

Survey Methodology

On February 23, 2016, ASHA fielded a survey to 3,000 ASHA-certified speech-language pathologists in the U.S. The purpose of the survey was to learn about their experiences and observations on the impact of popular personal technology devices on children’s communication (excluding AAC devices). Follow-up reminders were sent to non-respondents on March 1 and 7. The survey was closed on March 13. Of the 3,000 individuals, 27 opted out of this and future online surveys and 19 email bounced, leaving 2,954 possible respondents. The actual number of respondents was 307, for a 10.4% response rate.

Results

Percentages are rounded and may not add to exactly 100%. Some comments have been edited for grammar and spelling.

1. Do you currently provide clinical services to children and teenagers (i.e., ages 0-19)?

Response	Percentage	Number
Yes	83.1	255
No*	16.9	52

n = 307. *Those who responded “no” were exited from the survey.

2. Professionally, are you seeing sufficient misuse of personal technology devices by children and teenagers (i.e., ages 0–19) that give you serious concerns about their communication health?

Response	Percentage	Number
Yes	69.8	176
No	30.2	76

n = 252.

3. Rank order the following statements relative to your professional concerns about children and personal technology use. [The mean rating is presented in the first table. The possible range was 1 to 5, where 5 =highest. Response percentages are presented in the second table.]

Response	Mean Rating
Excessive technology use by children is replacing conversation and human interaction.	4.3
Children are being given unmonitored access to personal technology when they are too young.	3.4
Overuse of personal technology could negatively affect children’s speech and language skills.	3.3
Repeated misuse of personal technology at loud volumes could potentially damage the child’s hearing.	2.2
Parents feel as though they are in a losing battle with personal technology for influence over their children.	2.0

n ≥ 155.

Response	Greatest Concern	2 nd	3 rd	4 th	5 th
Percentages					
Excessive technology use by children is replacing conversation and human interaction.	58.5	24.4	10.4	4.3	2.4
Children are being given unmonitored access to personal technology when they are too young.	21.1	26.1	28.0	18.6	6.2
Overuse of personal technology could negatively affect children's speech and language skills.	14.5	34.0	28.9	17.0	5.7
Repeated misuse of personal technology at loud volumes could potentially damage the child's hearing.	3.2	8.4	21.9	33.6	32.9
Parents feel as though they are in a losing battle with personal technology for influence over their children.	4.4	8.9	11.4	28.5	46.8

4. Are more parents telling you they have concerns about technology's effects on their child's communication development/skills?

Response	Percentage	Number
Yes	17.9	43
No	82.1	197

n = 240.

5. In your professional opinion, what is the minimum age that children should have their own personal technology? (Check one.)

Response	Percentage	Number
3	2.1	5
5	6.3	15
7	17.2	41
9	26.5	63
No minimum age	11.8	28
Other (see below)	36.1	86

n = 238.

Other responses:

- 4
- 10 (4 responses)
- 10 or older
- 11 (3 responses)
- 12 (16 responses)
- 13 (11 responses)
- 14 (2 responses)
- 14-15 years' old
- 15
- 16 (2 responses)
- 16 get a job and pay for it themselves
- All electronics and screen time should be closely monitored for minor children

