Voices from Academia
A Digital Walk Through Digital Talk:
Lessons Learned

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ABSTRACT

Communication is an essential part of who we are. The purpose of this study was to evaluate the impact of a parental education program during COVID-19. A parent utilized a communication device in order to increase the number of opportunities for their nonverbal child to engage and participate at home and in the community. A descriptive mixed-methods case study with a sequential exploratory design was used in this study. A single parent of a nonverbal 8-year-old female diagnosed with Autism and Attention Deficit Hyperactivity Disorder was previously issued a complex communication device but had never used the device in either the home or the community prior to the study. Following a parental education program, the results indicated that the parent increased communicative opportunities, led to engagement in meaningful family activities. The use of family-centered parental education resulted in positive communication outcomes for increased family connectedness while it enhanced a sense of belonging within the family.

Keywords: parental education, assistive technology, augmentative and alternative communication, participation, COVID-19

A DIGITAL WALK THROUGH DIGITAL TALK: LESSONS LEARNED

Target Audience and Relevance

All professionals who work with assistive technology need to provide client-centered support, not only to the client, but also to the family, at every level of competency. The knowledge gained from this study is integral to helping professionals provide informed education and intervention to assist families in addressing barriers and promoting a child's communication and participation.

Communication is essential for a person to engage and participate at home, school, and throughout the community (American Occupational Therapy Association, 2020a). Over 3.5 million Americans have significant communication issues requiring the use of augmentative and alternative communication (AAC) to participate throughout their life roles (Henderson & Doyle, 2003; Wendt & Lloyd, 2011). AAC refers to the use of devices or techniques that compensate and/or supplement a person's verbal communication (Wendt & Lloyd, 2011).

According to the Individuals with Disabilities Education Act (2004), a nonverbal student is to be provided with a communication device to allow them to participate in school activities. At a public school district where the primary investigator is employed, it was observed that students using communication devices rarely took the devices home on weekends or over the summer. In the summer of 2019, 60 students utilized a communication device in the schools and only 6 devices went home when school was not in session (von Hellens, 2019).

Parental involvement with communication is critical, because the more parents learn about AAC, the more they can recognize the benefits as the child becomes a competent communicator (Light & McNaughton, 2014; Therrien & Light, 2018). Furthermore, when there is a lack of training and support for parents, there is a risk of low device usage and even device abandonment (Anderson et al., 2015; Huang et al., 2008; Stadskleiv, 2017; Tegler et al., 2019).

A needs assessment (von Hellens, 2019) was completed by the primary investigator, which indicated the need for parent education and training to support their child who uses a communication device. Literature reviewed to support the needs assessment (von Hellens, 2019) indicated that the most significant finding was the importance of parent support for their child to utilize a communication device throughout all environments (Topia & Hocking, 2012). It is critical for nonverbal students to become competent communicators, so they can participate in any and every role they encounter (Light & McNaughton, 2014).

The purpose of this study was to evaluate the impact of a parental education program. The evaluation occurred through identifying which, if any, of the 13 factors on the Family Impact of Assistive Technology in Augmentative and Alternative Communication Scale (Ryan & Renzoni, 2015) had changed. The primary objectives for this research included the following:
- provide parent education on device use and management to enable the parents to learn about the app and device itself

- provide opportunities for parents to practice implementation strategies that they can apply at home and in the community to increase the number of communication opportunities to enhance their child's participation
- identify family strengths and impacted dimensions on the child's functional performance outside the school environment
- explore parental perceptions of AAC

Meeting these objectives provides the education, practice, and support parents need to increase the use of the communication device in all settings. Increased use of the device allows the child to participate and communicate in all their roles and activities. The desired outcome is to provide a program where parents learn specifics about communication applications, modeling, and providing the opportunities for their child to increase AAC device use, to improve the child's engagement and quality of life.

A year of planning went into researching and designing this 15-week study. When the COVID-19 pandemic arrived, parents and children were isolated, and the digital world grew exponentially. The statewide shutdown occurred in March of 2020, one month prior to recruitment and two months prior to the start of the study. This resulted in changing the timeline of the study as well as changing the original intervention program, designed as multiple families interacting together, to a virtual parental education. The pandemic mandated isolation and made contact with parents difficult. Additionally, the start of the 2020-2021 school year was delayed for safety and health concerns for the public. As schools slowly reopened, the primary investigator had to start and complete the study in just 6 weeks.

