ATOB Guest Editor Perspective
Training Needs in Augmentative and Alternative Communication: A Virtual Roundtable Discussion

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In 2019, the Assistive Technology Industry Association (ATIA) released the results of an online survey, designed to identify training needs in the field of augmentative and alternative communication (AAC). The results were also later presented and discussed at an ATIA conference session by ATIA CEO David Dikter in February, 2020. The full report is available at https://atia.org/ATIA2019Survey.

The 2019 ATIA survey represented a massive outreach effort, supported by many individuals and organizations, to learn about training needs in AAC. The response was outstanding, with over 1,050 participants. The present paper is an edited version of an online roundtable discussion held in February 2021 to discuss a selected number of key survey findings. The discussion also addressed related topics such as strategies for building assessment and intervention capacity in AAC, opportunities for online case study discussions, supports for preservice instruction, development of collaborative AAC teams, inclusion of people who use AAC in all aspects of the assessment and intervention process, and the provision of culturally and linguistically responsive AAC services.

DISCUSSION PARTICIPANTS

- Amy Goldman (SLP-CCC) is President-Elect of the United States Society for Augmentative and Alternative Communication (USSAAC) and an AAC Strand Advisor for ATIA, and serves on the National Joint Committee for the Communication Needs of Persons with Significant Disabilities (NJC).
- Douglene Jackson (PhD, OTR/L, LMT, ATP, BCTS) served as the Florida Occupational Therapy Association president (2019-2021), and currently serves on the American Occupational Therapy Foundation board, and as CEO/Occupational Therapist of GIFTS Institute.
- Kanakavalli Kannan is the parent of a teen daughter who uses AAC. She is also a consultant who supports data analysis for Family Resource Navigators.
- Catherine (Cat) Kanter (SLP-CCC) provides support for AAC assessment and intervention at the Waisman Center Clinic in Madison, Wisconsin. She is a co-founder of ECHO AAC and the AAC Partnership Program.
- Chris Klein has used AAC for over 40 years. He is a graduate of Hope College and has studied at Western Theological Seminary. He regularly speaks at university classes, churches, conferences, and public schools using AAC.
- Sarah Marshall (SLP-CCC) provides support for AAC assessment and intervention at the Waisman Center Clinic in Madison, Wisconsin. She is a co-founder of ECHO AAC and the AAC Partnership Program.
- David McNaughton (PhD) is a faculty member at Penn State University, and is a co-leader of training and dissemination for the RERC on AAC.
- Diane Paul (SLP-CCC) is Director of Clinical Issues in Speech-Language Pathology at the American Speech-Language-Hearing Association (ASHA). She serves as an ex officio member on the NJC.
- Tracy Rackensperger (PhD) is a lifelong user of AAC, and coordinates all outreach efforts for the Living Well Georgia Project at the University of Georgia Institute on Human Development and Disability.
- Gloria Soto (PhD) is a Professor of Special Education at San Francisco State University.
- Carole Zangari (PhD) is a Professor of Speech, Language, and Communication Disorders at Nova Southeastern University. She has served as Coordinator for ASHA's AAC Division, and is one of the founders of PrAACtical AAC.

HOW CAN WE IMPROVE PRESERVICE PREPARATION?

David McNaughton: I would like to start the discussion by looking at the results related to preservice preparation. In response to a question asking about strategies for improving preservice training for AAC, the ATIA respondents (a majority of whom were speech-language pathologists) described the following activities as "very or somewhat valuable":

- Mentoring by experienced AAC professionals (94%)
- More required courses/credits in AAC (83%)
- More elective courses/credits in AAC (78%)
- Internship elective in AAC (75%)
- Scholarships in AAC specialty (72%)
- Internship requirement in AAC (65%)

David McNaughton: So, it is positive to see so much interest in so many activities; what did you find surprising about this information?

Cat Kanter: I was surprised by how valuable mentorship with an experienced professional was rated; I'd love to know how this would work/look across disciplines and how we might better develop opportunities for individuals in preservice programs to engage with experienced professionals.

David McNaughton: Carole, can you talk a little about your experiences providing clinical supervision as part of AAC preservice programs?

Carole Zangari: I did that for several decades and found it to be both extremely challenging and rewarding. One thing that I found to be very helpful was to rotate my role with AAC clients, so that I served as the clinician periodically, instead of always being in the supervisory role. Our clinic director wasn't crazy about it, but I found that it got my clients "caught up" and it also made me a better clinical supervisor. I had to be a little sneaky about it sometimes and took my lumps for that, but it was worth it!

Sarah Marshall: This type of mentoring is so valuable; AAC is a complex and dynamic practice area that tends to be less of a "see and do" and requires more of a "collaborate and trial" type of learning model.

Amy Goldman: Sarah, I agree that AAC is really an "art" rather than a science in so many ways, and that doesn't necessarily "fit" with how today's pre-professionals learn, especially when there is so much content (and skills to be learned) in a preservice program!

Sarah Marshall: Agreed. We face that barrier a lot in our preservice training (and some in-service training, too). Many of our learners are very focused on the technology itself, and very "black and white" in their thinking of applying one device to all clients with a particular diagnosis.

During our first two weeks of training new students at the University of Wisconsin, we have all students complete a guided observation. The first week they are asked to look at the learning preferences/needs/strengths/etc. of the individual and not pay attention at all to the device. The second week we ask them to look at the features of the device an individual is using. We then take them through our decision-making process of how we mapped a particular client strength/need to a feature on the device. Some students just "get it" pretty quickly after that, but others really struggle. I wonder why that is? How can we help all students advance their clinical skills in AAC, despite personal strengths, challenges, and preferences across the many content areas of speech-language pathology?

David McNaughton: Sarah, I really like your instructional activities to support a "person-centered" approach to assessment. I think this is a powerful way to make sure each person with complex communication needs is considered as an individual, with careful thought to their strengths, preferences, and challenges.

I think the issue of "novices" making the same recommendation for individuals with very different strengths/preferences/challenges has a lot to do with (a) the goal of the assessment/intervention process and (b) the level of support provided for decision making. The ASHA 2020 survey provides a good reminder of the challenges that speech-language pathologists (SLPs) face. SLPs working in schools have average caseloads of 40–50 children (American Speech-Language-Hearing Association [ASHA], 2020); it is easy to understand why they can feel overwhelmed.

I think some of the key elements to teaching and supporting individualized AAC decision making are exactly what you described: (a) present the goal as one of developing individualized communication supports for a particular person, with the focus on promoting communication during valued activities for that individual; (b) provide an organized decision-making process that considers both short-term and long-term objectives for communication and participation (Beukelman & Light, 2020; Willingham, 2007); (c) practice the decision-making process with lots of different examples. AAC is a complicated area. Communication is the most amazing thing we do as human beings, and practicing the use of a strategic approach can be helpful when there are so many factors to be considered.

Kanakavalli Kannan: David, I love everything you have said here. I think families benefit from hearing this too, time and again, to reaffirm and advocate.

Sarah Marshall: I am so glad you specifically highlighted the barriers (e.g., caseload size, variety, time, etc.) school SLPs face and how that can lead to difficulty learning/executing new skills. We have developed new programs to increase collaboration and provide supports for families and professionals during AAC assessment and intervention: the AAC Partnership Program, and ECHO AAC (please see the section on Continuing Education, below). One of my favorite parts of these programs is learning more about those barriers firsthand from the professionals, family members, and people who use AAC who participate (Figure 1 on following page).

Figure 1: Project ECHO Virtual Presentations

Prior to the start of these programs, never having worked in the school setting was a huge missing link in my outpatient evaluations. Although I strove to be person-centered and collaborative with the entire team, looking back, not all of my recommendations were realistic or as well-informed as they could have been. My favorite part of ECHO AAC program is the "all teach, all learn" philosophy—and that has really held true for enhancing my own clinical skills (both for patient care and clinical supervision).