- At least 10
- Beginning middle school (10-11)
- Depend on the use for it, communication device?
- Depends greatly on the child and what the intentions are
- Depends on abilities of the child, and only used in timed intervals with parent interaction under school age.
- Depends on individual
- Depends on individual child but absolutely not before age 3
- Depends on maturity of student and responsibility of parent
- Depends on needs and maturity of the child
- Depends on the child
- Depends on the needs of the student
- Depends on the purpose of the device
- Depends on the specific child
- Depends on the type of technology - i.e., phone, tablet, computer - I think it varies with the type and use of the technology!
- Depends on usage and reason why they are using it
- Depends on what the device is being used for
- For distraction purposes, small amount of time
- I believe personal technology for learning and for educational purposes could be used at school age to help with children; but it should be a joint effort with parents. The technology shouldn't be a "babysitter".
- I think it depends on how/if it is facilitated by an adult
- I think it depends on what the technology is being used for whether it is educational support purposes versus just video games.
- If an ACC, when utilized appropriately.
- It depends on the child.
- It depends on the child's needs and their use of the technology
- it depends on what the technology is, how much it is used, but I think not under 3 at all
- It is up to the parents' discretion. I do think they should have access to technology as soon as they stop drooling.
- Junior high at the very youngest
- Kids shouldn't be the "owners" of devices- that implies they have control over their use. Parents own and allow for use
- Middle school
- Middle school - 11
- No earlier than 10, preferably older.
- Out of elementary school
- Over 18
- Personal preference. Depends on the use of that technology and for how long
- Teen
- That depends upon the child's needs and how the technology is used.
- There has to be mindful discussion of usage - like why, how and when
- Totally dependent on the individual, the content, and the context
- Unsure, depends on how tech is used and monitored
- Very dependent on each individual and family needs for the device
- What's the definition of personal tech?? some are age appropriate. Many gadgets have some tech portion. Hard to answer as written.
- When they are mature enough to use the technology appropriately, not let the technology interfere with their daily lives and communicative functioning and if they are receiving sufficient safety-monitoring by parents and guardians.
- When they can pay for it themselves

6. Rank order the following actions that you think would most effectively help parents manage their children's technology usage. [The mean rating is presented in the first table. The possible range was 1 to 5, where 5 = highest. Response percentages are presented in the second table]

Response	Mean Rating
Encourage parents to become more involved in their children's technology usage and set clear parameters at home.	4.0
Offer specific guidelines to parents that detail what constitutes appropriate technology use by child age.	3.6
Provide parents with educational materials about the risk of communication disorders.	3.1
Encourage parents to only allow their children to use devices that have parental controls.	2.7
Encourage parents not to allow their children to have their own personal devices.	1.8

$n \geq 212$.

Response	1 st Most Effective	2 nd	3 rd	4 th	5 th
Percentages					
Encourage parents to become more involved in their children's technology usage and set clear parameters at home.	41.3	25.1	22.4	9.9	1.4
Offer specific guidelines to parents that detail what constitutes appropriate technology use by child age.	26.9	30.1	26.5	11.4	5.0
Provide parents with educational materials about the risk of communication disorders.	19.5	21.4	23.3	24.2	11.6
Encourage parents to only allow their children to use devices that have parental controls.	5.5	21.1	23.9	40.8	8.7
Encourage parents not to allow their children to have their own personal devices.	10.4	5.2	7.1	12.3	65.1

7. More broadly, rank order the efforts below that should be taken to help ensure children's safe use of personal technology. [The mean rating is presented in the first table. The possible range was 1 to 3, where 3 = highest. Response percentages are presented in the second table]

Response	Mean Rating
Teaching, promoting, and enforcing safe technology usage becomes a bigger priority for health professionals, educators, and parents.	2.6
The technology industry becomes more active in supporting public education about technology safety.	2.2
The government imposes safety measures on technology usage.	1.2

$n \geq 224$.

Response	1st Most Important	2nd	3rd
Percentages			
Teaching, promoting, and enforcing safe technology usage becomes a bigger priority for health professionals, educators, and parents.	70.4	23.5	6.2
The technology industry becomes more active in supporting public education about technology safety.	26.0	63.9	15.8
The government imposes safety measures on technology usage.	4.0	12.1	83.9

8. If you were to advise one step for addressing a typical case of a child's technology overuse, it would be: (Check one.)

Response	Percentage	Number
Encourage the parents to set reasonable parameters and model safe technology usage at home.	72.9	167
Talk with the parents about the importance of protecting their child's communication health.	22.7	52
Talk to the child in simple terms about the importance of their communication health.	4.4	10

n = 229.

9. What do you think is the best way to reach children about using technology safely? (Check one.)

Response	Percentage	Number
Work with health professionals, educators, and parents to create a multipronged approach that continually delivers and reinforces safety messages on technology use.	51.8	118
Encourage parents to set reasonable technology usage parameters and talk to their children about protecting themselves.	41.2	94
Deliver safety messages in ways that are easy for children to understand.	4.8	11
Tightly restrict children's technology usage.	2.2	5

n = 228.