There are several definitions utilized in this research to provide a common understanding. Assistive technology (AT) is defined by the Assistive Technology Act of 2004, which states that an "assistive technology device means any item, piece of equipment, or product system, whether acquired commercially off the shelf, modified, or customized, that is used to increase, maintain, or improve functional capabilities of individuals with disabilities" (29 U.S.C. 3001). For this research study, augmentative and alternative communication (AAC) is defined as a high-tech mobile device with a communication app installed. A communication opportunity is defined as a comment or question or choice provided by the parent to the child (Douglas et al., 2017).

LITERATURE REVIEW

A review of the literature identified several studies that confirmed the need for children who require AAC, usage in multiple environments, so that students may become competent communicators, able to participate and engage with others in all their occupational roles (Bailey et al., 2006; Biggs et al., 2019; DeCarlo et al., 2019; Light & McNaughton, 2014; Therrien & Light, 2018). The literature described the barriers that families face when a member is nonverbal, various types of parental education, and the effectiveness of using communication devices. Light and McNaughton (2014) found that parental involvement is critical. Other studies found that when parents saw the benefit to their child using an AAC device, there was improved communication within the family and the community (Bailey et. al, 2006). Kinney and Gitlow (2015) found that documented assistive technology outcomes were more successful

when therapists focused on the family, environment, and desired occupations. When parents learned how to manage the communication device and used the device to increase communication exchanges, it was easier for them to implement the device at home (Baxter et al., 2012).

Children crave a sense of belonging (Francis et al., 2012). Topia and Hocking (2012) reported that AAC devices need to be individualized, usable in all environments, and used with a variety of people. Copley and Ziviani (2004) found that parental involvement is necessary to help integrate the AAC device into home and community activities. For a nonverbal child, it is even more important to utilize the communication device during daily encounters, routine activities, special events, and parties, to create that sense of belonging and have meaningful interactions (Kantartzis, 2019). This, in turn, creates more opportunities for nonverbal children to successfully engage in their life roles.

Parents face multiple barriers that interfere with implementing communication devices. One barrier parents face is the lack of acceptance of assistive technology (Lorah, 2016) which can be observed when the parent doesn't use the AAC and continues to rely on the child's gestures and sounds to get needs met. Operational competency and acceptance are critical factors and are barriers when not addressed (Kent-Walsh & Light, 2003; Light & McNaughton, 2014; McNaughton et al., 2008). Other barriers include financial hardships, stress, and time constraints of taking care of other family needs (Mandak et al., 2017; Moorcroft et al., 2019). Another barrier can be device abandonment. Device abandonment or low device usage can lead to decreased communication opportunities for a child who relies on AAC. To help nonverbal children use AAC, parents need targeted, individualized support and intervention strategies beyond the use of handouts and other passive family education techniques (Parette & Huer, 2002). Hemmingsson et al. (2009) found that assistive technology devices are quickly abandoned when users perceive that they are different from others or when the child experiences a negative interaction with peers when using the communication device.

O'Neill et al. (2018) completed a systematic review of AAC interventions and found that interventions incorporating the AAC are effective when implemented through daily recurring environments. Schlosser et al. (2000) found that adult learning strategies can help parents overcome some barriers and provide an increase in opportunities for participation. Strategies, such as modeling AAC, can be effective by themselves or in combination with other interventions (Finke et al., 2017; O'Neill et al., 2018). However, it's important to note that AAC interventions need to focus on communication and not just operational competency (DeCarlo et al., 2019; McNaughton & Light, 2013). Interventions can create positive gains on a child's comprehension when using partner strategies such as open-ended questions, environment setup, least-to-most prompting, and modeling (Finke et al., 2017; Tegler et al., 2019; Therrien & Light, 2018). Cress (2004) researched parent perspectives and recommended keeping family priorities as the goal for the AAC intervention and utilizing functional interactions for the family to implement the AAC.

Professionals who work with assistive technology should provide client-centered support, not only to the client, but also to the family, at every level of competency. The knowledge gained from this study is integral to helping professionals provide informed education and intervention to assist families in addressing barriers and promoting a child's communication and participation.

METHODS

This research study utilized a descriptive mixed-methods case study with a sequential exploratory design. A case study was chosen to describe the client's response to a new intervention (Nelson et al., 2017). A semi-structured interview was utilized to explore the parental perceptions gained from the educational training. In addition, a pretest and posttest were utilized to see if there was a change due to the intervention (educational training), according to the 13 factors on the Family Impact of Assistive Technology Scale for Augmentative and Alternative Communication (FIATS-AAC; Ryan et al., 2015; Ryan & Renzoni, 2015). This study was approved by Eastern Kentucky University Institutional Review Board, and standards and ethics were strictly adhered according to the Occupational Therapy Code of Ethics by the American Occupational Therapy Association (2020b).

