

Chapter 15

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Laughter in Stuttering Therapy: Using Humor-Based Apps to Begin Meaningful Discussions

Purpose of the chapter

In this digital age, speech-language pathologists (SLPs) who provide therapy to individuals who stutter have access to numerous technologies to educate and engage their clients. Specifically, computer-based technologies, such as smartphones and tablet computers, which typically house a number of applications (apps), can be used as valid and relevant ways to provide meaningful therapy and support to school-aged children who stutter (CWS). Through the intentional use of humor-based apps that allow users to manipulate personal photographs in a manner that might be described as funny, some CWS may be more willing to share with their clinicians a number of personal thoughts and feelings that directly relate to stuttering and the lived experience of having this particular communication difficulty.

The purpose of this chapter is to highlight and discuss three humor-based apps that could help CWS grow and evolve as communicators. I will describe these apps in detail that allow the client and the clinician to actively participate in and collaboratively create a new comedic version of personal photographs. As an SLP who works primarily with CWS, I have enjoyed the opportunity to explore humor-based apps with my clients. I believe that, when a clinician makes the choice to appropriately infuse digital technology and humor into therapeutic experiences with CWS, a strong therapeutic relationship between the client and clinician develops. I hope that the practical information that I share in this chapter will help other clinicians to better imagine new ways to provide fun and functional therapy and support to CWS and will expand and enrich the 21st-century digital competencies of clinicians and clients.



The Relevance and Benefits of Apps in Speech and Language Therapy

A significant number of adults own smart mobile computing devices, such as an iPhone or iPad. For example, a vast majority (81%) of adults within the United States have smartphones, and a little more than half (52%) of Americans aged 18 years and over own tablet computers (Pew Research Center, 2019). Furthermore, a majority of parents in the United States allow their children to use their smartphones and tablet computers on a daily basis for various digital activities (Kabali et al., 2015). Children having as much access to smart mobile computing devices as they do (Given et al., 2014; Lauricella et al., 2014), with many of them first interacting with those digital technologies before their first birthday (Kabali et al., 2015), might be why today's youth are sometimes referred to as digital natives (Prensky, 2006) who are a part of the technologically savvy mobile generation (Lauricella et al., 2014).

In an effort to provide current school-aged children with more attractive, enjoyable, and effective 21st-century learning opportunities, educators across the globe are designing speech and language lessons that allow their students to use digital devices in the learning environment (Hussain et al., 2020; Toki & Pange, 2010). Studies have found that this action is beneficial for children with speech and language difficulties because those students were observed to be highly motivated and engaged while interacting with smart mobile computing devices during learning activities (Fernández-López et al., 2013; Orr & Mast, 2014). Also, parents of children with speech and language difficulties have reported positive attitudes toward their children using smart mobile computing devices during learning activities (Fletcher-Watson et al., 2016). These optimistic findings have paved the way for SLPs to explore the use of smart mobile computing devices and, more specifically, particular apps on those devices to gauge the apps' ability to enhance students' and clients' speech, language, and overall communication abilities (Davis & Sweeney, 2015; Ramsberger & Messamer, 2014).

Researchers have found that using apps in speech and language therapy gives SLPs the chance to model specific speech and language to their clients in ways that are reportedly both fun and functional (Davis & Sweeney, 2015). Also, because a substantial number of apps include customization features that can personalize the learning experience of a given user, clients have shown higher levels of therapy interest and satisfaction when they were encouraged to interact with apps during treatment with their SLPs (Heyman, 2020; Ramsberger & Messamer, 2014). In short, apps have demonstrated their ability to transform users from passive consumers of pre-made content to active creators of personalized content (Montgomery, 2015), that can directly coincide with individuals' speech and language goals.

The Case for Humor in Speech and Language Therapy

Studies show that using humor within therapeutic settings is beneficial for building rapport between adult clients and clinicians (Crepeau & Garren, 2011). From a speech-language pathology point of view, Walsh (2007) found that SLPs who introduced humor and allowed it to occur in their therapeutic interactions with adult clients had a positive influence on those adults' overall satisfaction levels. Also, Simmons-Mackie and Schultz (2003) discovered that, in speech-language therapy with adults, humor can be used as a tool to build solidarity, mitigate embarrassment, and solicit cooperation with tasks. Examples of using humor in the therapeutic setting are making fun of oneself in a playful manner, making fun of a stimulus item, or laughing at something unexpected in the context of therapy.

On the topic of children, Fourie et al. (2011) explored the therapeutic relationship between SLPs and their younger clients. Their study focused on the children's experiences in speech-language therapy. One of the themes that the semi-structured interviews revealed was that the children saw the SLPs as a source of play and fun. Examples that support these findings are when a child described his SLP by stating, "She was funny!" (p. 316) and, when asked to imagine a bad SLP, another child responded, "She would say . . . 'Stop laughing.'" (p. 316).

Not only do children with various communication difficulties appreciate humor in therapeutic settings, but parents of children with disabilities have also mentioned that they, too, appreciate humor, as it relates to the lives and care of their children (Rieger, 2004). Children naturally enjoy playing and participating in events that trigger smiles and laughter. So, it simply makes sense that a healthy number of studies consistently reveal that humor is a positive aspect that helps clients meet their goals and objectives within the therapy room. The data shows that as children grow and mature into adulthood, the natural desire to engage in humor does not disappear. Instead, the natural inclination to engage in humor remains. Thus, it is crucial that SLPs understand this and actively incorporate aspects of humor into their therapy settings whenever possible and appropriate.

Digital Technology and the Humor-Learning Relationship

When working with school-aged children, educators have learned that humor can gain learners' attention and increase their overall enthusiasm and motivation for the given subject at hand. For example, studies have found that showing funny pictures and telling jokes are valid parts of learning that students enjoy and appreciate (Kavandi & Kavandi, 2016). In addition, when humor was purposefully integrated into



the learning experience of some high school-aged students, Çelik and Gündoğdu (2016) discovered that there were decreased levels of anxiety and increased levels of knowledge retention, with one student stating, “It is really pleasant to laugh and have fun while learning. I wish we were taught in the same way in other classes. I wouldn’t have any low marks then.” (p. 154).