My turn to recap... I really appreciate your succinct three-prong approach to supporting individualized decision making. You can never restate the goal of supporting communication, participation, and independence too much. I'm thinking we should add an intro slide at the start of each ECHO AAC case study discussion as a reminder of the real reason we're all here.

Amy Goldman: Sarah, when I was at Temple University I frequently lectured in an Occupational Therapy class called clinical decision making, which walked through one or more case examples with a "meta" explanation of steps in the assessment process for each client case. Challenging to prepare, but I think a good approach (similar to the individualized decision making David described), and probably more important than a lecture on "This is AAC."

Sarah Marshall: What a neat class! Anecdotally, our team does guest lectures to the AAC class at UW–Madison focused on feature matching and language intervention through AAC. Both lectures are heavily focused on case studies and clinical decision making; I had thought we were doing a great job. This semester, however, one of our more outspoken students doing a clinical practicum shared that although those lectures were interesting, she felt it didn't prepare her for the "real deal." She was an excellent student and really seemed to "get" the clinical decision making we've been talking about. Yet, she felt that first learning in the classroom setting still felt too theoretical, despite our best efforts, and she struggled to apply what she learned in the classroom during her practicum. Having received this feedback this semester, I'm looking forward to seeking feedback from additional students as to whether they felt similarly, and exploring how to best move forward. I'd love to hear what others who are teaching in University settings are helping with this.

David McNaughton: Thank you for your honesty Sarah, and for sharing this story. I wonder if one piece of it is sharing the (good? challenging?) news with students that AAC intervention is frequently a long-term process. In teaching, I know I am most likely to share the clinical stories that end with the most positive outcomes, and when new career professionals do not see the same results quickly (or fully understand how much work went on behind the scenes), they may question their own competence, and that is an uncomfortable feeling for anyone.

Sarah, people who study instructional design would tell you that you are doing the things that are most likely to result in positive learning outcomes: providing lots of practice with a clear problem-solving framework, and gradually giving the learner more independence and responsibility for decision making (Archer & Hughes, 2010; Bereiter & Scardamallia, 1993). There is stress for the student as they take on that responsibility, but those will be the challenges they face on the job.

I think it would be very interesting to talk to the students about whether they implemented the key aspects of the assessment/intervention framework they were taught, and if not, what challenges did they encounter? Maybe there is a need for more support as they implement the framework in new and more challenging settings, probably why we see such an interest in mentorship programs in the survey, and why AAC ECHO has been so well received! It may also be that there are new issues that need to be addressed in preservice preparation. We regularly invite recent grads back to speak with current students; it helps to keep our preparation relevant to today's classrooms, and is a good reminder to faculty of the challenges of real world AAC intervention.

Douglene Jackson: When working in academia, I developed and taught the assistive technology course for Occupational Therapy (OT) graduate students, provided guest lectures on AT, and hosted groups of OT Assistant students through the assistive technology centers in Florida. Students often are provided with various theories and case studies but appeared to struggle with translating this knowledge into practice. I found that students were challenged with understanding the various components of an AAC evaluation and benefited from learning about an interdisciplinary approach to assessment and intervention. As a result of working with various professionals, I developed and taught a framework to scaffold their knowledge, the OCTOPUS Framework (Jackson, 2017). It is important to reinforce the need for a client-centered approach and that recommendations for AAC needed to be conceptualized across the lifespan. Having those who actually use AAC share their lived experiences has been powerful to include in academic programs and other training.

The survey speaks to the need for additional training and mentorship expressed by many students I have encountered. Many occupational therapy programs have a range of education provided, varying from a few hours to a week or two dedicated to AAC. Specifics for AAC are not provided in the Accreditation Council for Occupational Therapy Education (ACOTE) standards. Effective programs should include didactic and experiential opportunities with AAC, including engagement with users of AAC.

David McNaughton: Thank you Douglene, interesting to see that preservice preparation in OT faces some of the same challenges as SLP and education. Chris, as a person who uses AAC, what is the

message you want to send when you present in preservice classes on working with people with complex communication needs?

Chris Klein: I have been at this for quite a while. I started teaching in Hope College's Exceptional Child class, and the adapted physical education class, when I was still a student, and that was 29 years ago! The most important thing I try to get across is that anybody with a disability can be a success. I believe that too often we just take a quick look at the person and we rule them out. We don't let the person show us their abilities before writing their goals.

I believe we need to make sure people with complex communication needs have a place at the table—in assessment, in setting educational goals, in training professionals—in everything. In assessment, the assessment team needs to learn that we have to allow the person to show us the abilities they have before deciding the course of action. Let the person make their own decisions, and then see if we need to adjust something. This is the problem I faced during my school years (Klein, 2017), and it is an ongoing problem. All people have different types of abilities, so before we try to make decisions about what someone's abilities are, why not investigate and let them show us what their abilities are, and what they could be. Of course, this is under the assumption that everybody understands what supports are out there to accomplish an evaluation that will give the person the opportunity to demonstrate their skills and capabilities, and that will help to identify the best path for the future.

David McNaughton: Chris, I agree, there are many benefits to the dynamic assessment approach that you have described: teach, assess, teach, assess, and only then start to set goals based on the progress observed when appropriate supports are provided.

Tracy Rackensperger: At the University of Georgia, we have one AAC class offered in the Communication Disorders department and I guest lecture in their class. I think it is really important that students interact with a diverse group of speakers with a wide variety of perspectives. I think it is more engaging for the students, and there is expertise that can only be provided by a person who uses AAC.

Amy Goldman: I think it is particularly powerful to have guest speakers who use AAC (and they should be PAID!).

Tracy Rackenperger: I also was the faculty instructor for a class called Introduction to Disability for about 10 years (Wow! It's weird to say that). I tried to teach that people with disabilities are really diverse. Some people with disabilities are homebodies, while others are very active. Some have more health issues than others. There is a lot of diversity in the disability population.

I think having someone with lived experience is really helpful in teaching students. They get to hear about my life. Also, I use my unique situation of being not on government programs to highlight the economic inequities and privileges I see. Currently, I teach a directed study in disability. Directed study offers an individualized learning opportunity that requires the student to work closely with me to co-design a project

of interest to the student using process-oriented guided inquiry. We meet as a group at the beginning of the semester and then they work one-on-one with me for the rest of the semester.

Kanakavalli Kannan: Tracy, thank you so much for sharing this. As a parent and active participant in my daughter's team, diversity in disabilities is something I have to get new team members to understand. I would love for my daughter to listen to your lecture or have an opportunity to talk to you.

David McNaughton: On this topic, I would like to mention the archive of webcasts, including both Consumer Perspectives and Research to Practice (some of which are co-presentations with people who use AAC), at the AAC Learning Center. We will be adding more in the coming years with the assistance of Tracy, Chris, David Chapple, Anthony Arnold, and Godfrey Nazareth, all of whom are working for the recently funded RERC on AAC. I also wanted to ask, how does the survey information "match up" with your clinical experience or research?

Amy Goldman: I've heard more about mentoring as something that would be helpful on the job vs. preservice, but agree it would be helpful in increasing team member skills. Scholarships would incentivize the pursuit of AAC knowledge across disciplines. I would like to give a plug to the McLean Yoder Schiefelbusch Fund (MYS Fund), developed by the NJC in collaboration with the American Speech-Language-Hearing Foundation (ASHFoundation). Our goal is to endow this ASHFoundation fund so that student scholars who are interested in the communication needs of individuals with severe disabilities can receive scholarship support while they are establishing their research agenda.

David McNaughton: Amy, that speaks to my next question about barriers and supports. On an abstract level, there is always recognition and support for more coursework, internship opportunities, mentoring, but what are some of the barriers you see? What are the supports?

Amy Goldman: Barriers include: difficulty in cross-referencing coursework in multiple departments; "room" for electives in personnel prep programs; sources for scholarship dollars that emphasize AAC (or severe disabilities); and inter-professional preparation on the master's level.