10. Is children's preoccupation with personal technology just this generation's distraction of choice--much like television or video games were for prior generations—or is it qualitatively different with greater potential for harm?

Response	Percentage	Number
Distraction of choice	25.0	57
Qualitatively different	75.0	171

n = 228.

11. Rank order the following factors that you think make children’s preoccupation with personal technology qualitatively different rather than just a distraction of choice. [The mean rating is presented in the first table. The possible range was 1 to 6, where 6 = highest. Response percentages are presented in the second table]

Response	Mean Rating
Technology has become so dominant that it is more difficult for parents to control and monitor.	4.1
Parents are more time pressed than ever; therefore, the technology lends itself more to serving as a substitute for parental involvement.	4.0
Technology is infusing many more aspects of society and at a rate that outpaces the ability to protect or educate about safe usage.	3.9
The technology is far more powerful, with greater potential to negatively impact communication health.	3.7
The invisible, insidious nature of the potential damage to communication health makes it easy to overlook and difficult to warn against.	3.6
Unlike other serious public health threats, key stakeholders (e.g., industry, governmental leaders, etc.) are largely disengaged from championing safety.	1.9

$n \geq 156$.

Response	1st Leading Factor	2nd	3rd	4th	5th	6th
Percentages						
Technology has become so dominant that it is more difficult for parents to control and monitor.	21.9	20.6	24.4	18.1	11.3	3.8
Parents are more time pressed than ever; therefore, the technology lends itself more to serving as a substitute for parental involvement.	21.5	23.4	20.9	10.8	12.0	11.4
Technology is infusing many more aspects of society and at a rate that outpaces the ability to protect or educate about safe usage.	19.6	21.5	17.8	20.9	15.3	4.9
The technology is far more powerful, with greater potential to negatively impact communication health.	21.5	14.6	15.8	20.3	17.1	10.8
The invisible, insidious nature of the potential damage to communication health makes it easy to overlook and difficult to warn against.	15.1	18.2	15.1	18.9	25.8	6.9
Unlike other serious public health threats, key stakeholders (e.g., industry, governmental leaders, etc.) are largely disengaged from championing safety.	2.6	4.5	6.4	10.9	16.0	59.6

12. If it were allowed to continue, do you foresee widespread overuse of technology as a potential “time bomb” that could irreparably damage the communication skills of future generations?

Response	Percentage	Number
Yes	68.2	150
No	31.8	70

$n = 220$.

Survey Methodology

On February 23, 2016, ASHA fielded a survey to 3,000 ASHA-certified audiologists in the U.S. The purpose of the survey was to learn about their experiences and observations on the impact of popular personal technology devices on children’s communication (excluding AAC devices). Follow-up reminders were sent to non-respondents on March 1 and 7. The survey was closed on March 13. Of the 3,000 individuals, 72 opted out of this and future online surveys and 41 email bounced, leaving 2,887 possible respondents. The actual number of respondents was 241, for an 8.3% response rate.

Results

Percentages are rounded and may not add to exactly 100%. Some comments have been edited for grammar and spelling.

1. Do you currently provide clinical services to children and teenagers (i.e., ages 0-19)?

Response	Percentage	Number
Yes	72.2	174
No*	27.8	67

n = 241. *Those who responded “no” were exited from the survey.

2. Professionally, are you seeing sufficient misuse of personal technology devices by children and teenagers (i.e., ages 0–19) that give you serious concerns about their communication health?

Response	Percentage	Number
Yes	52.0	92
No	48.0	85

n = 177.

3. Rank order the following statements relative to your professional concerns about children and personal technology use. [The mean rating is presented in the first table. The possible range was 1 to 5, where 5 = highest. Response percentages are presented in the second table]

Response	Mean Rating
Excessive technology use by children is replacing conversation and human interaction.	3.9
Repeated misuse of personal technology at loud volumes could potentially damage the child’s hearing.	3.8
Children are being given unmonitored access to personal technology when they are too young.	2.9
Overuse of personal technology could negatively affect children’s speech and language skills.	2.6
Parents feel as though they are in a losing battle with personal technology for influence over their children.	1.9

n ≥ 83.