Adults who have the privilege of working with children can set up a humor-learning environment that might help young learners experience lower levels of stress (Sánchez et al., 2017) or temporarily forget about negative experiences in their lives (Stuber et al., 2009). Laughing and talking about digital files, such as hilarious pictures and silly movies, is a simple yet effective way to make meaningful connections with today’s youth (Mahdiloo & Izadpanah, 2017; Weitkamp & Burnet, 2007). My experience has been that, at times, some CWS experience high levels of stress and frustration related to their stuttering. Therefore, wonderful things can happen when SLPs create a humorous learning environment where smiles and laughter revolve around discussing a silly digital stimulus.

Stuttering Affects More Than Just the Individual’s Speech Patterns

Some of the most important goals in therapy have to do with helping CWS develop and maintain healthier thoughts and feelings about themselves as communicators (Chmela & Reardon, 2001). If SLPs can create an atmosphere where CWS feel comfortable talking about their stuttering-related thoughts and feelings, those clients might be able to grow and evolve as communicators. One of the ways that SLPs can do this is by discussing Sheehan’s (1970, 1997) iceberg analogy.

Sheehan’s iceberg analogy compares stuttering to an iceberg floating in water. The ice above the surface is the portion that people can see and hear. When compared to stuttering, that small part of the iceberg represents the behavioral motor difficulties, or surface features, of stuttering. The part below the surface is, by far, the larger portion of the iceberg and should not be forgotten or ignored simply because it is not visible above the water’s surface. When compared to stuttering, that unseen part of the ice below the surface is just like the self-defeating thoughts and feelings that CWS sometimes experience. The potential shame, fear, guilt, and other thoughts, feelings, and emotions that may fill a speaker’s mind and heart during a moment of stuttering are hidden from the world because they exist internally, or below the surface. This analogy perfectly illustrates why creating goals and therapeutic activities that focus solely on the behavioral motor issues is limiting because doing so may fail to address the psychosocial components of stuttering (Healey et al., 2004).

Many authors have commented on the challenges that SLPs face in the overall treatment for CWS, particularly with respect to their comfort when discussing the aspects of stuttering that are below the surface. Several studies have documented that clinicians are not comfortable working with CWS (Brisk et al., 1997; Kelly et al., 1997; Mallard et al., 1988; Tellis et al., 2008), a fact that is particularly concerning given the negative impact that many CWS experience in their lives in association with their speaking difficulties (e.g., Yaruss & Quesal, 2016). Also, studies have found that a number of speech-language pathology graduate students are completing their education without ever treating clients who stutter. This may be why some of these graduate students have reported feeling unprepared to work with CWS, even after completing coursework in fluency disorders (Santus et al., 2019).

Perhaps certain humor-based apps could be used by clinicians and speech-language pathology graduate students to help both clients and clinicians feel more comfortable discussing aspects of stuttering that are below the surface. The use of apps in therapy has not been thoroughly explored in the literature; however, there are numerous ways that SLPs can integrate such digital technology into therapy to increase motivation and personalization of the therapy experience for CWS. Specifically, SLPs can use humor-based apps to encourage CWS to examine their own emotional reactions to stuttering, to role-play different ways of responding to other people's reactions to their stuttering, and to explore the negative impact of stuttering and discuss ways that impact may be reduced.

The FIVES Criteria for App Selection

I selected the humor-based apps highlighted and discussed in this chapter by consulting the FIVES criteria described by Sweeney (Davis & Sweeney, 2015; Sweeney, 2010). The FIVES criteria urge SLPs to consider the following words before downloading any app for potential use with a client during a speech-language therapy experience:

- Free or fairly-priced (based on the app's quality and utility)
- Interactive (based on the app's potential engagement and creation of a digital product)
- Visual (based on the app's ability to provide support and scaffolding for learning and practice through visuals)
- Educationally relevant (based on the app's ability to assist students in accessing the curriculum)
- "Speechie" (based on the app's relevancy to speech and language and whether it can be repurposed for therapy use)



Each of the humor-based apps discussed in this chapter perfectly meets the FIVES criteria.

Repurposing Apps for CWS

Edutainment is a term that combines the words *education* and *entertainment* (Addis, 2005). Emerging digital technologies, such as humor-based apps that can be directly downloaded to smartphones and tablet computers, can easily be repurposed from being solely for entertainment to being therapeutic by directly motivating and encouraging CWS to use their voices to describe details about a humorous photograph. Then, the SLP can redirect the conversation to pair the humorous photograph with intentional discussions about communication in general and stuttering in particular. The following three humor-based apps that I discuss are *Doodle Mirror (Kingdom of Fun)*, *Face Booth*, and *AgingBooth*.

Doodle Mirror (Kingdom of Fun)

Doodle Mirror (Kingdom of Fun) (Trend L, 2020) allows users to take a photograph of themselves with their smartphone's or tablet's camera and alter their picture so that they appear drastically different. For example, one of the settings enlarges people's eyes in a way that makes them look as if they were space aliens. See the before-and-after pictures in Figure 1. A silly and creative experience such as this could be ideal for CWS who are fascinated by science fiction books and movies, which could have characters in them that appear to be similar to the altered *Doodle Mirror* photograph. This humorous photograph could be used as a legitimate talking point to generate a healthy amount of conversation that could be carefully steered toward the subjects of communication as a whole and stuttering when the time is right.