Cat Kanter: Amy, I completely agree! I'd also add the following with regards to mentorship: availability (both in number and in time) of experienced AAC professionals to provide desired mentorship and comparability of mentorship relationships/experiences.

Carole Zangari: I can't say that these data were very surprising, but I do think it speaks to the fact that AAC professionals continue to recognize the need for support in this area. We also have to be sure to recognize that while being a good mentor brings many rewards to veteran AAC professionals, it is also time-consuming. I think it is important not to respond to this need by setting up systems that further burden AAC-experienced clinicians without compensation. There are MANY who do this because it is their passion, but I do not think it is helpful in the long run to build systems that perpetuate this dynamic. The time spent in mentoring should be accounted for in their paid work time, or additional compensation should be provided by the system. Otherwise, we will continue to get results like this and the slow pace

of growing the pool of qualified providers will creep along. I worry a lot about burnout in our best professionals, and building systems that require them to volunteer their time (which they willingly do) is short-sighted at best, in my humble opinion.

Amy Goldman: At the preservice level, I believe there have been federal grants (although they are highly competitive). For example, my colleague Jenn Seale at the University of Maine recently received an Office of Special Education Programs (OSEP) grant that addresses AAC and early intervention. Years ago at Temple, I was involved with an OSEP grant focused on individuals with significant disabilities and AAC; it was a post-graduate "certificate," taught by experienced professionals, to experienced professionals (special education teachers and SLPs). For the individuals who participated, tuition was free, and the credits they earned resulted in a pay-scale increase. We need more programs to provide support for practicing professionals!

David McNaughton: Amy, the OSEP Personnel Preparation grants have been a great source of financial support for students, and the specialized AAC coursework developed for funded students is available to students in the entire program. We are currently working with both SLP and SPLED graduate students as part of the OSEP-funded AAC Collaboration Project. It has been great to have students from two disciplines participate in classes (and practicum experiences) "side-by-side."

Cat Kanter: UW–Madison also recently received an OSEP grant for a similar training initiative with SLP and Special Education grad students learning and working together.

Sarah Marshall: One additional support we offer at the Waisman Clinic is 1–2 clinical fellowship positions per year exclusively in the area of AAC. We focus heavily on the Clinical Fellow/Clinical Fellow mentor relationship and provide between 30–50% clinical supervision throughout the year.

Amy Goldman: The interest in additional required AAC coursework was surprising, given the fact that it would likely extend the preparation program, especially in areas like speech-language pathology (SLP). "Internship in AAC" is also hard to interpret, given the range of clients, and with varying age and disability types, it's unlikely that a "dedicated" internship could be constructed for any discipline (e.g., speech-language pathology). I would have been interested to know how respondents would have rated other choices like: AAC courses offered through multiple schools/departments so that pre-professionals from diverse disciplines learn together; embedding AAC in autism coursework; embedding AAC in other disability topics.

David McNaughton: Amy, the "embedding" vs. the "stand-alone" question is a fascinating one. Clearly having AAC content presented in context (e.g., in a class on aphasia), and also having dedicated classes on AAC, is ideal at the preservice level, but some programs may not have the distributed expertise to provide this. Online resources to support evidence-based practices, like those provided by ASHA and the National Joint Committee for the Communication Needs of Persons with Severe Disabilities, have been very helpful. As part of the RERC on AAC, we have developed a series of web-based interactive modules on evidence-based practices in AAC; currently there are seven modules, with more on the way!

Our goal is that they would be used by faculty with existing AAC coursework, and we have worked to align our content with current textbooks in the field (e.g., Beukelman & Light, 2020). We have seen good uptake since we launched in 2019, with over 35 colleges and universities (as well as the AAC Partnership Program in Wisconsin) making use of the materials.

We are also starting to develop supports for in-class discussion and practice activities, so that there is a "flipped" model of instruction to develop expertise with the content. For example, Dr. Kelsey Mandak developed an online module on "active listening skills" for SLPs (Mandak et al., 2020). Faculty can now download Powerpoint and print materials to support the practice of active-listening skills with preservice clinicians in class. Over 400 preservice clinicians have completed the active listening module in the past year, and 97% would recommend it to others, so we have been excited to see this uptake.

Diane Paul: Respondents likely want to see a requirement for a course dedicated to AAC. Current ASHA accreditation standards are more general and don't specify courses on particular clinical topics. Standards indicate that the program must include "content and opportunities to learn" so that each student can demonstrate knowledge and skills in assessment and intervention across the lifespan for "disorders and effectiveness of augmentative and alternative communication needs". The information could be infused throughout a variety of courses rather than being taught during a course devoted exclusively to AAC.

Amy Goldman: I understand ASHA's rationale in its accreditation standards, but it also may inhibit the potential for course offerings in AAC. In my opinion, on the other hand, an exclusive AAC course that is nothing more than a vendor parade won't improve preparation either. Perhaps a discussion of what a "quality" program that addresses AAC looks like is where the site reviewers could get some additional guidance. I'm not familiar with how other disciplines might address preservice preparation in AAC—with a few exceptions, like Penn State!

Diane Paul: Standards can be changed too. I was just sharing what ASHA's current standards are. Regardless, I like your suggestion, Amy, to prepare a model for a high-quality program to address AAC. The ASHA SIG 12 (AAC) could be involved. I think they've already made an effort to collect course syllabi. Some components would be interprofessional training, bring in the user experience as a central component, provide mentorships—shadow and watch what AAC experts are doing. And another key component of any course would be to provide practical experiences.

Carole Zangari: I would love to hear thoughts on how to scale up some of the AAC practices taught in preservice programs and professional development so that more professionals are using them. The problem of pedagogical AAC information is the easiest to address and this is being done in many ways by many people. The harder part is to build the implementation skills for AAC strategies in both assessment and intervention. First of all, we have little to no science to guide us as to what the best practices are for translating AAC content into clinical/educational application. More real-world research on this topic is critical, but we can't always wait for that. Being successful with an AAC client in a clinical rotation is very, very different than being effective as an actual clinician or teacher. We need more

implementation science research in AAC, and the support for helping student teachers/clinicians make the transition to professionals without getting beaten down by the systems in which they are employed. I hear from many of them who are gung-ho to implement AAC in their first years as professionals, but slowly give up as they get overwhelmed by other demands and unhelpful policies and practices in the workplace. We have to figure this out so that we stop losing the momentum that we've picked up by increasing preservice AAC training.

Also, why is there so little work in AAC being done for preservice special educators? We have data that students with the most significant cognitive limitations, for example, have VERY little access to SLP time (let alone with an SLP who is AAC-knowledgeable). A big implication of that is that there is a huge need for teachers to be living and breathing AAC facilitation strategies, writing IEP goals that appropriately incorporate AAC, using testing methods that are fair for AAC users, etc.

David McNaughton: Thank you Amy, Diane, and Carole, I think the more we do, the more we realize how much there is to be done! I agree, preservice preparation in special education, and in general education, can and should be doing more. Part of the rationale behind the [AAC Learning Center Moodle](#) is to make it "easy" for interested faculty to add AAC content to their class, even if they do not feel like they are "experts." But again, clearly, far more work is needed.

I would like to thank everyone for the resources they have been providing in this discussion. It is now easier to share online resources, but there is the added challenge of promoting evidence-based practice. Preservice preparation is a key first step, but as Carole notes, implementing these practices in real-world contexts highlights the need for supports for practicing professionals.

HOW CAN WE IMPROVE CONTINUING EDUCATION?

David McNaughton: Survey respondents were asked to identify their three most preferred methods for continuing education activities.

