

# Preface

Assistive and augmentive communication (AAC) is an emerging area that receives much support from the disabled community. It enables communication for those with impairments or restrictions on the production or comprehension of spoken or written language. There are unaided and aided AAC systems. Unaided systems do not require any external device for their use, but include facial expression, vocalizations, gestures, and signed languages. On the other hand, an aided AAC uses either an electronic or non-electronic device to transmit messages such as communication books or voice output devices using symbols. Since the skills, areas of difficulty, and communication requirements of AAC users vary greatly, an equally diverse range of communication aids and devices exists to meet these demands. For the low-tech aided AAC, communication is done through letters, words, phrases, pictures, and/or symbols on a board or in a book for access. As for high-tech aided AAC, electronic devices with storage and retrieval of messages allow the user to communicate with others using recorded speech output. There are high-tech aided AAC which use dedicated devices developed solely for communication, and non-dedicated devices, such as computers, adapted for use as communication with some external devices and software packages.

AAC has been a great assistance to people with cerebral palsy, autism, brainstem stroke, traumatic brain injury, and other disabilities. It helps them to learn, communicate, and gain social abilities. For young children, it develops their vocabulary from scratch and helps them learn the speech proficiency to go to school, improve their literacy, and gain employability in the market. Foremost, it improves the quality of their life.

There are many AAC tools being developed by various industry giants being distributed to fit into the general public needs. In fact, there are various niche researches going on in the research institutions, universities, and non-profit organizations that have not been publicized or commercialized widely. Hence, we gathered the recently completed and ongoing research in AAC and shared them with other researchers. All the chapters were peer-reviewed by members of our editorial board before they were accepted.

We anticipate this book will benefit professionals and researchers working in the field of assistive and augmentative technology in various disciplines, such as special education, healthcare, computational intelligence, and Information Technology. Moreover, the book also provides insights and support to individuals who are concerned with the development of children and adult with disabilities.

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