Response	Greatest Concern	2 nd	3 rd	4 th	5 th
Percentages					
Excessive technology use by children is replacing conversation and human interaction.	35.3	32.9	18.8	11.8	1.2
Repeated misuse of personal technology at loud volumes could potentially damage the child's hearing.	48.2	14.1	9.4	21.2	7.1
Children are being given unmonitored access to personal technology when they are too young.	13.3	21.7	24.1	24.1	16.9
Overuse of personal technology could negatively affect children's speech and language skills.	3.5	21.2	30.6	22.4	22.4
Parents feel as though they are in a losing battle with personal technology for influence over their children.	1.2	9.3	16.3	22.1	51.2

4. Are more parents telling you they have concerns about their child's hearing due to technology misuse?

Response	Percentage	Number
Yes	34.5	58
No	65.5	110

n = 168.

5. In your professional opinion, what is the minimum age that children should have their own personal technology? (Check one.)

Response	Percentage	Number
3	1.8	3
5	6.1	10
7	12.7	21
9	24.2	40
No minimum age	16.4	27
Other (see below)	38.8	64

n = 165.

Other responses:

- 6 months
- 8 (**3 responses**)
- 10 (**10 responses**)
- 10-12
- 10-12 listening usage, no social media until at least 13
- 11 (**2 responses**)
- 11-12 (**12 responses**)
- 12 (**18 responses**)
- 12, unless away from parents/caregivers often enough to need a way to communicate with them.
- 13 (**3 responses**)
- 13 or older
- 14 (**2 responses**)
- 15

- 16 (5 responses)
- 18 (2 responses)
- Age is really not the issue. It the amount of time they are consumed with the same activity
- As with most things, depends on the individual and the circumstances
- Before 16, but not before 12
- Depends on child and amount of supervision when devices are being used
- Depends on situation, but 13+
- Depends on the child and parent
- Depends on the maturity/development level
- Depends on the technology, and parents should always be monitoring
- Do you mean a hearing aid? When they are diagnosed with a hearing loss.
- I think interaction with the child while using a device is the key issue
- I think it is child and parent dependent
- I think that is a very individual determination, based on many variables.
- If parents set volume limits, no age restriction
- Individual basis
- It is an individual family decision. Some need it to communicate with working parents.
- Let parents decide what is appropriate for their child
- None, as long as proper use and time of use is monitored
- Not sure what you mean by Personal technology. If you mean hearing aids, then yes at birth. If you mean FM/HAT then we typically put them on at school as deemed via an IEP
- Teenage
- When a parent feels they are mature enough to have the responsibility.
- When they can afford their portion of the associated costs of technology

6. Rank order the following actions that you think would most effectively help parents manage their children’s technology usage. [The mean rating is presented in the first table. The possible range was 1 to 5, where 5 = highest. Response percentages are presented in the second table]

Response	Mean Rating
Encourage parents to become more involved in their children’s technology usage and set clear parameters at home.	4.2
Offer specific guidelines to parents that detail what constitutes appropriate technology use by child age.	3.5
Provide parents with educational materials about the risk of communication disorders.	3.2
Encourage parents to only allow their children to use devices that have parental controls.	2.9
Encourage parents not to allow their children to have their own personal devices.	1.4

$n \geq 144$.

Response	1 st Most Effective	2 nd	3 rd	4 th	5 th
Percentages					
Encourage parents to become more involved in their children's technology usage and set clear parameters at home.	47.1	29.4	19.6	3.9	0.0
Offer specific guidelines to parents that detail what constitutes appropriate technology use by child age.	25.0	28.4	23.7	20.3	2.7
Provide parents with educational materials about the risk of communication disorders.	15.9	25.2	26.5	25.2	7.3
Encourage parents to only allow their children to use devices that have parental controls.	10.3	16.4	28.8	40.4	4.1
Encourage parents not to allow their children to have their own personal devices.	4.9	2.8	4.2	7.6	80.6

7. More broadly, rank order the efforts below that should be taken to help ensure children's safe use of personal technology. [The mean rating is presented in the first table. The possible range was 1 to 3, where 3 = highest. Response percentages are presented in the second table]

Response	Mean Rating
Teaching, promoting, and enforcing safe technology usage becomes a bigger priority for health professionals, educators, and parents.	2.5
The technology industry becomes more active in supporting public education about technology safety.	2.2
The government imposes safety measures on technology usage.	1.3

$n \geq 149$.