Continuing Education Opportunities Ranking in the Top 3
- Mentoring by experienced AAC professionals (in-person or online; 81%)
- Continuing education on job site (70%)
- Recorded online education (41%)
- Live online education (39%)
- Continuing education at state conferences/conventions (27%)
- Continuing education at national conferences/conventions (14%)

Sarah Marshall: I really enjoyed reading this response. It does affirm with what we've seen in Wisconsin with regards to creating a culture change in widespread AAC acceptance and implementation. Our clinic staff often presented at state conferences, yet attendance was never that high. Feedback we've received is that general practice SLPs don't want to spend "too much time" on a specialty area when they need to gain continuing education in so many areas during the short time period of a convention. For those who

did attend the various presentations, it was often the side conversations after the presentation that felt most meaningful. There is something special about that 1:1 connection, or community involvement, in which you can process and then apply information.

David McNaughton: Sarah and Cat, I know that you and your colleagues at the Waismann Center have developed some fascinating initiatives in Wisconsin that make strategic use of online training, live interactions, web-based discussions, and more! Can you provide some more information about the AAC Partnership and AAC ECHO programs? Your work directly addresses the preferences identified in the survey.

Sarah Marshall: Both programs grew out of needs we saw in Wisconsin, but I think the same challenges are often seen around the country. When our AAC clinic was faced with what was close to a two-year waiting list, and people were traveling five or more hours round-trip for services, we knew our treatment model had to change. Cue ... AAC Partnership Program and ECHO AAC.

The AAC Partnership Program is an AAC evaluation capacity-building program. SLPs from across Wisconsin enroll in the program. They have access to the AAC Learning Modules on the AAC Learning Center Moodle, which helps to ensure we share common terminology and an assessment framework prior to partnering. We then schedule their students/clients for an expedited feature-matching evaluation that is completed collaboratively with the entire team. Instead of adding the individuals to our caseload and extending our waiting list, we instead provide ongoing mentorship to support the partner SLP in implementing the selected AAC system. We also provide support throughout the SGD funding process (e.g., templates, proofreading for red flags, etc.). The AAC Partnership Program has not only empowered general practice SLPs to practice more confidently in the area of AAC, but it has improved the access crisis in Wisconsin by helping children get scheduled for evaluations in a far more timely manner. Our ECHO AAC program is our other capacity-building program—but I'll let Cat introduce that program!

Cat Kanter: After developing our AAC Partnership Program, we received feedback that many SLPs and teams wanted one or more follow-up appointments with our clinic for ongoing AAC implementation support, and we were looking for a way to provide evidence-based practice as well as ongoing collaborative problem solving virtually to continue to support our team. Enter ECHO AAC, our online learning community.

The Extension of Community Healthcare Outcomes (ECHO) is a national capacity-building model developed at the University of New Mexico, originally targeted to meet the needs of patients requiring specialty medical care. Both the Universities of Wyoming and New Mexico have further expanded this model to include outreach into educational settings, which is what we now use (Root-Elledge et al., 2018). ECHO AAC provides a series of six sessions in the spring and fall which include 45 minutes of didactic content and 45 minutes of case-based problem solving with our whole ECHO AAC group. It's been wonderful to see the community develop, and we have enjoyed participation from SLPs, OTs, people who use AAC, parents, educators, and others.

The case-based learning is a very unique part of the ECHO model, as it encourages audience participation. ECHO follows the "all teach, all learn" philosophy in which each person's expertise is valued. We've found that ECHO AAC has become a wonderful tool to create a Community of Practice among participants, allowing for natural resource sharing and problem solving among all members of the AAC team. I think ECHO really captures what we miss in the AAC-PP, which is mentoring from other professionals. As someone who practices exclusively in the area of AAC in an outpatient setting, I am not as well equipped to mentor another SLP on AAC implementation in the school setting, yet our ECHO AAC community provides that missing link! We're excited to continue to measure the outcomes of this program!

Carole Zangari: I am a big fan of the ECHO model and love how the assistive technology community has put it into action. You and Sarah are doing a terrific job with the public sessions for ECHO AAC and I can only imagine how powerful the problem-solving segments are for your whole team. Congrats to you, Sarah, and all the others who are making such a big impact with this innovative approach!

David McNaughton: Cat and Sarah, I also find this approach fascinating! Can you share a little information on what you have seen with respect to participation, and where this might go next?

Cat Kanter: Currently, we have three different iterations of our ECHO AAC program.

1. *ECHO AAC.* Our original ECHO AAC is an open model, where participants are encouraged to join sessions they can attend and review recorded sessions if they cannot attend. In 2020, we provided 18 hours of professional development training (for free) and had participants from 14 unique roles participate including individuals who use AAC, parents, AAC vendors, psychologists, audiologist, social workers, OT, paraprofessional, administrator, AT specialist, SLP, students, teachers, and ABA providers. As of February 2021, we had over 197 individuals participate live from 97 unique "health centers" (e.g., schools, outpatient clinics, universities, etc.) from across Wisconsin. We also have a mailing list of ~450 individuals who receive our invitations and the recordings. In the fall of 2020, ECHO AAC grew outside of the state of Wisconsin, and had individuals participate from 15 different states as well as a participant from Canada! Overall, 95% of attendees have agreed that the trainings are useful and relevant, and they would share the information they learned from ECHO with others. Over 98% also indicated they would make a change to their practice after attending ECHO.
2. *ECHO AAC Autism.* In August, 2020 we launched a 3-series pilot specifically aimed at increasing knowledge and collaboration with ABA providers around the state of Wisconsin. We had 22 providers around the state participate in our pilot; most were BCBAs, although we also had two case managers and one student participate. One hundred percent of participants said they would attend ECHO sessions again in the future. Over 95% said they would share information with colleagues, and 100% agreed that the sessions were relevant and useful.
3. *ECHO AAC Families.* This spring, we're launching an ECHO AAC Families specifically to provide support to families of children who use AAC. The goal is to provide greater ongoing support, accessible materials and research, and create a community of families.

Kanakavalli Kannan: I am very excited to read about your ECHO AAC program, especially with the involvement of families! There is a significant shortage of SLPs with AAC expertise for families to access and the costs are very high, making it unaffordable for many of our families in our area (California). Your model of capacity building sounds very interesting!

Amy Goldman: Sarah, your program sounds amazing! I am really taken by the interdisciplinary aspect. Do participants come as a team to your sessions?

Sarah Marshall: Yes, absolutely! For both AAC-PP and ECHO AAC we encourage team involvement! We don't directly investigate if team outcomes are different for those who participate together versus not, but I'd love to learn that answer. Anecdotally, the sessions flow better and reported team outcomes are improved when more team members are involved (not surprising). Some of the most influential team members in ECHO-AAC sessions have been paraprofessionals, parents, and people who use AAC. Our weekly feedback surveys have echoed (pun intended) that observation.

David McNaughton: Carole, I see the work that Sarah and Cat are doing in building communities of practice through activities like AAC ECHO as being part of the solution, as well as the work that you do through PrAACtical AAC to share intervention strategies as implemented by practicing clinicians. The ASHA SIG-12 and QIAT LISTSERVs, and Facebook sites like AAC for the SLP and Ask Me, I'm an AAC User also serve valuable roles. It is very encouraging to see these innovative approaches to supporting evidence-based practices in real-world settings (Figure 2)!

Figure 2: The PrAACtical AAC Blog

WHO ARE THE KEY PLAYERS IN CAPACITY BUILDING?

David McNaughton: The survey was one of the largest efforts of its kind, and saw a very strong response rate from the AAC field. With that said, it is important to note that it overwhelmingly reached (and was responded to) by professionals who are active in providing AAC services, so it is not surprising that SLPs were the most frequent respondents.

Survey Respondent's Role
- SLP (60%)
- Occupation Therapist (10%)
- AT Specialist (9%)
- Parent (7%)
- AT Consultant (3%)
- Researcher (3%)
- Administrator (3%)
- Educator (1%)
- AAC user (1%)

Clearly, it is important to have an understanding of the training needs of SLPs, but what other voices need to be heard in a discussion about training needs and building capacity? And how do we cast a wider net in future research efforts?

