

BRIDGE ASSISTIVE AIMS TO INCREASE AAC CAPACITY IN DEVELOPING COUNTRIES

Tanja Effing^{1,2,3}, Amy Litton^{1,2}, Charlene Cullen^{1,2}, Bas Tijdhof¹.

¹ Bridge Assistive, Adelaide, Australia

² Link Assistive, Adelaide Australia

³ College of Medicine and Public Health, Flinders University, Adelaide, Australia

Introduction

Communication is a human right, and a precondition for equal opportunities and participation (WHO and UNICEF, 2022). Augmentative and Alternative Communication (AAC) can be defined as a set of tools and strategies that individuals with complex communication needs can use to solve everyday communication challenges (Burkhart). AAC methods supplement (augment) or replace (alternate) speech to benefit individuals with complex communication needs (Douglas, 2012).

AAC includes a wide range of unaided and aided strategies (Light et al., 2019) and people with complex communication needs should all have the opportunity to communicate to the best of their ability and in their preferred mode or modalities (Speech Pathology Australia, 2020).

It is indisputable, that there is a considerable global inequity between developing and developed countries in terms of access to and knowledge of AAC (Muttiah, Gormley, & Drager, 2022; WHO and UNICEF, 2022). A survey of the World Health Organisation (WHO) and United Nations shows that actual access to necessary assistive technology varied from 3% to 90% in 29 included countries (WHO and UNICEF, 2022). The lowest access to assistive technology was, not surprisingly, reported in the low income countries and lower-middle income countries in the world (WHO and UNICEF, 2022). In terms of access to AAC, lack of funding and lack of access to (high-tech) AAC systems all contribute to the considerable inequity between developing and developed countries. Moreover, the number of skilled professionals specialised in AAC in developing countries is extremely small (Bunning, Gona, Newton, & Hartley, 2014). Outcomes of a recent review, show evidence that AAC can be successfully implemented in developing countries (Muttiah et al., 2022).

Regardless of where they live, people with complex communication needs should not be denied the

opportunity to communicate to the best of their ability. Training of AAC users and their communication partners is only possible if there are locally available professionals that are appropriately educated in AAC (Muttiah et al., 2022). AAC capacity building in developing countries is therefore one of the highest priorities (Muttiah et al., 2022).

Bridge Assistive

Bridge Assistive (bridgeassistive.com) is a not-for-profit company that aims to increase the use of (high-tech) AAC in developing countries. It is a subsidiary of Link Assistive (linkassistive.com) and officially registered as a charity organisation with the Australian Charities and Not-for-profits Commission (ACN: 661 392 169). Bridge Assistive aims to undertake sustainable projects to increase AAC capacity in developing countries by; 1) collaborating with local education and health organisations; 2) providing online training and mentoring sessions to health care and educational professionals regarding the use of communication devices; 3) donating (second-hand high-tech) AAC devices and providing free companion apps and resources to support local parents, teachers and carers, as well as paper-based resources replicating the software; and 4) evaluating the implementation processes, for improvement and to allow others to learn from Bridge Assistive's experiences.

Sustainable Projects

Bridge Assistive is currently collaborating with the University of Ghana to perform an AAC implementation project in Ghana that includes the training of twelve Ghanaian Speech and Language Therapists (SLTs). The project has started in January 2024 and the findings regarding feasibility, barriers and facilitators are scheduled to be published in 2025.

In this project, the SLTs undergo an online AAC training course and receive access to an AAC kit. For this, Bridge Assistive has donated a total of seven AAC kits including access and communication devices (i.e., non-electronic communication boards, switches, switch toys, and electronic devices). All the AAC kits have officially been handed over by the Australian High Commission to the Department of Audiology, Speech and Language in March 2024. Participating SLTs within the same organisation will share an AAC kit.

After completion of the online training, the SLTs are offered three one-on-one mentoring sessions with Australian speech pathologists, all affiliated with Link Assistive. The SLTs are asked to use their AAC kits for client assessments. Should individual clients require AAC, SLTs can apply for individual AAC device donations using the Bridge Assistive Online Application System (<https://bridgeassistive.com/apply-for-a-device>).

An additional (116) eye gaze device has been sent to the University of Ghana to be used for: 1) client assessments at the University hospital, and 2) education of SLT university students. In addition, if SLTs in the community like to trial eye gaze with their clients, they will be able to do this at the AAC University Clinic.

See below, some motivations of Ghanaian SLTs to take part in this project:

“I have a huge caseload of non-verbal children and young adults who have no means of communication. My greatest desire is to give them a voice... It has been challenging because I do not have enough competence in the use of AAC and also not all of my clients are able to benefit from the use of pictures due to various levels of visual impairments and sensory issues... With this project I will be able to build my knowledge and skills in AAC which will directly help the children and young adults at my workplace find a voice”.