Study Outline

This study used the following research process plan: (1) obtain parental signature on the consent to participate; (2) complete pretest and semi-structured interview at parent convenience; (3) have participant watch videos and use written materials via Google classroom; (4) participate in four interactive educational sessions; and (5) complete the posttest six weeks after the pretest and answer any remaining interview questions.

Participants

Recruitment for a convenience sample of participants utilized flyers, emails, texts, and posts on social media for parents who have nonverbal children. Specific criteria for inclusion in this study required that the participant's first language must be English and must be the parent/guardian of a child who uses an AAC device. The exclusion criteria consisted of non-English speaking families and parents of a child who used only low-tech communication devices.

One parent responded to the flyer, provided consent, and participated in the study. For participant protection, the parent was addressed as Laura and her daughter as Tammy. Laura reported basic demographic information, including that she was working on finishing her bachelor's degree and that she was the single parent of two children. Her older child is a female who is nonverbal, who was 8 years old at the time; her younger child is a female who was 6 years old at the time and verbal. Laura reported that her older child, Tammy, was diagnosed with Autism and Attention Deficit Hyperactivity Disorder. Tammy attended a self-contained classroom at a local elementary school. Tammy had received an AAC device two years prior to starting school from an outside agency. However, no individual or family training was provided until Tammy received initial training at school.

Materials

Although the purpose of this study was to evaluate the impact of parental education, the COVID-19 pandemic required the primary investigator to adapt the initial intervention activities into a virtual format. Therefore, the investigator created four modules (see Table 1) to help parents (a) understand how to use AAC; (b) learn how to perform basic troubleshooting of an AAC device; (c) understand how to implement

strategies; and (d) receive a list of meaningful activities that parents can do with their child using the device.

Table 1: Information in Google Classroom Modules

Module	Contents
Introduction	• Basic Navigation within the Google Classroom • Goals and Objectives of AAC parental training
Mechanics of the iPad	• Diagram of iPad • Troubleshooting tips for the iPad
Implementation	• Video on Myths and Realities of AAC • Video on how to be a good communication partner • Video on modeling with an AAC device • Video on implementation strategies • Video on how to make a conversation using AAC • Video on activities and how to use AAC within an activity
Low Tech AAC Boards	• Low tech communication boards for various iPad applications
Other Resources	• Emergency Communication bag • Activities using core vocabulary for Parents and Children • Myths and Realities of AAC

Within the implementation module, there were six videos which covered the following topics: (a) myths and realities of using AAC; (b) strategies on how to be a good communication partner; (c) instructions on how to model with the device; (d) implementation strategies modeled; (e) instructions on how to have a conversation using an AAC device; and (f) instructions on how to use activities with the AAC device. These modules were placed virtually in a Google Classroom. The virtual platform allowed for ease of access to the material, not only for parent convenience, but out of necessity once the pandemic required social isolation.

Study Details

This study began with a telephone interview for the pretest as well as a semi-structured interview (Appendix A) that lasted 30 minutes. Once the pretest interview was completed, the participant received an emailed invitation to join a Google Classroom titled AAC Training for Parents. Laura did not have access to a computer after work hours; therefore, she participated in the first intervention by telephone. Subsequent interventions took place face-to-face during her lunch breaks, each lasting approximately a half hour, per her request. Material from the Google Classroom was adapted, modified, and presented throughout each educational session.

During the first session, only modeling with the communication device and some myths/realities were covered, due to telephone limitations. The remaining interventions took place outside, while seated, observing social distancing guidelines. In the second intervention, modeling was reviewed, demonstrated, and practiced through role playing. In the third intervention, strategies for being a good communication partner were covered, along with the importance of having an emergency communication

bag. This bag is used in case of pandemic shutdowns (as was the case due to COVID-19), medical emergencies, severe weather, and other natural disasters. Recommended contents of the bag are an extra charger and battery pack for the communication device and low-tech communication boards that can be used anytime and anywhere. The fourth intervention utilized a meaningful activity with the entire family using the communication device. The final interview was completed face-to-face during Laura's lunch break, six weeks after the pretest. The remaining questions from the interview question guide (Appendix A) were covered during that visit.