I have used *Doodle Mirror* to begin general conversations about feelings with CWS. In particular, I have frequently paired the following prompt with a *Doodle Mirror* photograph: "How would you feel if you randomly saw this space alien walking down the street?" After a few moments of thinking time, CWS may be able to share that they would perhaps feel surprised, scared, or nervous. Further expansions of the stated feelings might reveal how a client would be surprised because "it's not every day that you walk outside your house and see a space alien" or "I would feel scared or nervous because I'm not sure if the space alien would be friendly or not." Each of those responses to the shared feelings is more than appropriate and shows how the child is able to speak directly on the subject of personal feelings.



Figure 1: Doodle Mirror Results [Before / After]

When working together with CWS, an important question that should be asked is “How does your stuttering make you feel?” However, my experience has been that some CWS may not be ready to share such personal information. This experience connects to the literature that shows how a number of children (Blood et al., 2003) and adults who stutter have stated that they rarely or never talk about their stuttering to anyone (Corcoran & Stewart, 1998). Not talking about talking seems to be an indicator that there is a strong self-perceived stigma associated with stuttering and a fear related to talking about talking (Beilby et al., 2013; Hughes et al., 2011). Taking this into consideration, asking about feelings associated with seeing a space alien may gently ease CWS into the idea of talking about feelings that directly relate to communication as a whole and stuttering in particular.

Using the *Doodle Mirror* photograph as a starting point for discussing feelings could then allow the client and clinician to go beyond the science fiction-themed conversation to more personal topics. For example, while still pointing to the previously shared feelings of being surprised, scared, or nervous, I have shared with clients that I often feel those same things whenever I have to travel somewhere by airplane. I have stated, “Sometimes, when I’m on an airplane, the occasional bumps in the sky really surprise me, and, when I feel those bumps when I’m sitting in my seat while flying in the air, I get really scared and nervous that we might have to



make an emergency landing.” Though, on its surface, this example might not necessarily sound like a conversation that pertains to communication and stuttering, it does set the foundation for future conversations about communication and stuttering, and the feelings connected to those topics.

After the client and clinician have participated in broad conversations about feelings, the following prompt could be used as a way to transition to more communication-based discussions that revolve around feelings: “Thank you for sharing those words with me about the times you feel those things. Hey, since we’re in therapy, I’m wondering if you might be able to share with me a time you felt [surprised, scared, nervous] because of communication or stuttering.” On numerous occasions, this approach has helped me uncover valuable therapeutic data that directly connects to the lived experiences of CWS. For example, a 6-year-old boy who stutters once shared the following with me: “I felt surprised when I went to the restaurant for my neighbor’s birthday party and I didn’t stutter when the waiter asked what drink I wanted.” The child then said, “I felt scared and nervous when the waiter came back around again asking if I wanted a refill. I didn’t want to break the no stutter streak.”

This was the first time that this particular client had mentioned the “no stutter streak” in therapy. Upon engaging in deeper discussion, the child was able to describe how he would mentally tally each moment of his verbal communication when stuttering was not auditorily present. He believed that his goal as a communicator was to “keep the no stutter streak going for as long as possible.” Through careful and caring conversations, I was able to help the client see how this particular way of thinking was not helpful. This is a clear example of how beginning the process of talking about feelings and talking about talking can help CWS consider different types of thinking related to who they are as communicators who stutter. It all started with exploring a humor-based app like *Doodle Mirror*. According to clients, making the decision to start a conversation about stuttering and actively talking about talking and the thoughts and feelings that surround talking are beneficial (Irani et al., 2012).

The *Doodle Mirror* example shows the overlap that exists when the choice is made to discuss feelings. See the Venn diagram in Figure 2. On one side of the diagram is the experience of seeing the space alien walking down the street. On the other side is the stuttering-related experience of being in the restaurant. The feelings of being surprised, scared, or nervous seem to be attached to both experiences. Therefore, this approach might serve as an eye-opening activity for some CWS to participate in.

To recap, SLPs might consider creating a funny photograph using *Doodle Mirror*. The client and clinician can talk about that neutral photograph in a way that allows

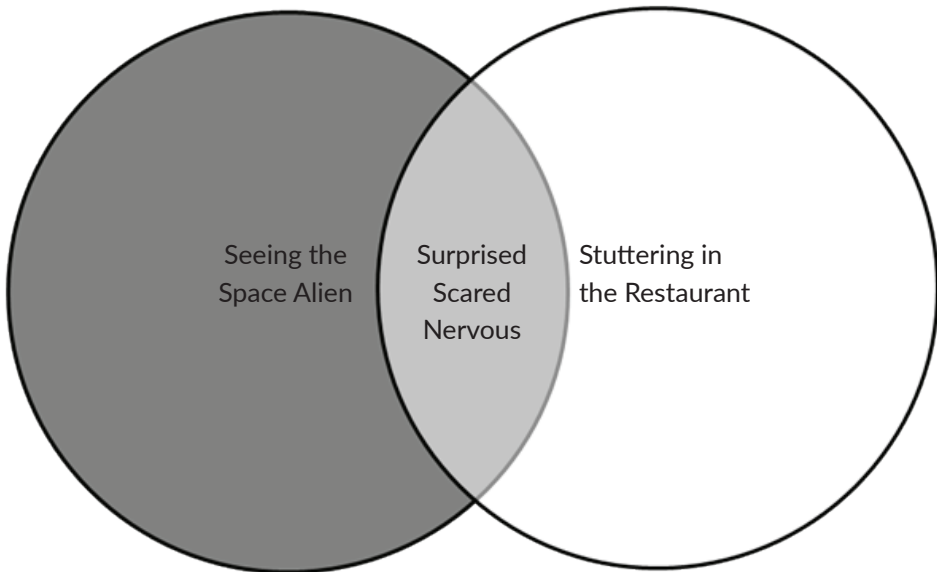


Figure 2: Doodle Mirror: *Feelings*

them to speak broadly about the various feelings connected to an altered aspect of the photograph. Then, as the session progresses, the clinician can make the conscious decision to move the conversation closer to the subjects of communication and stuttering.

