# Augmentative and Alternative Communication in Educational Settings: An Assessment of Needs

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## **Objective:**

Augmentative and Alternative Communication (AAC) can improve children's language and fine motor skills and motivation to discuss new topics (Garzotto & Bordogna, 2010; Pino & Kouroupetroglou, 2010; Waller et al., 2009). Barriers to implementation of AAC include a lack of buy-in from, training of, and coordination between adults (e.g., teachers and therapists) (Norrie et al., 2021). Our goal was to identify support needs for Speech Language Pathologists (SLPs) and special educators providing AAC services in lowa.

#### Method:

We recruited special educators and SLPs from five Area Education Agencies (AEAs) through their directors. We distributed a Qualtrics survey to them with 37 questions regarding AAC service provision. We calculated descriptive statistics for survey items and estimated the strength of positive and negative relationships between responses to Likert-scale items (using a 1-5 scale) using Spearman's Rank Correlation (Spearman's Rho).

## **Results/Conclusion:**

We received responses from 4 special educators and 19 SLPs across the five AEAs. 83% of surveyed professionals indicated a need for additional time dedicated to training students to use their AAC devices. Moreover, 65% of professionals indicated a need for additional time dedicated to programming AAC devices. Based on this information, schedule and caseload adjustments could be considered to better allocate the time of AAC professionals. These adjustments should allow increased time for programming, providing services to students who use AAC, and training other professionals (e.g., general education teachers) to improve overall delivery of services.

Professionals who reported higher levels of comfort with the overall use of technology also indicated higher levels of frustration in meeting students' AAC-related needs (p = 0.589, p = .002). This indicates that discomfort with technology is not likely to be a cause of frustration for professionals providing AAC services. Instead, familiarity with technology (and its limitations) may contribute to frustration or increased levels of frustration may serve as motivation to become more comfortable with technology.

48% of surveyed professionals indicated their general AAC knowledge was a limiting factor in their ability to meet the students' needs. Most of the surveyed professionals indicated they had no more than 10 hours of training related to AAC devices in the last five years. Only 15% of the surveyed professionals believe that the training for AAC devices is sufficient. Specific training

protocols could be considered to address the variability currently found across professionals working with students who use AAC. Making training accessible and creating dedicated time for professionals to obtain a consistent level of knowledge would address this primary area of need.

Overall, the results from this needs assessment highlight AAC service delivery and AAC professional training as two specific areas of need within Iowa AEAs. Future research should consider a wider sample of professionals (e.g., assistive technology specialists, general education teachers, etc.), with a broad range of experiences and perspectives in the context of AAC. This research would have further implications for practical strategies to improve delivery of AAC service moving forward.

#### References:

- Garzotto, F., & Bordogna, M. (2010). Paper-based multimedia interaction as learning tool for disabled children. *Proceedings of the 9th International Conference on Interaction Design and Children IDC '10*, 79. https://doi.org/10.1145/1810543.1810553
- Norrie, C. S., Waller, A., & Hannah, E. F. S. (2021). Establishing Context: AAC Device Adoption and Support in a Special-Education Setting. *ACM Transactions on Computer-Human Interaction*, *28*(2), 1–30. https://doi.org/10.1145/3446205
- Pino, A., & Kouroupetroglou, G. (2010). ITHACA: An Open Source Framework for Building

  Component-Based Augmentative and Alternative Communication Applications. *ACM Transactions on Accessible Computing*, 2(4), 1–30.

  https://doi.org/10.1145/1786774.1786775
- Waller, A., Black, R., O'Mara, D. A., Pain, H., Ritchie, G., & Manurung, R. (2009). Evaluating the STANDUP Pun Generating Software with Children with Cerebral Palsy. *ACM Transactions on Accessible Computing*, 1(3), 1–27. https://doi.org/10.1145/1497302.1497306