Data Collection

Data was collected by the primary investigator via (a) a pretest and posttest, (b) semi-structured interview, (c) and the interventions.

Quantitative data was collected from the pretest and posttest, which utilized the Family Impact of Assistive Technology Scale for Augmentative and Alternative Communication Systems (FIATS-AAC, Ryan & Renzoni, 2015; Ryan et al., 2018). The FIATS-AAC was chosen for the outcome measures as it identified strengths and barriers on the impact of family roles and responsibilities through 13 factors (Ryan & Renzoni, 2015; Ryan et al., 2018). The FIAT-AAC results were used to determine what, if any, changes occurred since the initial interview and various interventions were provided.

For qualitative data, the primary investigator used a semi-structured interview, observations, and documentation. The interview took place throughout the research study using the formal question guide (see Appendix A) during the initial interview and the final interview. During the sessions, the investigator asked questions such as, "Did you use the communication device this past week?" and "How did it go?" Two interventions were audio recorded with parent permission and transcribed verbatim by the investigator.

The investigator utilized reflexive notes and transcripts of descriptive sessions to code, categorize, and find the themes that emerged through the parental education. This study also utilized an audit trail and reflexive journaling to enhance the rigor and trustworthiness (Stanley, 2014).

Data Analysis

Quantitative data analysis consisted of the standard deviations in each of the 13 factors of the FIATS-AAC from the pretest and posttest. The FIATS-AAC statistical data were analyzed using the worksheet that accompanied the protocol (see Table 2) to determine whether there was a notable change in any of the 13 dimensions beyond measurement error (Kron et al., 2018; Ryan et al., 2015; Ryan et al., 2018).

Descriptive thematic analysis was used by the primary investigator on the data obtained by the semi-structured interview. This consisted of the transcribed data that was coded and categorized by the primary investigator. Thematic analysis was used to identify themes and utilized participant's words to keep the richness of the participant's perspectives (Stanley, 2014).

Table 2: FIATS-AAC Results

Dimension	Pretest	Post-test	Difference	Change with 95% CL
Total FIATS-AAC	49.9	52.2	2.3	No
Behavior	4.5	4.3	-0.2	No
Care Giver Relief	4.6	3.3	-1.2	Yes
Contentment	4.9	5.4	0.6	No
Doing Activities	6.4	6.4	0.0	No
Education	5.1	5.6	0.4	No
Energy	4.2	4.2	0.0	No
Face-to-face Communication	2.0	3.5	1.5	Yes
Family Roles	3.0	2.9	-0.1	No
finances	3.0	1.6	-1.4	No
security	2.3	3.4	1.1	Yes
self-reliance	4.9	5.3	0.4	No
social versatility	2.3	3.9	1.6	Yes
supervision	2.9	2.4	-0.4	No

RESULTS

Quantitative Results

Results from the Family Impact of Assistive Technology Scale-Augmentative and Alternative Communication (FIATS-AAC, Ryan & Renzoni, 2015) questionnaire provided data regarding 13 factors of family strengths and barriers (Table 2) from the pretest and posttest. The FIATS-AAC results indicated that remarkable changes occurred in the family factors of caregiver relief and security, and in the child factors of face-to-face communication and social versatility. Table 2 presents the family and child factors, as well as the pretest and posttest score the parent gave for each factor. It should be noted that within these noteworthy changes, (a) face-to-face communication, (b) social versatility, and (c) security were improved, while (d) caregiver relief had a notable decrease.

Qualitative Results

Fourteen codes were analyzed, and the following three categories emerged: family history of device use, family ability to use the AAC, and meaningful activities used to incorporate AAC. Two themes developed from these categories (a) a mother's reluctance, discovery, and celebration, and (b) increased opportunities and increased family interaction.

A Mother's Reluctance, Discovery, and Celebration

Although Laura was interested in the educational training, as evidenced by her consent to participate, she was reluctant. For instance, after the initial interview, the investigator prompted the parent to join the Google Classroom multiple times. The parent rescheduled twice, and at the time of the first intervention, Laura still had not logged into the site. At the newly appointed time, Laura called the investigator instead

of joining virtually; therefore, Laura was not able to view any of the videos or resources provided prior to the intervention.

