even though the results themselves may not have substantive or practical significance. This is particularly true for chi square (χ^2) tests.[1]
Chi square (χ^2)	A test used to assess the statistical significance of a finding where the variables being assessed are nominal (e.g., annual salary and hourly salary) or ordinal (e.g., excellent, good, fair, and poor). It measures whether there are statistically significant differences between the observed frequencies and the expected frequencies of two variables. The larger the observed frequency is in comparison with the expected frequency, the larger the χ^2 statistic and the more likely the difference is statistically significant. When the sample size is large, large χ^2 values (that is, ones that are statistically significant) can be obtained even for weak associations.[1]

Notation	Description
Cramer's *V* and *Phi*	A measure of the strength of the association, used with χ^2 statistics to identify the meaningfulness of a relationship. The χ^2 value may be large with a small probability ($p < .05$) of having occurred by chance. That is, it is "statistically significant at the .05 level." Cramer's *V* and *phi* are measures of how strong (practically important) the relationship is between the variables. The larger the Cramer's *V* or *phi*, the stronger the association. *Phi* is used for 2 × 2 tables; Cramer's *V* is reported for tables larger than 2 × 2. These statistics are only presented in this report when $p \leq .05$.
p	Probability. Found in expressions such as $p = .003$, meaning "The probability that this result could have been produced by chance is 1 in 3/1000ths." The smaller the number, the less likely that the result was due to chance. The *p* value is the actual probability associated with an obtained statistical result, such as χ^2 or *F*.[1]
df	Degrees of freedom. The number of values that are free to vary when computing a statistic. Used in interpreting both a χ^2 and an *F* ratio. It is calculated in a cross-tabulation as (R – 1) (C – 1) or (the number of rows minus 1) times (the number of columns minus 1). In a 3 × 4 table, *df* would be 6.

[1] Vogt, W. P. (1993). *Dictionary of statistics and methodology*. Newbury Park, CA: Sage