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Tim Jin on Embracing Change in AAC Technology



Tim Jin's presentation, "Embracing Change in AAC Technology: The Keyboard to My Success," was first given at the [Future of AAC Research Summit](#) on May 14, 2024, in Arlington, Virginia. [Tim](#) is a member of CommunicationFIRST's Board of Directors and is a strong proponent of self-direction, recognizing its crucial role in empowering individuals with disabilities to have greater control over their lives. Mr. Jin is employed by California's Department of Developmental Disabilities' Self-Determination Program to advocate for these principles state-wide. His work has been featured by both TEDx and ABILITY Magazine. Mr. Jin graduated from California State University in Long Beach with a degree in speech communication.

An open-captioned recording of his presentation can be accessed at:

<https://youtu.be/FZIAYDdKrjE>. Video production by [the RERC on AAC](#) at Pennsylvania State University.

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[TIM JIN]: My name is Tim Jin, and I live in Southern California. I'm in my last year in my fourth decade. I'm from a different era because I'm certainly not a Swiftie fan. Maybe because I never swept with a broom?

I am using a communication device at the base of my wheelchair, by typing with my toes. My pronouns are he and him, but if you ask my friends, they have other pronouns for me that are not so appropriate to mention at this conference. And most likely, you have already heard them outside of this room.

As you can see, my jokes can be funny and bad all at the same time, and thanks to my day job at Disability Voices United as one of their directors¹, trying to be a comedian has always been a hobby for me, along with being a public speaker, but I've always been an advocate for communication for people with disabilities.

My communication journey has spanned over three decades. And times have really changed. Today I want to share how these changes affect me and other AAC users.

When I was in preschool I started with extensive speech therapy. This continued as I grew up so I could learn to use my natural voice as much as possible.

In elementary school, I learned how to type on a manual typewriter. The keyboard soon became an appendix to my body. **The sound of keys clicking was so refreshing to me because finally, I could let everyone know what I wanted.**

The keyboard became a vessel for my thoughts.

Shortly after that, my SLPs got me started on AAC, and **I've had numerous devices**, some as big as a chopping board, where I needed to spell out each word phonetically. I have also had devices as small as a pocket calculator.

My parents and teachers emphasized the significance of social skills alongside academic achievements. They taught me social skills were just as important as good grades, and that is why they insisted for me to **learn AAC at an early age**. Communication was the **key to my success**, just as important as getting a good education.

¹ At the time of the AAC Research Summit, Tim was a Director at Disability Voices United. He has since started working for California's Department of Developmental Disabilities' Self-Determination Program.



Consider this. I've only had a handful of pairs of shoes in my lifetime, but when it came to technology, that's another story. My parents and therapists always knew my devices would need to be changed as technology advanced. **They never restricted me with core words and with preprogrammed phrases.**

I'm not an answering machine and you don't have to wait for the beep to answer me.

Once I learned how to use a device and applications, it was time for me to move on to the next device. Depending on if I had outgrown the system, or had a change of needs, I would look to see if there was something better out there to make me a more efficient communicator while still giving me the power to say everything I wanted to say.

I've consistently embraced mainstream technology purchased from stores like Circuit City or Radio Shack during my upbringing. For those unfamiliar with these stores, they were essentially the equivalent of today's Best Buy and Amazon.

I have even tried off-the-shelf products like a label maker. However, it didn't cater to my specific needs, and despite the challenge of a keyboard too small for my toes to press effectively, I persevered in printing out my thoughts on labels made on my label maker, refining my motor skills and making me a better typer because it forced me to adapt to the equipment that I had.

I didn't see these as barriers so much, but rather skill sets on how to adapt to mainstream everyday goods. In the meantime, while I was trying out different gadgets to be a good communicator, I was also being taught how to use different AAC systems.

I think I see a great barrier to being able to communicate effectively as each AAC system has its unique operating system, which has its own specific task for using its devices. The functionalities are the same, but the process and the keystroke and the commands to speak are different from each other.

Unlike a telephone, where the number pad is consistently there for dialing, **programming an AAC device to tailor to your needs from system to system as your needs change can be challenging at times because there is no universal design or interface that one can use.**



For example, different vendors have their own ways of using their devices, especially when you want to program phrases. When a user switches to a different device from a different company, they would most likely be retrained on how to use their new device.

It is almost like speaking with a different accent, but we are still using the same language. Speaking for myself who has had many AAC devices, this is the biggest obstacle that I have faced because no one wears the same pairs of shoes for their entire lives with the same brand.

My strategies to overcome these barriers are to **try out as many different systems as possible and give feedback to the developers on what they need to improve, and hopefully one day, we will have a universal interface** such as the number pad on a phone versus an ATM machine, ensuring seamless functionality regardless of the location. No matter what language you speak, the number pad operates consistently regardless of the device.

The future of AAC is exciting to me. The current word prediction system is very outdated. I would like to see **word prediction that uses some form of artificial intelligence to make me communicate even more effectively and faster.**

For example, an app that will know what setting I am in, either at home or work, and it will predict phrases or words that I've already used for that environment.

Or, let's say I'm at a show, seeing my favorite bands. With A.I. and GPS, the app will know where I'm at and switch vocabulary to fit that environment, like names of the bands or songs.

AAC should be adapting to the user rather than the user adjusting to the device.

Of course, there is a consequence that we should be aware of. I don't want A.I. to be so good I don't even have to think of what to say because it has predicted all my thoughts. This could cast a stigma on our community, suggesting to skeptics that we are not actively composing our thoughts and using our competence, but rather relying on A.I. to do all the work for us.



Here is my final thought on alternative ways to access AAC devices because my time is almost up.

As we age, our needs are always changing. I know for myself that it takes me longer to type out words because I no longer have the flexibility with my toes that I once had when I was younger.

As AAC users, we need to be reevaluated periodically as we age. There is a perception in the community: once we have our first assessment on the ways that we communicate, we will use the same setup for the rest of our lives.

I would like to go back to the shoe example.

It's improbable for anyone to wear the same shoes throughout their entire life because our feet grow and change as we age. As we age, our needs change, and this should be considered for AAC users too.

For example, notice how my device remains distant from my face, yet I can easily view the screen angled towards my feet. But what if my vision deteriorates?

Just as individuals undergo annual check-ups, AAC users should also undergo periodic reassessments to **ensure we have the appropriate setup and equipment tailored to our changing needs.**

In closing, I want us all to remember: **AAC users know their needs, and those needs change over time.** I encourage **ongoing dialogue and innovation in the field of AAC to empower individuals with disabilities to communicate effectively and independently.** Let's strive for more independence and accessibility in all aspects of life, providing everyone with the **necessary tools to express themselves and fully participate in society.**

Furthermore, I stress the significance of ongoing reevaluation for AAC users, acknowledging that our needs evolve over time. Similar to regular health check-ups, periodic reassessments of AAC setups are vital to ensure they meet our changing requirements.



Through advocacy and having an open dialogue with researchers, manufacturers, and clinicians, we can enhance inclusivity and accessibility for all AAC users.

Thank you.

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