During the first intervention, the investigator explained modeling and the importance of everyone in the family using the device to make it a more normal way to communicate. The parent exclaimed, "I'd never thought of it like that before!" Laura reported later that learning to have everyone in the family use the device was a turning point for her. However, it took two more weeks before the device was implemented. Laura excitedly started off the third meeting as she wanted to recount that she had discovered how she was able to use the AAC device and Tammy's reaction to it. Laura used the device for the first time as she typed out the message, "Tammy, clean up." Laura then demonstrated how Tammy's eyes opened wide with surprise, and then she [Tammy] laughed. Laura was astonished when Tammy was able to show her where everything was on the device. Laura said, "I'm like, can she handle this? and she showed me where everything was. I said, 'Where's the keyboard, Tammy?' And she knew exactly what I was talking about, too."

By the end of six weeks, Laura demonstrated her trust in the investigator as she successfully implemented strategies and saw the flourishing results. Once Laura started using the device, along with other family members, Tammy ceased fiddling with the device and started using it for communication. Laura was stunned as she said, "She doesn't think it's a toy anymore…now, she's fine with it." Laura celebrated the family's newfound sense of connectedness as the communication and engagement increased among the family members.

Increased Opportunities, Increased Family Interaction

As Laura and her family used the communication device, not only did communication increase, but interactions were more meaningful to every family member, reported Laura. One example of the changed family dynamics came as the investigator orchestrated a modified version of the game Hedbanz. To play, each player places a card on their headband without looking at it, displaying it so that everyone else can see it. Then, each player had to use the communication device to ask questions in order to figure out what is on their own card. Playing the game taught each family member where items of food, animals, colors, and transportation were located on the device. Each player used the device to ask questions like, "Am I a food? Am I a fruit? Am I red?" Once the player decided what the card must be, the AAC device was used to say, "I am an apple." When it was Tammy's turn, she took her card down, looked at it, and then typed "I am a frog" and handed the device to her mom. Watching Tammy, Laura's eyes got big as she exclaimed, "You see Tammy, she's a cheater. I love it!" For the first time, this family engaged in a leisure activity filled with giggles and laughter as they interacted with one another. Each family member used the AAC device to ask questions until the item on the card was discovered. Laura commented later that she enjoyed seeing everyone participate and seeing "everyone's personality come out." Laura exclaimed, "I loved it!" It was inspiring for Laura to see her children interacting and sharing in the same leisure activity.

Once Laura implemented some of the strategies she learned from the educational intervention, such as modeling and waiting for a response, Laura appeared amazed as she watched her children interact in a

meaningful activity. She further explained, "We can all use it. It don't [sic] make Tammy singled out. It is normal. That was big to me. Loved it." The family dynamics changed for the better as each family member was included, socially engaged, and accepted, creating improved occupational identity and performance for all.

DISCUSSION

The purpose of this research was to evaluate the impact of parent training with targeted parental goals for their nonverbal child who uses an AAC device. This parent's objective was to increase Tammy's communication exchanges with more people and in more environments. Despite challenges and modifications required by COVID-19, this goal was successfully addressed as Laura watched her children engage and participate in meaningful activities. Research has found that parental involvement is necessary to help integrate a communication device, creating more opportunities for social engagement and interactions (Copley & Ziviani, 2004).

The results of FIATS-AAC indicated four noteworthy changes after a short-term use of the communication device. The first family factor that increased was security. Laura may have become more confident and secure for multiple reasons. First, Laura learned to trust the investigator. The trust was earned as the investigator utilized Laura's narrative and addressed her questions and concerns. Once that occurred, Laura was able to learn about the AAC device, achieve operational competency, and gain acceptance for using the communication device. Acceptance of the device resonated with Laura when she saw the power of using the communication device with Tammy, as they had several meaningful exchanges. Third, Laura was more secure once she received a low-tech backup communication device, making her more prepared for unexpected emergencies. Laura's acceptance and investment in the device supports multiple studies that found that buy-in is necessary (Lorah, 2016) and the lack of family and user support can become a constraint if not addressed (Kent-Walsh & Light, 2003; Light & McNaughton, 2014; McNaughton et al., 2008).

The second family factor, caregiver relief, became a significant barrier as Laura reported that she was more stressed in the past six weeks due to the current health pandemic. COVID-19 precautions led to the decrease of Tammy's Applied Behavior Analysis services, and Laura was forced to miss work due to lack of childcare during the increased number of virtual school days. These results validate previous studies that parent barriers and family priorities must be addressed, as reducing even one barrier has a positive effect on social communication (Moorcroft et al., 2019; Therrien & Light, 2018).