Amy Goldman: I believe survey results were heavily influenced by having such an overwhelming majority of respondents serving children as school-based practitioners or in early intervention. Clearly this is an important segment, but we need to find better ways to reach and include the "voices" of AAC users and family members, as well as practitioners serving adults (including those with acquired disabilities). Also, in future research, it would be wonderful to be able to tease out more information on the professional background of the "AT Specialist;" that may be a role that is carried out by someone who is credentialed in another field (OT, SLP, educator). It would be helpful to know more about their skills and needs.

Cat Kanter: Amy, the need to hear from clinicians serving adults also stood out to me, as I consider vision specialists, neurologists, etc. as key members of the team for many of our adults with neurodegenerative conditions, as well. Another key area is individuals working within the inpatient setting; we need to find a way to get the perspectives of people who have other primary roles, but frequently interact with people with complex communication needs, like nurses and other medical staff.

David McNaughton: Cat, good thing we have the hard-working team at the [Patient-Provider Communication Forum](#) working to spread the word about AAC among medical professionals!

Gloria Soto: We need to find better ways to hear the voices of educators, too; they play a critical and pivotal role in the success of AAC implementation in schools.

Douglene Jackson: It is evident from the survey that the demand for professional development is there, with variance in how that might occur. Mentorship and on-the-job training were the highest but that can be hard to establish within the workplace. It would be beneficial to develop local professional communities of practice that focus on building capacity of various professionals, working in partnership with AAC users. An interprofessional approach, including leveraging the virtual space where appropriate, can help provide support and use a group mentorship model to build a more competent workforce. I would also recommend reaching out to the state-funded assistive technology programs to help with training and technical assistance, although each state program varies.

Chris Klein: I have to admit seeing the low level of participation by people who use AAC is very frustrating. First, I believe people who use AAC don't really have a voice at the table, and they should have a BIG say when decisions are being made. And I get that a lot of SLPs are working with school-age children, but that is when it is important to give the family and child a voice at the table. This is an industry that is run by manufacturers, professionals, and educators. In the last 20 years, I haven't seen much progress made on key issues like education and employment. This is why it is important for me to continue to push for a seat at the table. I will continue to advocate and push for people who use AAC to have their voices heard! People who use AAC should have a voice. The problem is, I don't think we do, and I believe that has to change.

I wanted to share more, and I believe I can articulate it. This is just my experience, as I have worked with a lot of families over the last 10 to 12 years. The evaluation process for an AAC device still baffles me, because not every speech language pathologist knows AAC. I understand that and I'm not sure what to do about it. However, I have seen people select a device because the speech language pathologist was comfortable with it, instead of looking at the other devices. There is no "one size fits all," so I would like to see more comprehensive trial periods before deciding on a device. Too often, if a decision is rushed, a device is selected that doesn't work for that individual, so it sits there on the shelf, which doesn't do any good.

I was also in an evaluation where a speech language pathologist told a mom that if she asked her daughter if she wanted to eat a shoe, her daughter would say yes. Now, I had been interacting with her daughter, and it was obvious to me that she had receptive language. She would get excited about talking about "Little Kitty," and other things that interested her. I knew she wanted to talk, but she didn't get a chance to do so.

That is the stuff that really frustrates me. There is a lot of work that needs to be done, from the preparation and expertise to do the evaluations, to the counseling process, to changes in the requirements for funding, and to the commitment to developing language. The best evaluations I have been involved with are the ones in which a person has an opportunity to trial every communication device that person wants to try. I just want to give the person the best chance to communicate and build on something. It isn't about

selling a certain communication device. It's about giving the person access to language, so that he or she can develop communication skills. It's about giving the person the best tools to have a successful life.

The lack of employment opportunities also is unbelievably disturbing, and it needs to be addressed. There has to be some long-term employment opportunities or internships at the university level, so that opportunities are there to build your resume. I have built a good resume, but I lack experience. I haven't had a "job" where I would go to work every day and work with a team every day. I have work experiences, but not comprehensive full-time employment, which puts you even further behind, as if a lack of communication is not enough. Again, I believe this could and should be done based on a person's interests and abilities, with supports as needed. Everybody can be employed, so let's figure out how to get that done. It takes cooperation between everybody.

Lastly, I do believe people who use AAC need to have a much bigger voice at the table. I believe we need to push for that voice, and I am willing to do that. We need to look at a person and not think about the limitations, but the possibilities. I hear too often that "not everyone can be a Chris Klein." Well, Chris Klein wouldn't exist if no one gave me the chance to show my abilities. So that is one thing, and I would love to see more cooperation between the team and the person; this is how it should be working. After watching *Crip Camp: A Disability Revolution* (Newnham & Lebrecht, 2018), I have been motivated to start a movement like that in the world of AAC. It is time for people who use AAC to become the voice of the industry, and not the other way around.

Sarah Marshall: Well said, Chris. I want to let you know that your voice, and voices of others who communicate using AAC, really matters and does make change. Through our ECHO AAC program, we have had three different individuals who use AAC share about the importance of feature matching and the detriment they have personally experienced when SLPs forced their "preferred" system onto them. We had many SLPs on those calls who have subsequently shared in feedback surveys that this information was important for them to hear, and that they will consider more systems in the future. We did not see the same amount/level of feedback when we, as SLPs, encouraged trialing multiple devices. The voices of people who use AAC can make a critical difference in changing attitudes and practices!

Gloria Soto: Chris, I agree wholeheartedly with you. I receive daily emails from professionals or family members who get caught in turf wars, or services driven by individual preferences based on false assumptions or whatever is "in" at the moment, rather than basing professional decisions on evidence and best practices. As such, children are left without robust AAC systems and without systematic interventions that are goal-driven and grounded on developmental theories and evidence. We know that professional decisions are often based on professionals' sense of self-efficacy, and whether they feel they can support the system. Professionals have too much power to steer the process; it can be in the right direction, or it can lead it to a total disaster. The voices of persons who use AAC are ESSENTIAL in this process. Parents need to "see" what is possible with appropriate supports. Thanks for continuing to advocate.

Kanakavalli Kannan: I absolutely agree and echo what Chris has stated so beautifully about needing AAC users and families at the table. I also share his concerns with the inappropriate use of a candidacy model that too often exists in AAC assessments and device justifications. Many families require a lot of advocacy to even get an AAC evaluation for their children, and are often stuck with children having to demonstrate various abilities to show they are "ready." As a parent and as a parent advocate, there are very high barriers for AAC evaluations, the lack of professionals serving children who have complex communication needs, and many problems with the affordability of such evaluations and devices.

I also wonder if assessments and intervention/implementations need to be seen differently. AAC implementations often fail without strong team coordination; often an SLP works with their client in a school setting, with weak or no carryover plans for the supporting members during the rest of the day. We need to find ways to better understand and respond to the experiences and the needs of families, AAC users, educators, and other support staff like paraeducators.

David McNaughton: Kanaka, you raise excellent issues. One way to build understanding across team members is to make use of the growing resources developed by people who use AAC (e.g., Stefanie Faso, John Draper, David Chapple) and parents (e.g., Fighting Monsters with Rubber Swords, Love That Max, and Uncommon Sense.) In addition to learning how to listen on an individual level, these resources can help us think more broadly about the goals and experiences of people who use AAC and their families.

HOW CAN WE IMPROVE COLLABORATION AMONG PROFESSIONALS?

David McNaughton: In the table below, you see the level of confidence expressed by respondents about their skills, and the skills of their peers, by setting. What do you find surprising about this information? What does this mean for service delivery, and collaboration?

Confidence in Skills (own, peer)
- Special schools/transition (93%, 37%)
- Hospital (93%, 59%)
- Rehabilitation (90%, 53%)
- Outpatient (89%, 57%)
- Schools: preK–12 (88%, 37%))

Amy Goldman: I was surprised that the responses regarding "peers' skill" from those in special schools was almost exactly the same low percentage as seen in other school settings! I was (pleasantly?) surprised that peers in hospital/ rehabilitation/outpatient are rated as highly as they are. What is it about those settings that accounts for that?