Face Booth

Face Booth (Ekmekci, 2017) allows users to take a photograph of themselves with their iPhone's or iPad's camera and alter the photograph so that their face shows a plethora of new and often unusual details. For example, one of the categories within *Face Booth* is *animal*. This category has more than 50 different animal features, such as cat eyes, ram horns, pig noses, and dog ears. All these face details and more can be added to a user's photograph. See Figure 3.

Like *Doodle Mirror*, *Face Booth* can facilitate humorous and potentially science fiction-themed conversations between client and clinician. For example, I have used *Face Booth* to begin imaginative discussions with CWS in which I ask them to envision a world in which an animal exists that has cat eyes, ram horns, a pig nose, and dog ears. In particular, I have shared the following prompt after I had created a picture of this unique animal using *Face Booth*: "How might this creature talk?" After a few moments of think time, CWS might be able to guess and vocalize the





Figure 3: Face Booth: Results [Before / After]

unique ways that the imaginary creature produces sounds and how it “talks.” One client might vocalize a type of strong growl, whereas another client might vocalize a high-pitched cackle. In my experience, this type of vocal activity almost always elicits a healthy amount of smiling and laughter. Highlighting these positive results is important because it might begin the process that allows CWS to see that their voices can be a source of fun and meaningful play.

One of the questions that I consistently ask CWS is, “Do you think it is possible to have fun with your voice?” Sometimes, this open-ended question results in responses that make it clear that clients do not think highly of their voices and do not view them as a source of fun, perhaps because of stuttering. Past literature has highlighted the feelings of people who stutter when they are asked to speak about the moments of stuttering. For example, individuals who stutter described their feelings during the moments of stuttering as follows:

- “like I am a butterfly trying to fly, but I am constantly buffered by strong winds. I cannot move forward like I want and it is frustrating” (Manning, 2006, p. 155).
 - “a momentary suffocation . . . you get the feeling that you’re drowning” (Plexico, et al., 2009, p. 94).
 - “a black hole where time stands still until the word(s) get verbalized” (Tichenor & Yaruss, 2019, p. 4360).
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In thinking back to *Face Booth* and the newly created photograph of the imaginary animal that has cat eyes, ram horns, a pig nose, and dog ears, the clinician could present the following feeling-related prompt to CWS: “How would you feel if one day you woke up and you were on a planet where all the animals looked like this?” After a few moments of think time, CWS might share that perhaps they would feel confused. Further conversations might reveal that the client would feel confused because “I never saw anything like this before!”

In an effort to move the conversation closer to the subject of stuttering, a clinician might say, “Hey, since we’re in therapy, I’m wondering how you would feel if one day you woke up and you were on a planet where everyone stutters.” This prompt might open up honest responses from CWS. For example, an 11-year-old boy who stutters once shared the following response with me: “I would feel confused because I’ve never met another person who stutters before.” The child then proceeded to say, “Wow! Imagine a planet where everyone was a person who stutters. That would be great because everyone would know exactly what I was going through.” This valuable string of dialogue emphasized the importance of connecting people who stutter with other people who stutter to expand their network of those who might be able to provide additional support. The honest response that the child shared helped me see that the client would benefit from meeting other CWS, so I gave the child’s parents information about a local support group for youth who stutter.

The act of providing support group information to the client and his parents was fully aligned with the literature that focuses directly on people who stutter who choose to partake in stuttering-related support group experiences. One of the ways these individuals have been able to gain support for adverse stuttering-related feelings and emotions is through experiences with other people who stutter. Stuttering support experiences are diverse (Trichon & Raj, 2018), with some being in-person experiences, such as national self-help conferences (Trichon & Tetnowski, 2011), local self-help meetings (Yaruss et al., 2002), or summer camps exclusively designed for CWS (Byrd et al., 2016). Other stuttering support experiences are internet-based, such as social networking websites (Fuse & Lanham, 2016; Raj & Daniels, 2017) or audio podcasts (Dignazio et al., 2020). No matter what the stuttering support experiences look like, one clear theme that all of them share is the sense that people who stutter benefit from knowing they are not alone, and that there are others out there who have similar lived experiences.

The example of the *Face Booth* photograph shows the overlap that exists when the choice is made to discuss feelings. See the Venn diagram in Figure 4. On one side of the Venn diagram is the experience of being on the planet with the unique animal that has cat eyes, ram horns, a pig nose, and dog ears, and on the other side is the experience of being on a planet where everyone stutters. The feeling of con-



fused could describe both experiences. Therefore, this approach might serve as an appropriate activity for some CWS.

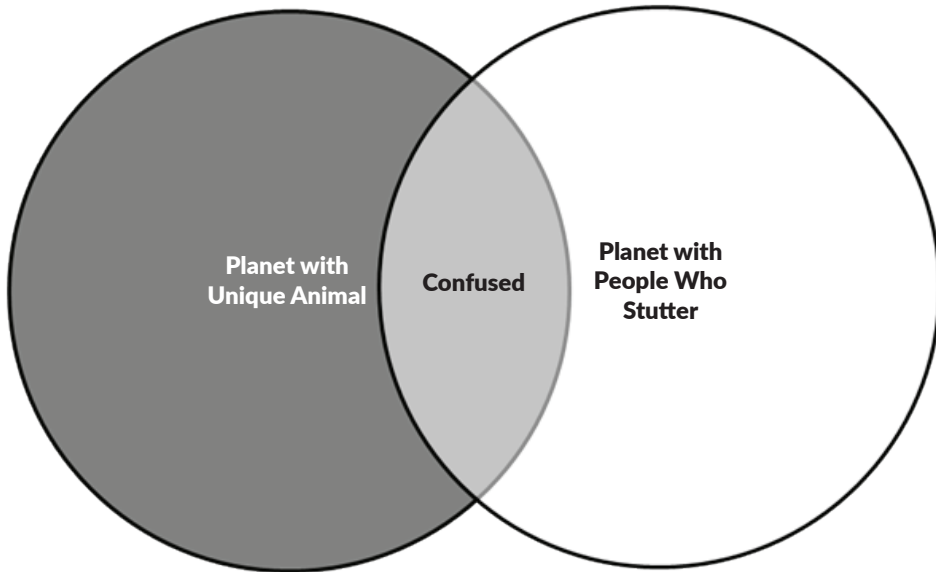


Figure 4: Face Booth: *Feelings*

To recap, SLPs might consider creating a funny photograph using *Face Booth*. The clinician and the CWS could speak directly about that neutral photograph in a way that allows them to speak broadly about various feelings connected to an altered aspect of the photograph. Then, as the session progresses, the clinician can make the conscious decision to move the conversation closer to the subjects of communication and stuttering.