“I like to use AAC because it helps to provide means of communication to the clients I work with. For clients who are minimally verbal, but also for those I use AAC to provide the means of communication. Also, those who have language but find it difficult to use it, I use AAC to augment the language and to help expand their utterances... I would like to learn more about the use of AAC, the assessments and how I can train parents”.

“I have realised that, for most of my client group (children) with neuro diverse conditions which has impact on their ability to communicate and interest, when trained on how to use AAC will benefit so much in sharing their thoughts and emotions.”

A Fijian project is in the developing phase and will include collaborations with the Frank Hilton Organisation and Charles Sturt University.

People from Developing Countries Can Apply for AAC

In addition to performing formal projects, individuals



from developing countries can apply for donation of a (second-hand) AAC device through Bridge Assistive’s online application process (<https://bridgeassistive.com/apply-for-a-device>). Applications can be submitted by speech pathologists, other health care providers, educators, and carers. The applications will be reviewed by a speech pathologist and approval will depend on: 1) meeting pre-set criteria, and 2) availability of devices and services. After approval, Bridge Assistive will prepare the device, ship it to the applicant, and provide clinical and technical support.

Bridge Assistive received the following feedback from the support team of their first young clients 3-6 months after they received their communication touch device (i.e., I-110):

“Having the device has made his family and teachers understand him more, he communicates things we would never have imagined and uses so many words, the teachers are surprised at his academic level.” (14-year-old boy; Fiji)

“This device has changed her life, particularly education access. She is 13 years old and had never previously learnt to read or write. With her device, she has access to a robust set of vocabulary that gives her the ability to have more equitable access to a curriculum.” (13-year-old girl; Fiji)

“So far he’s learning to communicate his needs like juice and toilet or cartoon and is progressing so much. He is speaking out and repeating what the device says which is a great thing to see because he is non-verbal.” (6-year-old boy; Fiji)

“She has made tremendous progress over the past months. It has been a great example to people in her community of the amazing capabilities of children with disabilities. It has been a great avenue to shift

attitudes which will benefit other children in the community.” (3-year-old girl; Fiji)

Donate a Device

For Bridge Assistive to be able to continue their work, they need more second-hand communication devices. Please consider donating any unused communication devices, not older than 5 years, to Bridge Assistive <https://bridgeassistive.com/donate-a-device>.



office@bridgeassistive.com



www.bridgeassistive.com

References

Baxter, S., Enderby, P., Evans, P., & Judge, S. (2012). Barriers and facilitators to the use of high-technology augmentative and alternative communication devices: A systematic review and qualitative synthesis. *International Journal of Language & Communication Disorders*, 47(2), 115-129. <https://doi.org/https://doi.org/10.1111/j.1460-6984.2011.00090.x>

Bunning, K., Gona, J. K., Newton, C. R., & Hartley, S. (2014). Caregiver perceptions of children who have complex communication needs following a home-based intervention using augmentative and alternative communication in rural Kenya: An intervention note. *Augmentative and Alternative Communication*, 30(4), 344-356. <https://doi.org/10.3109/07434618.2014.970294>

Burkhart, L. J. (2023). What is AAC? Retrieved from <https://isaac-online.org/english/what-is-aac/>

Douglas, S. N., Light, J. C., & McNaughton, D. B. (2013). Teaching paraeducators to support the communication of young children with complex communication needs. *Topics in Early Childhood Special Education*, 33(2), 91-101. <https://doi.org/10.1177/0271121412467074>

Light, J., McNaughton, D., Beukelman, D., Fager, S. K., Fried-Oken, M., Jakobs, T., & Jakobs, E. (2019). Challenges and opportunities in augmentative and alternative communication: Research and technology development to enhance communication and participation for individuals with complex communication needs. *Augmentative and Alternative Communication*, 35(1), 1-12. <https://doi.org/10.1080/07434618.2018.1556732>

Muttiah, N., Gormley, J., & Drager, K. D. R. (2022). A scoping review of Augmentative and Alternative Communication (AAC) interventions in Low-and Middle-Income Countries (LMICs). *Augmentative & Alternative Communication*, 38(2), 123-134. <https://doi.org/10.1080/07434618.2022.2046854>

Speech Pathology Australia. (2020). Augmentative and Alternative Communication Clinical Guideline. Melbourne, SPA.

Unholz-Bowden, E. K., Girtler, S. N., Shipchandler, A., Kolb, R. L., & McComas, J. J. (2024). Use of augmentative and alternative communication by individuals with Rett Syndrome part 2: High-tech and low-tech modalities. *Journal of Developmental and Physical Disabilities*, 36(1), 147-167. <https://doi.org/10.1007/s10882-023-09902-y>

WHO and UNICEF. (2022). Global report on assistive technology (CC BY-NC-SA 3.0 IGO). Retrieved from Geneva: Licence: CC BY-NC-SA 3.0 IGO