Sarah Marshall: Amy, I agree. I think it is a pretty jarring mismatch between confidence in providers' own skills versus those of their colleagues. I wonder if lack of insight into other professionals' work setting barriers might contribute to the rating of confidence of peers. As I've begun to learn more about what it entails to provide AAC services in the school (although I have much more to learn), I am willing to admit that my own confidence in my peers/colleagues has grown. I think there is hidden expertise in all practicing clinicians that needs/deserves a platform to be shared.

I think it's important to reframe the focus on AAC to more of a focus on language intervention through another modality. I question how the survey would differ if the question was assessing confidence in providing language intervention. "Generalist" or "specialist," our trust and confidence in our colleagues is where discussions, supports and resources can begin.

To your point about hospital/rehab/outpatient, I wonder if outpatient "specialty" centers account for this increased confidence? Perhaps even the availability of additional AAC resources in comparison to some school or early intervention settings?

Douglene Jackson: I find it striking that across the board the confidence in colleagues was low, being lowest for the school environments. I might hypothesize that this could be due to working in silos and not truly embracing interprofessional team approaches, especially when considering intervention. Team evaluations occur more frequently than intervention and those working in school environments might utilize more pull-out approaches versus push-in. Those working in more clinical settings rated their colleagues with increased confidence, although still low, which leads to questions around the quality of intervention provided for AAC users. With such questions regarding the abilities of providers arise, this further validates the need for further education and possibly the establishment of baseline competencies across these contexts.

Gloria Soto: I also am surprised by the high level of confidence among some professionals, and also the low levels of confidence toward their peers. It points to a perception of uneven levels of training and experience among team members. This is quite problematic but really informative.

Self-efficacy is a very elusive construct, which is context-specific. Also, often times those who we regard as experts express lower levels of confidence, as they are aware of the complexities of the task at hand.

David McNaughton: Gloria, I agree with you that sometimes those who have been at this the longest have a richer understanding of the complexity of the challenge than "novices," ironic in many ways! To follow up on what Chris Klein said earlier, one "tension" I see in the field today is the temptation to provide the same AAC system to all individuals with complex communication needs on a clinician's caseload, which may lead to a clinician feeling "confident" because they "understand" the AAC system they regularly recommend. Individualized AAC assessment and intervention IS challenging, and we need better instruction at the preservice and in-service level to make that a reality (and that is on me as a university faculty!).

Gloria Soto: That is so scary, David. I have seen that too, the idea that "one AAC system fits all." And of course, the system is whatever the "professional" feels more comfortable with, rather than following a process that is child-driven, and with the end goal in mind of optimal and "independent" communicative competence.

I also am disheartened by the fact that so many children with complex communication needs end up receiving ABA services alone. I regularly receive emails from SLPs who feel that they are being completely shut out of the decisions around communication intervention. There seems to be a limited awareness of the multiple benefits of including AAC (e.g., reduced frustration, supports for social interaction) and an overemphasis on verbal imitation and requesting routines. I have seen entire schools "forbidding" the use of a robust communication system in favor of "behavior compliance." There are ethical considerations that we need to address, and have no recourse to do it. As a field we need to develop a consensus of what is malpractice and unethical.

Amy Goldman: Conflicts with ABA specialists (and others) is increasing, I believe (based on a nonscientific reading of Facebook and ASHA SIG 12 posts). How can we engage ABA specialists (outside of those who are dually credentialed with SLP and ABA) in inter-professional training and other experiences to get "on the same page"?

Sarah Marshall: Amy, I agree. I think these conflicts are far too common, yet ABA and SLP collaboration has the potential to be a "dynamic duo." We recently offered an ECHO series, entitled *Collaboration between BCBAs and SLPs with AAC: Having Conversations that Matter* (Weber, 2020). Barb Weber was our presenter and she is dually certified. I think it was helpful to have a dually certified individual be the source of knowledge dissemination, as all attendees could relate. She shared some excellent tools on developing a shared vocabulary, recognizing the overlap in goals and creating a common ground, and a wide range of collaboration strategies.

Gloria Soto: Sarah, THANKS for sending these two resources. It is very helpful to see how the two approaches to communication intervention can support each other!

Diane Paul: The conflicts between ABA specialists and SLPs certainly are dramatic in the extremes. If ASHA posts anything on social media that even hints at support for ABA, we know there will be concerns expressed. The full range of perspectives was highlighted in a recent ASHA Leader article by Nancy Volkers (2020), in which she addressed the extreme positions that we sometimes see, ranging from "ABA is abusive" to "ABA should be used for everyone." ASHA recently contributed to an article by the Association for Behavior Analysis International (ABAI) entitled "Interprofessional Collaborative Practice Between Behavior Analysts and Speech-Language Pathologists," which stresses collaboration. We've received feedback from SLPs asking why we endorsed this article. We didn't endorse it (and were not asked to do so). However, ASHA supports collaboration and supports the U.S. Department of Education and the Centers for Medicare & Medicaid Services (CMS) in saying the ABA should be one treatment option for children with autism based on individual needs. And SLPs should be involved whenever there

is a communication challenge. We have posted additional relevant sources of information at the [AAC Learning Center](#).

Kanakavalli Kannan: My personal experience for my daughter makes me think that often the attitudes towards the AAC learners are often the biggest barriers, and that peers (which as used here seems to mean other professionals like teachers and paraeducators) play a critical role. Also, skill building for these other professionals requires regular training and oversight, and that is hardly ever planned for within an implementation/support plan. If SLPs who specialize in AAC do not spend the time to build that training and capacity among other team members, it is a disservice to the AAC learner, especially in school settings where there is significant juggling between the demands of language, literacy, and pacing of the classroom. What I find surprising about this information is, do SLPs consider themselves as key players in building peer skills in the area of AAC, and what do they consider as barriers in building the peer skills?

Sarah Marshall: I can speak to my own clinical practice a bit and some of the ways we've attempted to grow towards a more capacity-building approach, recognizing that 1:1 therapy can only go so far and that team training is essential for success. As an outpatient clinic, we involve parents heavily in sessions, but family/school team training outside of the caregiver who accompanied the individual has historically been minimal. I want to highlight that this is NOT because I didn't recognize the importance or that I didn't want to put in the work, but it's just not reimbursable for my employer. I am not sure if school SLPs have more flexibility (likely not), but we just don't have any insurance codes that we can bill to capture this critical time spent.

This always weighed heavily on me, as I would want to train team members, attend IEP meetings, or offer additional support outside of the therapy environment, but I also needed to uphold my productivity requirements for my position. We did, and still do, our best to overcome these barriers by videotaping sessions (with permission) to highlight teaching strategies, creating handouts for families/teams, and relying on vendors for training on operational features so we can maximize our time focused on language.

In Wisconsin, we also offer a sister program to our clinic-based services, called the "Communication Development Program," that focuses exclusively on family and team training. Prior to COVID this was done in-homes/in-schools but now we're transitioned to offering these services virtually. This program is funded through children's long-term support waiver dollars, thus allowing the flexibility of not having to go through insurance. This approach draws upon the small amount of money available to the state under the Assistive Technology Act (2004), however, and it is a somewhat complicated approach to funding support.

ECHO AAC was, in part, developed to address some of these issues. By bringing an interdisciplinary team to the table, particularly those who use AAC and their family members, we are able to provide education not only on various AAC topics, but on roles and responsibilities, highlighting who needs to be involved. As I shared with Chris earlier, the individuals on our ECHO sessions who use AAC have been the best instructors. I also think this provides an opportunity for peers to coach peers, and peers to recognize skills they didn't necessarily realize their colleagues had.

I believe that there are many SLPs who are passionate, motivated and continually striving to do their best (reflected in the "confidence of self" rating). Unfortunately, many of these same SLPs also are facing barriers outside of their control, which may impact their ability to provide the type of person-centered AAC services that they would like to deliver. I know advocacy is at the forefront of solving some of these barriers, both for reimbursable insurance codes and manageable caseloads in the schools.