AgingBooth

AgingBooth (PiVi & Co, 2020) allows users to take a photograph of themselves with their smartphone's or tablet's camera then alter the photograph so that their face looks much older. See Figure 5. In my experience, this particular app has been one of the most helpful that I have used with CWS. First, *AgingBooth* seems to be a big hit with younger clients because many of them enjoy seeing older versions of themselves. Second, the photograph that the app creates almost always sparks a massive burst of smiles and laughter in the therapy room. Thirdly, and perhaps most importantly, the photograph can be used as a valid talking point to start future-oriented conversations.



Figure 5: AgingBooth: Wyniki [Before / After]

Having future-oriented conversations with CWS is necessary because researchers have found that CWS report lower levels of optimism for their futures when compared to children who do not stutter (Blood et al., 2011). When SLPs begin to have future-oriented conversations with CWS, the honest dialogue could give clinicians a glimpse into how their clients see themselves and the mindset that may shape their particular thoughts and feelings (Caughter & Crofts, 2018). One of the ways in which I have used *AgingBooth* in therapy has been to pair it with the following prompt: “Let’s make some guesses about what you think the future might be like when you’re 100 years old.” In the past, this neutral prompt has generated responses that touched on the topic of stuttering, even if stuttering was not necessarily mentioned in the prompt.

For example, a 13-year-old boy who stutters shared the following response with me: “When I’m 100 years old, things will be very different. Computers and iPhones might be microscopic. Space travel might be so fast that we could get to Mars in a day. Skateboards might have rockets attached to them. Stuttering pills might exist to cure stuttering. Robots might be able to do my homework when I’m tired.” All these responses were more than appropriate, and they showed a 13-year-old boy who truly enjoyed imagining the potential technological advances that the future might hold for all humanity. However, the prediction about stuttering pills stood out, which showed me that stuttering was on the client’s mind.



Knowing that the client was thinking about stuttering pills was an excellent opportunity for me to transition to conversations with him about feelings, such as “How would you feel if there was a pill that could cure stuttering? Would you take it? Why or why not?” (adapted from Reitzes, 2006, p. 244). These are deep conversations for any person who stutters, let alone a 13-year-old child. However, the start of the therapy experience was filled with smiles and laughter as a result of creating and talking about funny photographs using *AgingBooth*. Therefore, it is my opinion that the client was far more willing to participate in these deep conversations that helped him and me better understand how stuttering impacted his perceived present and future life.

I have also used *AgingBooth* in therapy by pairing it with the following prompt: “Let’s imagine that a time machine has been invented which allows you to talk to an older future version of yourself. How would that make you feel?” In the past, this science fiction-themed prompt has elicited unexpected conversations that had to do with the theme of feeling lucky. More specifically, a 14-year-old boy mentioned that he would “feel lucky because I would enjoy asking the older future version of myself lots of questions to see how I turned out.” Some of the questions that he wanted to ask were whether he owned a “big house” and “met anyone famous.”

After I had asked appropriate follow-up questions that allowed the client to understand what it means to feel lucky, I gave him ample opportunities to fully describe the house he hoped to own and to list the famous people he hoped to meet. Throughout this conversation where feeling lucky was the theme, I kept moving closer to the subject of communication as a whole. For example, I asked, “How might you introduce yourself to one of those famous people you hope to meet one of these days?” Perhaps this could be an ideal opportunity for me to begin to discuss various categories of communicative competence that might include learning about assertiveness and confidence in communication (Byrd et al., 2016; Chmela & Campbell, 2014).

As described by Chmela and Campbell (2014), CWS can choose to improve their communication abilities in many meaningful ways. For example, CWS can learn ways of being assertive that would help them feel comfortable with initiating conversations and participating in communicative interactions with familiar and unfamiliar listeners. Also, CWS can learn ways of being confident, which would entail understanding and intentionally using their body language and voice volume to clearly show their communication partners their desire to engage in a communication exchange.

After the conversation has come to a natural conclusion, the client and clinician could choose to revisit the theme of feeling lucky. One way that I have done this is to ask, “Do you ever feel lucky to be a person who stutters? If so, when?” Of course,