Response	1 st Most Important	2 nd	3 rd
Percentages			
Teaching, promoting, and enforcing safe technology usage becomes a bigger priority for health professionals, educators, and parents.	61.3	30.7	8.0
The technology industry becomes more active in supporting public education about technology safety.	33.6	54.6	11.8
The government imposes safety measures on technology usage.	6.0	14.1	79.9

8. If you were to advise one step for addressing a typical case of a child's technology overuse, it would be: (Check one.)

Response	Percentage	Number
Encourage the parents to set reasonable parameters and model safe technology usage at home.	64.1	98
Talk with the parents about the importance of protecting their child's communication health.	22.9	35
Talk to the child in simple terms about the importance of their communication health.	13.1	20

$n = 153$.

9. What do you think is the best way to reach children about using technology safely? (Check one.)

Response	Percentage	Number
Work with health professionals, educators, and parents to create a multipronged approach that continually delivers and reinforces safety messages on technology use.	47.4	72
Encourage parents to set reasonable technology usage parameters and talk to their children about protecting themselves.	36.2	55
Deliver safety messages in ways that are easy for children to understand.	15.8	24
Tightly restrict children's technology usage.	0.7	1

$n = 152$.

10. Is children's preoccupation with personal technology just this generation's distraction of choice--much like television or video games were for prior generations—or is it qualitatively different with greater potential for harm?

Response	Percentage	Number
Distraction of choice	32.9	50
Qualitatively different	67.1	102

$n = 152$.

11. Rank order the following factors that you think make children's preoccupation with personal technology qualitatively different rather than just a distraction of choice. [The mean rating is presented in the first table. The possible range was 1 to 6, where 6 = highest. Response percentages are presented in the second table]

Response	Mean Rating
Technology is infusing many more aspects of society and at a rate that outpaces the ability to protect or educate about safe usage.	4.3
Technology has become so dominant that it is more difficult for parents to control and monitor.	4.2
The technology is far more powerful, with greater potential to negatively impact communication health.	3.6
The invisible, insidious nature of the potential damage to communication health makes it easy to overlook and difficult to warn against.	3.5
Parents are more time pressed than ever; therefore, the technology lends itself more to serving as a substitute for parental involvement.	3.4
Unlike other serious public health threats, key stakeholders (e.g., industry, governmental leaders, etc.) are largely disengaged from championing safety.	2.1

$n \geq 92$.

Response	1st Leading Factor	2nd	3rd	4th	5th	6th
Percentages						
Technology is infusing many more aspects of society and at a rate that outpaces the ability to protect or educate about safe usage.	27.4	23.2	17.9	16.8	8.4	6.3
Technology has become so dominant that it is more difficult for parents to control and monitor.	26.6	24.5	17.0	17.0	7.5	7.5
The technology is far more powerful, with greater potential to negatively impact communication health.	16.0	19.2	19.2	11.7	20.2	13.8
The invisible, insidious nature of the potential damage to communication health makes it easy to overlook and difficult to warn against.	17.2	8.6	19.4	28.0	17.2	9.7
Parents are more time pressed than ever; therefore, the technology lends itself more to serving as a substitute for parental involvement.	12.0	18.5	19.6	12.0	22.8	15.2
Unlike other serious public health threats, key stakeholders (e.g., industry, governmental leaders, etc.) are largely disengaged from championing safety.	2.1	6.4	7.5	13.8	24.5	45.7

12. If it were allowed to continue, do you foresee widespread overuse of technology as a potential “time bomb” that could irreparably damage the communication skills of future generations?

Response	Percentage	Number
Yes	66.2	96
No	33.8	49

n = 145.