Amy Goldman: I am assuming the respondents to this survey consider themselves the "AAC expert" and (hopefully) their "peers" refer/defer to them when it comes to intervention/assessment for AAC for their clients/patients. However, it does raise the concern, how do we "spread" knowledge/skills regarding AAC and empower (some level) of AAC skill to the others? SHOULD we? Or should we maintain the "expert" model?

Sarah Marshall: I couldn't agree more. This has been a huge push of our AAC Partnership Program in Wisconsin. The "expert" model, often in which an AAC "expert" is practicing in isolation and is the keeper of the expertise, is what we feel contributed to our AAC access crisis and 2-year waiting list in Wisconsin. Our clinic often heard from school SLPs that "they don't do AAC" or "your clinic is where you go to get a device." In my opinion, this is not a sustainable model, nor is it in the best interest of the individual and their family. We've instead shifted to a capacity-building model in which mutual trust and respect for each team member's expertise in the evaluation process is identified and valued.

I agree that the AAC "expert" remains an integral part of the team; however, they're just one key player amongst a much larger team. Empowering AAC finders, general practice SLPs, consumers, and family members has been a game changer in Wisconsin. Through our program, many general practice SLPs have since taken on the AAC expert role on the team, or referred another child to our clinic when another team member is needed for the evaluation process.

Gloria Soto: I would be curious to see how the responses would have changed if the question had included culturally and linguistically responsive (CLR) AAC services. The literature is consistent that most SLPs don't feel confident in cultural and linguistic responsiveness in action. Confidence in one's own knowledge and ability to implement in practice are different constructs.

I guess one of the questions that comes up in this area is, do AAC professionals understand the scope of cultural and linguistic responsiveness? It is wonderful to see how manufacturers are addressing issues of cultural representation in pictures and voices. We still have a long way to train preservice and in-service professionals in family-centered practices which are ultimately responsive to the unique needs and strengths of a family. There are many changes that are necessary at the preservice level to address the changing needs of our classrooms, and the need to provide culturally/linguistically responsive AAC services. And change starts with reflection and recognition of the ideologies that permeate our practices.

Diane Paul: Gloria, excellent points! I have posted additional resources at [The AAC Learning Center](#).

Amy Goldman: Gloria, I would be surprised if AAC providers have more skill than the "average" SLP in CLR-AAC services ... I'm just hypothesizing that AAC providers make AAC their priority for CE and might not focus on (general) CLR. So specialized preservice and continuing ed that combines both would be great! I do believe there is more attention being paid now to CLR services in general, and it is great to see symbols and (soon, I understand) voices that assist in appropriate representation.

Cat Kanter: Gloria, this is SUCH an important distinction and I hope future research will address CLR-AAC services! In my clinical experience, I've seen a lot of what David described: many clinicians choose one AAC system for all culturally and linguistically diverse children on their caseloads. I see this especially within our bilingual English and Spanish speaking communities, where we've had entire districts who only purchase and implement one bilingual system even if they offer multiple English-only systems. While part of that speaks to systemic issues with providing CLR services, I do think a large part is also due to SLPs' lack of confidence in exploring and implementing CLR-AAC services.

David McNaughton: Cat, I agree; one more area in which new supports are needed to ensure that decisions are based on the needs of the individual. Gloria, I know you have done a lot of important work on this topic, I would like to recommend Solomon-Rice, Soto, and Robinson, (2018) and Tönsing and Soto (2020) to our readers.

NEW DIRECTIONS FOR ADDRESSING TRAINING NEEDS

David McNaughton: Throughout this discussion, a number of you have mentioned new initiatives for capacity building that you have developed. I wanted to use this final section as a place to discuss innovative strategies for the challenges we face in the field of AAC.

Tracy Rackensperger: It is important to have families and professionals understand that people using AAC are capable of doing a lot. Stories of a wide variety of people using AAC need to be shared, especially of those with intellectual disabilities. Families sometimes say to me, "But my child has XYZ and isn't going to college." Maybe or maybe not? People can still be very successful no matter what they are able to do. We need to share that message. Stories should be shared online through social media. Younger folks like Twitter and Snapchat, older folks (like me) stick with Facebook.

Cat Kanter: Tracy, I love that you brought this up! I'm lucky enough to work with a wonderful young woman who uses AAC whose goal is to develop an AAC Mentorship Program precisely for the reason you discussed—she grew up not knowing anyone else who communicated like she did. Creating opportunities and awareness is such a HUGE part of building capacity. She's also recently joined our ECHO AAC network, and many participants have specifically commented on how the perspective she brings to case studies completely changes their thinking.

Chris Klein: I also strongly believe that people who use AAC need to play a key role, and I would like to share some information about building networks among people who use AAC. I believe communication is about building relationships, and I believe language development happens best when you are in a

social setting. This is true for typically developing children, and for children who need AAC. This is why I believe we need to create opportunities for people to have social interaction if we want them to have success in learning AAC, which I believe, at its heart, is learning language.

When the pandemic hit, I started a group called Device Verses. We started out with three to four people who use AAC. We have about 10 to 12 people now. It is a place where people who use AAC can feel welcomed. Yes, we are studying the scriptures. We are also supporting one another and becoming a great community for one another. This is my latest attempt to build a community where everybody feels welcomed, and to combat social isolation. I am amazed at how many people who use AAC haven't felt or been welcomed into a church or faith community. This troubles me, so I am always working with another group to help churches become more welcoming and inclusive to those that have complex communication needs.

Diane Paul: I am so glad to learn about this program that addresses the spiritual needs of people who use AAC. It emphasizes the need to have a broad, far-reaching, whole-person perspective.

Chris Klein: Thanks Diane, participation in faith communities has always been an important part of my life, and I know that is true for many people with complex communication needs (Klein & Lowe, 2010). I also believe Device Verses is making an impact on beginning users. It wasn't my plan to have such an impact on beginning users, but I have a couple of them joining the group on Wednesday nights and they are communicating better in the last six months. That peer interaction has a great effect, and I believe we need more of that going forward. Tracy is right. We need to share stories and we also need to share that everybody can be successful no matter what their abilities. I hear too often that not everybody can be a Chris Klein. Yes, I know that, because not everybody can be a Michael Jordan, either. However, everybody can be successful, and we need to share that more!

David McNaughton: Chris, I think you have hit the nail on the head—people have no sense of the range of positive outcomes that are possible. And we don't know what the outcome will be until we make an honest effort to provide supported opportunities for learning. I think we need to get lots and lots of different "stories" out to parents, and professionals, and the community at large, so people set ambitious goals for every individual. Too often the path forward is restricted by the limited awareness of possibilities. We need to do a better job of "spreading the word" on positive outcomes.

Tracy Rackensperger: Exactly!

David McNaughton: Kanaka, could I ask you to say a few words about your work with the Family Resource Navigators? It is a different way of thinking about "building capacity," but often parents need support both for what is possible and in how to access/advocate for services.

Kanakavalli Kannan: Family Resource Navigators is a parent-led, parent-staffed agency in the San Francisco Bay area that supports families in navigating the various systems (school districts, regional center, insurance, etc.), so they can get the supports and services their children need. We work with

families of children from 0–22 across various programs, and have been doing this work for over 25 years now. The biggest challenges we face are increasing awareness among professionals, increasing awareness among family members, and the small number of clinicians who have skills in providing family-centered AAC services.

Diane Paul: Kanakavalli, we have seen those same challenges across the country. Some other suggestions for new directions:

1. As Gloria described, CE and preservice should emphasize ways to serve individuals and families from diverse cultural and linguistic backgrounds.
2. Some people feel overwhelmed with the breadth of technology. Preservice and CE should teach strategies for including consideration of mobile technologies and apps in AAC assessment and intervention.
3. We need better knowledge translation and communication among clinicians, researchers, and vendors. There is a tendency among clinicians to rely on vendor information, which has a sales component.
4. ASHA may want to establish a Consumer Advisory Panel, particularly in the age of value-based care, to help with the development of outcome measures that use consumer input.
5. There are a number of strong organizations that address AAC, but we need to increase collaboration; for example, we need to build stronger connections between the ASHA SIG 12 (AAC) and the NJC and the NJC network.
6. We need to promote a lifespan perspective in training, and address not only the school-age years, but employment, community integration, and other key issues in adult life.