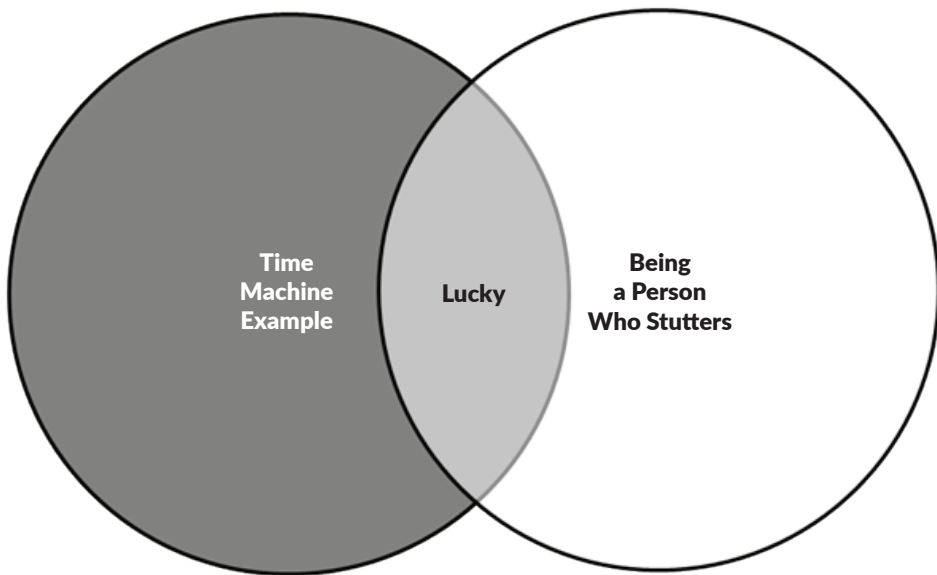


Figure 6: AgingBooth: *Fellings*

the ways in which CWS respond to that particular prompt is a strong indicator of where they are on their therapeutic journey, but on several occasions CWS have shared wonderful responses, such as the following one from a 12-year-old-girl who stutters. She said that she “feel[s] lucky to be a person who stutters because if it wasn’t for stuttering, I would have never met or become friends with [her friend who also stutters].” This idea of feeling lucky and other examples of positive emotions directly related to being a person who stutters also appear in the literature (Klein & Hood, 2004; O’Dwyer et al., 2018).

To recap, SLPs might consider creating a funny photograph using *AgingBooth* to make the user’s face look much older. That neutral photograph could be directly addressed in a manner that allows the client and clinician to speak broadly about the future. Then, as the session progresses, the clinician can consciously move the conversation closer to the subjects of communication and stuttering. For example, the client and clinician could discuss various feelings that connect to the future.

Conclusion

Today’s technologically savvy generation of CWS deserve exciting and relevant therapeutic experiences filled with smiles and laughter. My opinion is that all the hu-



mor-based apps discussed in this chapter truly do allow fun and functional therapy to happen. As Pollak and Freda (1997) stated, “Students tend to remember teachers who take the trouble to express their messages in unusual ways” (p. 177). Some SLPs might consider these humor-based apps as unusual. However, embrace the unusual, and create unusual photographs with your CWS. Thank you to all the SLPs who are willing to become a space alien, a unique animal, or a time traveler, all in the hope of connecting with CWS. Your amazing clients will remember all of you amazing SLPs.

Questions

1. According to the Pew Research Center (2019), a little more than _____% of Americans 18 years of age and over own tablet computers.
 - a) 27;
 - b) 52;
 - c) 72;
 - d) 92.
 2. The following is not part of the FIVES criteria for App selection
 - a) Free or fairly priced;
 - b) Visual;
 - c) Covered by insurance;
 - d) Interactive.
 3. Which of the following is an app that allows users to take a photograph of themselves with their iPhone’s or iPad’s camera and alter their picture so that they appear drastically different.
 - a) *Face Booth*;
 - b) *Aging Booth*;
 - c) *Mirror, mirror on the wall*;
 - d) *Doodle Mirror*.
 4. Which of the following is an app that allows users to take a photograph of themselves with their iPhone’s or iPad’s camera and alter the photograph so that their face shows a plethora of new and often unusual details.
 - a) *Face Booth*;
 - b) *Aging Booth*;
 - c) *Mirror, mirror on the wall*;
 - d) *Doodle Mirror*.
 5. Which of the following is an app that allows users to take a photograph of themselves with their iPhone’s or iPad’s camera and alter the photograph so that their face looks much older.
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- a) *Face Booth*;
- b) *Aging Booth*;
- c) *Mirror, mirror on the wall*;
- d) *Doodle Mirror*.

Suggested reading

Mobile apps for treatment of speech disorders in children: an evidence-based analysis of quality and efficacy: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6872533>.

Quality of mobile phone and tablet mobile apps for speech sound disorders: Protocol for an evidence-based appraisal: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5155082>.

Critical review: Is the integration of mobile device apps' into speech and language therapy effective clinical practice? <https://www.uwo.ca/fhs/csd/ebp/reviews/2011-12/Sidock.pdf>.

Mental health smartphone apps: Review and evidence-based recommendations for future developments: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4795320>.

User experience of Cognitive Behavioral Therapy apps for depression: An analysis of app functionality and user reviews: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6010839>.

The digital psychiatrist: In search of evidence-based apps for anxiety and depression: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6872533>.

References

Addis, M. (2005). New technologies and cultural consumption—edutainment is born! *European Journal of Marketing*, 39(7/8), 729–736.

Beilby, J.M., Byrnes, M.L., Meagher, E.L., & Yaruss, J.S. (2013). The impact of stuttering on adults who stutter and their partners. *Journal of Fluency Disorders*, 38(1), 14–29.

Blood, G.W., Blood, I.M., Tellis, G.M., & Gabel, R.M. (2003). A preliminary study of self-esteem, stigma, and disclosure in adolescents who stutter. *Journal of Fluency Disorders*, 28, 143–159.

Blood, G.W., Blood, I.M., Tramontana, G.M., Sylvia, A.J., Boyle, M.P., & Motzko, G.R. (2011). Self-reported experience of bullying of students who stutter: Relations with life satisfaction, life orientation, and self-esteem. *Perceptual and Motor Skills*, 113(2), 353–364.

Brisk, D. J, Healey, E.C., & Hux, K.A. (1997). Clinicians training and confidence associated with treating school-age children who stutter: A national survey. *Speech, Language, and Hearing Services in Schools*, 28(2), 164–176.

Byrd, C., Chmela, K., Coleman, C., Weidner, M., Kelly, E., Reichhardt, R., & Irani, F. (2016). An introduction to camps for children who stutter: What they are and how they can help. *Perspectives of the ASHA Special Interest Groups*, 1(4), 55–69.



