I used AI to write this paper: communicating with Augmentative Innovation

Darryl Sellwood[1]
[1] AGOSCI

Short Abstract

The integration of artificial intelligence (AI) into augmentative and alternative communication (AAC) is rapidly transforming content creation and communication. Drawing on my lived experience as an AAC user, this presentation explores AI's dual role as an enabler and disruptor in the field. I will discuss my personal journey of integrating AI tools into my daily workflow, highlighting how they've enhanced my communication across various contexts, from email writing to conference presentations. The presentation will address the potential benefits of AI in AAC, including improved communication efficiency and expanded capabilities for users. However, it will also delve into the ethical challenges, particularly focusing on maintaining authenticity and ensuring that AI-assisted work genuinely represents the user's voice. By sharing strategies I've developed to balance AI's capabilities with preserving my unique contribution, I aim to contribute to the ongoing dialogue about responsible AI use in AAC. This presentation will provide valuable insights for AAC users, speech pathologists, educators, and researchers, emphasizing the need for collaborative efforts to harness AI's potential while addressing ethical concerns in our increasingly digital world.

Long Abstract

The integration of artificial intelligence (AI) into augmentative and alternative communication (AAC) and education is rapidly transforming how we approach content creation and communication in our daily lives. Drawing on my lived experience as a person who uses various types of AAC strategies, this paper explores the dual role of AI as both an enabler and a disruptor, highlighting its potential benefits and ethical challenges for people who use AAC.

The field of computer science has been studying and developing AI for decades (Dergaa et al., 2023; Lancaster, 2023). Recent emergence of tools like ChatGPT has introduced this technology to the broader community, promising efficiency in text generation but raising ethical and credibility concerns (Dergaa et al., 2023). Academic literature creation, a multifaceted process, increasingly incorporates AI, with a systematic review emphasizing the importance of training, transparency, and ethical practices (Khalifa & Albadawy, 2024).

Butson and Spronken-Smith (2024) discuss the pros and cons of using AI in an academic context, highlighting ethical and usage complexities. In reading their paper, I found myself relating more to Spronken-Smith surprisingly who is more sceptical about using AI. Her idea of using AI as a tool rather than a partner in co-creation resonates more with the way I have engaged with AI in creating this paper.

Lancaster (2023) argues that the education system is ill-prepared for the challenges posed by AI text generation technology. He advocates for the educational and academic integrity sectors to embrace and engage with new AI technologies rather than disregarding or resisting them.

The AAC field has been grappling with communication efficiency for decades, for example, acknowledging the extraordinary amount of time and physical effort required to generate messages to participate in meaningful conversations (Light et al., 2019). Zastudil et al. (2024) investigated the use of AI in AAC devices for beginner communication learners with Visual Scene Displays. Their research highlights the potential of generative AI in AAC devices while emphasizing the need for careful consideration of personalization and ethical implications before fully integrating this technology into communication systems. AI informed tools currently being developed include context-sensitive pictogram-based applications for mobile devices (Neamtu et al., 2019) and voice recognition software that claims to be able to understand dysarthric speech (Murero et al., 2020).

In this paper, I will argue that AI is a valuable tool for supporting communication and education in AAC, while recognizing the need for active engagement to ensure authentic communication. Further research is needed into real-time text generation, ethical issues of intellectual property, and effective use of this technology in learning. I will explore my personal journey of integrating AI tools into my daily workflow to enhance communication across various contexts. I'll discuss how I've leveraged AI to improve my content creation process for writing emails, crafting blog entries, developing business documents, and even preparing conference presentations. This integration has significantly impacted my productivity and communication efficiency.

However, I recognize that the use of AI in content creation raises important ethical questions. I will delve into my own ethical concerns, particularly focusing on the challenge of maintaining authenticity and ensuring that the final product genuinely represents my own work and ideas. This exploration will include strategies I've developed to strike a balance between leveraging AI's capabilities and preserving my unique voice and intellectual contribution.

By sharing my experiences and reflections, I aim to contribute to the ongoing dialogue about the responsible use of AI in communication, especially for individuals who rely on AAC strategies. This discussion will highlight both the transformative potential of AI tools and the critical need for ethical considerations in their application.

This paper underscores the urgent need for collaborative efforts among AAC users, educators, researchers, and technologists to harness the potential of AI while addressing ethical concerns. By working together, we can shape a future where AI enhances communication for all, ensuring inclusivity and authenticity in our increasingly digital world.

Attendees will gain new insights into the utilization of AI in AAC to augment communication. Speech pathologists and educators will learn how this technology can support their clients and students. People who use AAC will discover strategies to enhance their written and conversational communication. Researchers will gain valuable insights into ethical issues and knowledge gaps in this rapidly evolving field. This presentation will provide an insight into AI's impact on AAC and communication, benefiting professionals, users, and researchers alike.

Butson, R., & Spronken-Smith, R. (2024). AI and its implications for research in higher education: A critical dialogue. Higher Education Research & Development, 43(3), 563–577. https://doi.org/10.1080/07294360.2023.2280200

Dergaa, I., Chamari, K., Zmijewski, P., & Saad, H. B. (2023). From human writing to artificial intelligence generated text: Examining the prospects and potential threats of ChatGPT in academic writing. Biology of Sport, 40(2), 615–622. https://doi.org/10.5114/biolsport.2023.125623

Khalifa, M., & Albadawy, M. (2024). Using artificial intelligence in academic writing and research: An essential productivity tool. Computer Methods and Programs in Biomedicine Update, 5, 100145. https://doi.org/10.1016/j.cmpbup.2024.100145

Lancaster, T. (2023). Artificial intelligence, text generation tools and ChatGPT - does digital watermarking offer a solution? International Journal for Educational Integrity, 19(1), NA-NA. https://doi.org/10.1007/s40979-023-00131-6

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

Murero, M., Vita, S., Mennitto, A., & D'Ancona, G. (2020). Artificial Intelligence for Severe Speech Impairment: Innovative approaches to AAC and Communication. PSYCHOBIT.

Neamtu, R., Camara, A., Pereira, C., & Ferreira, R. (2019). Using Artificial Intelligence for Augmentative Alternative Communication for Children with Disabilities. In D. Lamas, F. Loizides, L. Nacke, H. Petrie, M. Winckler, & P. Zaphiris (Eds.), Human-Computer Interaction – INTERACT 2019 (pp. 234–243). Springer International Publishing. https://doi.org/10.1007/978-3-030-29381-9_15

Zastudil, C., Holyfield, C., Kapp, C., Crosland, X., Lorah, E., Zimmerman, T., & MacNeil, S. (2024). Exploring the use of Generative AI to Support Automated Just-in-Time Programming for Visual Scene Displays (Version 1). arXiv. https://doi.org/10.48550/ARXIV.2408.11137