The third and fourth remarkable changes in the FIATS-AAC occurred in the child factors of face-to-face communication and social versatility. These gains were associated with the use of the communication device and the training (Ryan et al., 2015). Laura learned how to use the device during meaningful activities, which allowed her to see her child's personality emerge. For the first time, according to Laura, Tammy engaged in more communication with her sibling and with her mom. Copley and Ziviani (2004) found that parental involvement was necessary to help integrate the AAC device by creating communicative opportunities to engage in various activities. Family games provided a fun way for the

family to interact and increase communicative opportunities with the AAC device. People need to engage with others in meaningful activities, as it creates a sense of belonging and connectedness to one another (Kantartzis, 2019; Stanley, 2014).

OUTCOMES AND BENEFITS

Although the COVID-19 pandemic changed multiple aspects of this study, there were several impactful benefits and outcomes. Kantartzis (2019) and Francis et al. (2012) found that meaningful interactions help create that sense of belonging and improve the sense of self. Tammy's communication increased, and the family bonding increased, as a result of Laura incorporating the AAC device into family activities. The parental training provided Laura with the knowledge of AAC and how to model and naturally create communicative opportunities with the device.

Bailey et al. (2006) found that parents want to know about the specifics of working a communication device, and they need implementation strategies to utilize the device at home. Therefore, trainings from the school-based assistive technology team evolved from device management to implementing the device in various activities, making the training more meaningful and engaging. Parent education was needed to increase the number of communication opportunities for Tammy at home and in the community. The parent/family narrative and the initial FIATS-AAC assessment results provided an individualized intervention. Laura not only learned about the device, but she learned how to be a competent communication partner (Light & McNaughton, 2014). She also used various strategies to promote socialization and engagement through activities (Bailey et al., 2006).

Limitations

There were some limitations throughout this research study. One limitation was the lack of parent access to a computer after work hours. This made it impossible for the parent to access the virtual training. Therefore, the study was adapted for the parent as they completed the first intervention via telephone call; the following interventions were face-to-face. Another limitation was COVID-19, as the pandemic made contacting and recruiting parents difficult because isolation was encouraged, and group gatherings were limited to no more than three people. In addition, the fall school start was delayed, coinciding with the beginning of the study. The investigator shifted focus to see only one parent to provide the education. Single case study results need to be generalized with caution.

Implications

Implications from this study include, but are not limited to, the following: Explicit communication is necessary between community-based therapies, school-based therapies, and families to help prevent device abandonment. Another implication includes school personnel collaborating with parents/guardians when it comes to providing and/or adapting trainings during times of social isolation and virtual instruction. Teachers and parents will see an increase in acceptance and increased implementation of the AAC device after working with parents and addressing their concerns. Lastly, this study provided evidence

that an individualized, family-centered approach to intervention improved occupational performance for both the parent and the child.

Future research is needed, beginning with looking at the effectiveness of implementation of AAC using occupational performance as a measure with a larger sample for a longer length of time than the six weeks allotted in this study. Another area of focus would be evaluating the effectiveness of schoolwork utilizing the AAC device and seeing if there's a difference in usage between virtual class time and face-to-face class. Lastly, further research should be done on policy and procedures regarding parental education that is needed to support evidence-based practice in the educational setting.

CONCLUSION

Many lessons were learned during this COVID-19 pandemic. The most important lesson is that we must continue to be flexible and adaptable. This study evolved from a proposed integrated multifamily intervention to an all-virtual parental education, and then to a face-to-face intervention program. However, it evolved into an individualized parent training. It changed the dynamics of one family for the better when everyone had a "say" in all the activities. No matter the circumstances, we must remember to meet parents, teachers, clients, students, and children where they are. Actively listening to concerns and using family-centered goals will help families overcome some of their barriers. Family-centered interventions can equip parents with strategies to help their children who use AAC effectively communicate, engage, and participate in all their life roles.

DECLARATIONS

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APPENDIX A

Semi Structured Interview Questions Guide

1. What's the parent's educational background?
2. What's your child's formal diagnosis?
3. What age is your child? Siblings?
4. What's the age equivalent of your child's comprehension?
5. What's the age equivalent of your child's expressive language?
6. What's your child's most common educational setting?
7. What's your experience with augmentative and alternative communication?
8. How often is the communication device used at home?
9. What functional outcomes would you like to see with the communication device?
10. What routines or activities does your child use the device for?
11. What kind of training have you received in the past?
12. When did your child first receive her AAC device?
13. What are some of your child's favorite activities?
14. How do you think your child's life routines will change?
15. What do you think of this training experience?