- Caughter, S., & Crofts, V. (2018). Nurturing a resilient mindset in school-aged children who stutter. *American Journal of Speech-Language Pathology*, 27(3S), 1111–1123.
- Çelik, B., & Gündoğdu, K. (2016). The effect of using humor and concept cartoons in high school ICT lesson on students' achievement, retention, attitude and anxiety. *Computers & Education*, 103, 144–157.
- Chmela, K.A., & Campbell, J.H. (2014). *Working with school-age children who stutter: Basic principle problem solving*. Super Duper Publications.
- Chmela, K., & Reardon, N. (2001). *The school-age child who stutters: Working effectively with attitudes and emotions: A workbook*. Stuttering Foundation of America.
- Corcoran, J.A., & Stewart, M. (1998). Stories of stuttering: A qualitative analysis of interview narratives. *Journal of Fluency Disorders*, 23, 247–264.
- Crepeau, E.B., & Garren, K.R. (2011). I looked to her as a guide: The therapeutic relationship in hand therapy. *Disability and Rehabilitation*, 33(10), 872–881.
- Davis, K., & Sweeney, S. (2015). Reading, writing and AAC: Mobile technology strategies for literacy and language development. *SIG 12 Perspectives on Augmentative and Alternative Communication*, 24(1), 19–25.
- Dignazio, L.E., Kenny, M.M., Raj, E.X., & Pelkey, K.D. (2020). Stuttering-related podcasts: Audio-based self-help for people who stutter. *Perspectives of the ASHA Special Interest Groups*, 5(5), 1131–1138.
- Ekmekci, H. (2017). *Face Booth* (Version 1.3) [Mobile application]. <https://apps.apple.com/us/app/create-a-new-face-face-booth/id1072356162>
- Fernández-López, Á., Rodríguez-Fórtiz, M.J., Rodríguez-Almendros, M.L., & Martínez-Segura, M.J. (2013). Mobile learning technology based on iOS devices to support students with special education needs. *Computers & Education*, 61, 77–90.
- Fletcher-Watson, S., Pain, H., Hammond, S., Humphry, A., & McConachie, H. (2016). Designing for young children with autism spectrum disorder: A case study of an iPad app. *International Journal of Child-Computer Interaction*, 7, 1–14.
- Fourie, R., Crowley, N., & Oliviera, A. (2011). A qualitative exploration of therapeutic relationships from the perspective of six children receiving speech-language therapy. *Topics in Language Disorders*, 31(4), 310–324.
- Fuse, A., & Lanham, E.A. (2016). Impact of social media and quality of life of people who stutter. *Journal of Fluency Disorders*, 50, 59–71. <https://doi.org/10.1016/j.jfludis.2016.09.005>
- Given, L.M., Winkler, D.C., Willson, R., Davidson, C., Danby, S., & Thorpe, K. (2014). Documenting young children's technology use: Observations in the home. *Proceedings of the American Society for Information Science and Technology*, 51(1), 1–9.
- Healey, E.C., Scott Trautman, L., & Susca, M. (2004). Clinical applications of a multidimensional approach for the assessment and treatment of stuttering. *Contemporary Issues in Communication Science and Disorders*, 31, 40–48.
-

- Heyman, N. (2020). Identifying features of apps to support using evidence-based language intervention with children. *Assistive Technology*, 32(6), 306–316.
- Hughes C.D., Gabel, R.M., Goberman, A.M., & Hughes S. (2011). Family experiences of people who stutter. *Canadian Journal of Speech-Language Pathology and Audiology*, 35(1), 45–55.
- Hussain, A., Mkpojiogu, E., & Babalola, E. (2020). Using mobile educational apps to foster work and play in learning: A systematic review. *International Journal of Interactive Mobile Technologies*, 14(18), 178–194.
- Irani, F., Gabel, R., Daniels, D., & Hughes, S. (2012). The long term effectiveness of intensive stuttering therapy: A mixed methods study. *Journal of Fluency Disorders*, 37, 164–178.
- Kabali, H.K., Irigoyen, M.M., Nunez-Davis, R., Budacki, J.G., Mohanty, S.H., Leister, K.P., & Bonner, R.L. (2015). Exposure and use of mobile media devices by young children. *Pediatrics*, 136(6), 1044–1050.
- Kavandi, E., & Kavandi, R. (2016). The effect of using humor on high school students' grammar performance and motivation. *Theory and Practice in Language Studies*, 6(7), 1466–1475.
- Kelly, E.M., Martin, J.S., Baker, K.E., Rivera, N.I., Bishop, J.E., Krizike, C.B., Stettler, D.S., & Stealy, J.M. (1997). Academic and clinical preparation and practices of school speech-language pathologists with people who stutter. *Language, Speech and Hearing Services in Schools*, 28, 195–212.
- Klein, J.F., & Hood, S.B. (2004). The impact of stuttering on employment opportunities and job performance. *Journal of Fluency Disorders*, 29(4), 255–273.
- Lauricella, A.R., Cingel, D.P., Blackwell, C., Wartella, E., & Conway, A. (2014). The mobile generation: Youth and adolescent ownership and use of new media. *Communication Research Reports*, 31(4), 357–364.
- Mahdiloo, A., & Izadpanah, S. (2017). The impact of humorous movie clips on better learning of English language vocabulary. *International Journal of Research in English Education*, 2(2), 16–29.
- Mallard, A.R., Gardner, L.S., & Downey, C.S. (1988). Clinical training in stuttering for school clinicians. *Journal of Fluency Disorders*, 13, 253–259.
- Manning, W. (2006). Therapeutic change and the nature of our evidence: Improving our ability to help. In: N. Berstein Ratner and J.A. Tetnowski (Eds.), *Current issues in stuttering research and practice* (pp. 125–158). Lawrence Erlbaum.
- Montgomery, K. (2015). Children's media culture in a big data world. *Journal of Children and Media*, 9(2), 266–271.
- O'Dwyer, M., Walsh, I.P., & Leahy, M.M. (2018). The role of narratives in the development of stuttering as a problem. *American Journal of Speech-Language Pathology*, 27, 1164–1179.
- Orr, A.C., & Mast, M. (2014). Tablet-based communication and children with multiple disabilities: Lessons from the clinical setting. *Procedia-Social and Behavioral Sciences*, 141, 138–142.
- Pew Research Center. (2019). *Mobile fact sheet*. <https://www.pewresearch.org/internet/fact-sheet/mobile/>