David McNaughton: Diane, wonderful ideas, each worthy of a full discussion on their own! I know ASHA has worked to build valuable resources and structures to support interaction across professions; the National Joint Committee network has played an especially valuable role.

Cat Kanter: While it was initially aimed at in-service professionals, we've found more and more preservice undergraduate and graduate students are joining our ECHO AAC sessions biweekly to learn and problem-solve along with our community. Establishing early communities as a young professional is so helpful to knowing where to turn when encountering difficulties or unknowns (as we all do) in the future.

Sarah Marshall: Something that has been very helpful for us since COVID-19 is the acceptance and use of telehealth. We've had greater team involvement from more rural areas of Wisconsin now that we can offer virtual participation. It also provides an opportunity for us to provide more "eyes-on" mentorship; whereas, prior to COVID-19 all of our discussions occurred via phone or email without the child present.

David McNaughton: I will be interested to see what happens in this area once children are back in school. When I look at the ASHA 2020 SLP survey, it says that SLPs typically spend about 20 hours a week with children in therapy rooms or classroom settings, and about two hours per week with parents/families. SLPs in schools report average caseloads of 50 children; I see a lot of time pressure on

their ability to work with families via teleconference (once children are back in school). With that said, I hope that there will be a way to get home teleconferencing recognized as a valuable (perhaps key) use of SLPs' time. Hopefully, continued use of teleconference will be a positive outcome of COVID-19.

Amy Goldman: David, I agree that COVID-19 will have some permanent impact on how we "do business"; hopefully, employers/funders will continue to recognize the efficacy of videoconferencing/training and support it as a part of service delivery options. How are videoconference skills being developed on the preprofessional (or continuing education) levels? (BTW, check out some of the ATIA offerings in this regard!)

Douglene Jackson: Telehealth has certainly changed the way we practice and I was happy to have been working in the space prior to COVID-19. I have been asked by various practitioners to help them figure out the landscape of telehealth and find that this has provided much insight into the challenges, barriers, and supports for everyday life. Leveraging asynchronous and synchronous means for telehealth service delivery can promote increased access to services and specialists, especially for those practitioners needing guidance and mentorship for those with more complex communication needs. AAC really takes a team approach and using the virtual space for service delivery and capacity building of providers is critical to establish a well-equipped AAC workforce to support users across the lifespan and in multiple contexts.

David McNaughton: Thank you, Douglene, interesting to see the commonalities across our professions, and I support your call for more attention to using a team approach. I am sorry to bring our discussion to a close, but thanks to all of you for the content you have shared. Amy, you have provided a great transition to a resource I wanted to be sure we discussed, the ATIA Learning Catalog. It contains a rich and growing collection of content from past conferences, as well as special recordings, and is available at the [ATIA Learning Catalog](#).

DECLARATIONS

REFERENCES

AAC Learning Center Moodle (2021). https://aac-learning-center-moodle.psu.edu/

AAC Partnership Program (2021). https://ucedd.waisman.wisc.edu/aac-partnership-program/

American Speech-Language-Hearing Association (2020). *SLP caseload and workload characteristics*. https://www.asha.org/siteassets/surveys/2020-schools-survey-slp-caseload.pdf

Archer, A. L., & Hughes, C. A. (2010). *Explicit instruction: Effective and efficient teaching*. Guilford Publications.

American Speech-Language-Hearing Association (2021). *AAC practice portal*. https://www.asha.org/practice-portal/professional-issues/augmentative-and-alternative-communication/

Association for Behavior Analysis International (n.d.). *Interprofessional collaborative practice between behavior analysts and speech-language pathologists*. https://www.abainternational.org/constituents/practitioners/interprofessional-collaborative-practice.aspx

ATIA Survey (2019). *Training needs in augmentative and alternative communication.* Available at https://www.atia.org/ATIA2019Survey

Bereiter, C., & Scardamalia, M. (1993). *Surpassing ourselves. An inquiry into the nature and implications of expertise.* Open Court.

Beukelman, D. R., & Light, J. C. (2020). *Augmentative & alternative communication: Supporting children and adults with complex communication needs*. Paul H. Brookes Publishing Company.

Chapple, D. (2021). *Speaking with professionals alternatively*. https://speakingwithprofessionalsalternatively.wordpress.com/

Draper, J. (2021). *Together we rock: Creating accessible and inclusive communities*. https://www.togetherwerock.com/

ECHO AAC (2021). https://ucedd.waisman.wisc.edu/echo-aac/

Faso, S., & Borisov, K. (2021). *Got smarts? Sense making and real truths!* https://wevegotsmarts.com/

Hudson, R. (2021). *Fighting monsters with rubber swords.* http://belovedmonsterandme.blogspot.com/

Jackson, D. (2017, November). *Comprehensive assessment for assistive technology: The OCTOPUS framework*. Presentation for the Assistive Technology Industry (ATIA) webinar series. https://www.atia.org/wp-content/uploads/2017/11/ATIA-60-Minute-OCTOPUS-Framework-Handout.pdf

Klein, C. (2017). Communication and developing relationships for people who use augmentative and alternative communication. *Assistive Technology Outcomes & Benefits*, *11*(1), 58–65.

Klein, C., & Lowe, J. (2010). *Only God could hear me*. Video available at https://youtu.be/Odi4Sne_Gr8

Mandak, K., Light, J., & McNaughton, D. (2020). The effects of an online training on preservice speech-language pathologists' use of family-centered skills. *American Journal of Speech-Language Pathology*, *29*(3), 1489–1504. https://doi.org/10.1044/2020_AJSLP-19-00057

Newnham, N., & Lebrecht, J. (Directors). (2018). *Crip camp: A disability revolution*. https://www.netflix.com/title/81001496.

Nieder, D. (2021). *Uncommon sense.* http://niederfamily.blogspot.com/

Root-Elledge, S., Hardesty, C., Hidecker, M. C. J., Bowser, G., Leki, E., Wagner, S., & Moody, E. (2018). The ECHO model® for enhancing assistive technology implementation in schools. *Assistive Technology Outcomes & Benefits*, *12*(1), 37–55.

Seidman, E. (2021). *Love that Max: A blog about kids with disabilities who kick butt.* https://www.lovethatmax.com/

Solomon-Rice, P. L., Soto, G., & Robinson, N. B. (2018). Project building bridges: Training speech-language pathologists to provide culturally and linguistically responsive augmentative and alternative communication services to school-age children with diverse backgrounds. *Perspectives of the ASHA Special Interest Groups, 3*(12), 186–204. https://doi.org/10.1044/persp3.SIG12.186

Tönsing, K. M., & Soto, G. (2020). Multilingualism and augmentative and alternative communication: Examining language ideology and resulting practices. *Augmentative and Alternative Communication, 36*(3), 190–201. https://doi.org/10.1080/07434618.2020.1811761

Volkers, N. (2020). When SLP meets ABA. *Leader Live*. https://leader.pubs.asha.org/do/10.1044/leader.FTR2.25102020.52/full/

Weber, B. (2020, September). *Collaboration between BCBAs and SLPs with AAC: Having conversations that matter.* https://uwmadison.box.com/s/y5mxa39ag0k5bcqitmp5qqcmuf8lck8a

Willingham, D. T. (2007). Critical thinking: Why is it so hard to teach? *American Educator, Summer 2007,* 8–19. https://www.aft.org/sites/default/files/periodicals/Crit_Thinking.pdf

Zangari, C., & Parker, R. (2021). *PrAACtical AAC*. https://praacticalaac.org/