- PiVi & Co. (2020). *AgingBooth* (Version 5.0) [Mobile application]. <https://apps.apple.com/us/app/agingbooth/id357467791>
- Plexico, L.W., Manning, W.H., & Levitt, H. (2009). Coping responses by adults who stutter: Part I: Protecting the self and others. *Journal of Fluency Disorders*, 34, 87–107.
- Pollak, J.P., & Freda, P.D. (1997). Humor, learning, and socialization in middle level classrooms. *The Clearing House: A Journal of Educational Strategies, Issues and Ideas*, 70(4), 176–178.
- Prensky, M. (2006). *Don't bother me, Mom, I'm learning!: How computer and video games are preparing your kids for 21st century success and how you can help!* Paragon House.
- Raj, E.X., & Daniels, D.E. (2017). Psychosocial support for adults who stutter: Exploring the role of online communities. *Speech, Language and Hearing*, 20(3), 144–153. <https://doi.org/10.1080/2050571X.2016.1253533>
- Ramsberger, G., & Messamer, P. (2014). Best practices for incorporating non-aphasia-specific apps into therapy. *Seminars in Speech and Language*, 35(1), 17–24.
- Reitzes, P. (2006). *50 Great activities for children who stutter: Lessons, insights, and ideas for therapy success*. Pro-Ed.
- Rieger, A. (2004). Explorations of the functions of humor and other types of fun among families of children with disabilities. *Research and Practice for Persons with Severe Disabilities*, 29(3), 194–209.
- Sánchez, J.C., Echeverri, L.F., Londoño, M.J., Ochoa, S.A., Quiroz, A.F., Romero, C.R., & Ruiz, J.O. (2017). Effects of a humor therapy program on stress levels in pediatric inpatients. *Hospital Pediatrics*, 7(1), 46–53.
- Santus, N., Tellis, G., & Kong, F. (2019). Are graduate students receiving adequate education and training in fluency disorders? *Clinical Archives of Communication Disorders*, 4(3), 236–251.
- Sheehan, J.G. (1970). *Stuttering: Research and therapy*. Harper and Row.
- Sheehan, J.G. (1997, January 12). *Message to a stutterer*. <http://www.mnsu.edu/comdis/kuster/Infostuttering/sheehanmessage.html>
- Simmons-Mackie, N., & Schultz, M. (2003). The role of humour in therapy for aphasia. *Aphasiology*, 17(8), 751–766.
- Stuber, M., Hilber, S.D., Mintzer, L.L., Castaneda, M., Glover, D., & Zeltzer, L. (2009). Laugh-ter, humor and pain perception in children: A pilot study. *Evidence-Based Complementary and Alternative Medicine*, 6(2), 271–276.
- Sweeney, S. (2010). *The FIVES criteria: For evaluating and integrating simple technology resources in speech and language therapy interventions*. <http://www.scribd.com/doc/44503715/Fives-Booklet>
- Tellis, G.M., Bressler, L., & Emerick, K. (2008). An exploration of clinicians' views about assessment and treatment of stuttering. *Perspectives on Fluency and Fluency Disorders*, 18(1), 16–23.
- Tichenor, S.E., & Yaruss, J.S. (2019). Stuttering as defined by adults who stutter. *Journal of Speech, Language, and Hearing Research*, 62(12), 4356–4369.
-

- Toki, E.I., & Pange, J. (2010). E-learning activities for articulation in speech language therapy and learning for preschool children. *Procedia-Social and Behavioral Sciences*, 2(2), 4274–4278.
- Trend L. (2020). *Doodle Mirror (Kingdom of Fun)* (Version 9.9.5) [Mobile application]. <https://apps.apple.com/us/app/doodle-mirror-kingdom-of-fun/id401513041>
- Trichon, M., & Raj, E.X. (2018). Peer support for people who stutter: History, benefits, and accessibility. In: B.J. Amster & E.R. Klein (Eds.), *More than fluency: The social, emotional, and cognitive dimensions of stuttering* (pp. 187–214). Plural.
- Trichon, M., & Tetnowski, J. (2011). Self-help conferences for people who stutter: A qualitative investigation. *Journal of Fluency Disorders*, 36(4), 290–295. <https://doi.org/10.1016/j.jfludis.2011.06.001>
- Walsh, I.P. (2007). Small talk is “big talk” in clinical disclosure. *Topics in Language Disorders*, 27(1), 24–36.
- Weitkamp, E., & Burnet, F. (2007). The Chemedian brings laughter to the chemistry classroom. *International Journal of Science Education*, 29(15), 1911–1929. <https://doi.org/10.1080/09500690701222790>
- Yaruss, J.S., & Quesal, R.W. (2016). *Overall Assessment of the Speaker's Experience of Stuttering*. Stuttering Therapy Resources, Inc.
- Yaruss, J.S., Quesal, R.W., Reeves, L., Molt, L.F., Kluetz, B., Caruso, A.J., McClure, J.A., & Lewis, F. (2002). Speech treatment and support group experiences of people who participate in the National Stuttering Association. *Journal of Fluency Disorders*, 27(2), 115–134. [https://doi.org/10.1016/S0094-730X\(02\)00114-6](https://doi.org/10.1016/S0094-730X(02)00114-6)



