Introduction to the Special Issue on Augmentative and Alternative Communication

Jeff Sigafoos

Published online: 2 March 2010
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Keywords Editorial · Special issue · Augmentative and alternative communication

Background

This special issue of the *Journal of Developmental and Physical Disabilities* focuses on implementing Augmentative and Alternative Communication (AAC) intervention for individuals with developmental and physical disabilities. AAC refers to a range of non-speech methods of communication, including gestures, manual signs, picture- or symbol-based communication systems, and computer-based speech-generating devices. AAC is used to augment unintelligible speech and provide an alternative when speech and language development is significantly delayed or severely impaired.

AAC is a relevant topic for the *Journal of Developmental and Physical Disabilities* because many individuals with developmental and physical disabilities present with severe communication impairment and complex communication needs. The nature of their severe communication impairment ranges from highly unintelligible speech to the complete absence of speech. This range of impairment makes implementing communication assessment and intervention extremely difficult and often unsuccessful. New and more effective assessment and intervention strategies are needed because without good communication skills these individuals will be at a severe disadvantage. To reduce this disadvantage and improve their overall quality of life, individuals with developmental and physical disabilities must be enabled to communicate effectively and appropriately. For many such individuals, AAC is likely to be their only real option for enabling effective and appropriate communication.

J. Sigafoos (✉)

School of Educational Psychology and Pedagogy, Victoria University of Wellington, Karori Campus,
PO Box 17-310, Wellington, New Zealand
e-mail: jeff.sigafoos@vuw.ac.nz

Fortunately, professionals can now draw upon a large and growing number of evidence-based interventions for developing effective use of AAC among individuals with developmental and physical disabilities. The current evidence-base is strong thanks to the efforts of numerous researchers who have worked gallantly to develop new and more effective AAC interventions for individuals with developmental and physical disabilities.

Still, there are numerous areas where additional research is desperately needed to advance evidence-based practice in the field. There are, as they say, significant gaps in the literature. The articles in this special issue go some way towards filling many of the most significant gaps by exploring new frontiers in AAC intervention for individuals with developmental and physical disabilities. Indeed, the present collection of eight empirical studies, three systematic reviews, and two conceptual papers showcases the best and most recent developments in AAC research involving individuals with developmental and physical disabilities.

Overview of Content

Among the empirical papers, it was a pleasure to receive several submissions involving individuals with the most severe disabilities. Development of effective communication skills in this population continues to present a major challenge. One such challenge is assessing existing communicative forms and functions. Assessment of existing forms and functions is critical for intervention planning. Along these lines, the opening article by Didden and his colleagues illustrates a promising approach for assessing communication forms and functions of individuals with Rett syndrome. This is an important contribution as it is often unclear whether or not individuals with such extreme and regressive conditions do in fact retain any communicative abilities that could serve as a starting point for intervention.

The next article by Lancioni et al. deals with the difficult situation of enabling access to assistive communicative technology. Enabling access so that a person can effectively use assistive communication technology is complicated when individuals present with extensive motor impairment, as was the case for the two adults participating in this study. This paper demonstrates an elegant technological solution that enabled these two post-coma patients to request and obtain environmental stimulation. The positive findings reported by Lancioni et al. further highlight how assistive communication technology might contribute to assessing disorders of consciousness.

Next Schieltz and her colleagues explored the types of reinforcers that maintain communicative and problem behaviors in 10 young children with developmental disabilities. The study shows that the reinforcers maintaining these two classes of behavior were different in 8 of the 10 children. This is a surprising finding given that problem behavior is often conceptualized as a form of communicative requesting. This may still be the case, but these findings suggest that when communicative and problem behaviors co-exist, they may serve different functions for the individual. This finding has considerable implications for designing interventions that aim to replace problem behaviors by teaching more appropriate forms of communication.

The next two studies deal with teaching children to use graphic-mode or picture-based communication systems. Cannella-Malone, Fant, and Tullis show how one such system was implemented to develop more social communication. Simpson and Keen further explore the use of graphic systems within the preschool. Both of these innovative studies extend the application of graphic-mode AAC in important new directions.

In addition to demonstrating effective procedures for using AAC for social communication and in natural classroom routines, researchers are beginning to explore the impact of AAC use on other areas of functioning. Along these lines, the paper by Ganz and her colleagues evaluates the impact of picture-based communication and verbal imitation training on a range of functioning areas, including requesting, picture discrimination, and speech production. In a similar vein, Angermeier and her colleagues examined the impact of different types of AAC output on spelling performance. Both of these studies suggest that AAC can positively impact a range of functioning areas besides the communication domain.

In the final empirical paper in this special issue, Trembath and his colleagues take a look at a relatively underserved population and issue. Their unique research on the vocational experiences of adults who use AAC is a welcomed and much needed addition to the literature. Their findings will enable professionals to better assist AAC users in gaining more fulfilling vocational experiences.

Next in the line-up are three systematic reviews of the literature covering (a) interventions to develop literacy skills among AAC users (Machalicek et al.), (b) use of AAC by individuals with hearing loss (Davis et al.), and (c) the extent to which book reading is an effective context for implementing AAC (Stephenson). As noted by Schlosser et al. (2007), a good systematic review should provide readers with a comprehensive summary and critical appraisal of research evidence relevant to a specific clinical question. The three reviews in this special issue do just that and each offers a telling bottom line. From Machalicek et al. the bottom line is that there are several well-established procedures for teaching literacy skills to persons with developmental and physical disabilities who use AAC. From Davis et al. the bottom line is the need for more systematic approaches for matching AAC devices to user needs. And Stephenson's bottom line is that while shared book reading might be a promising context for developing AAC use, the research evidence is currently too meager to draw any firm conclusions.

This special issues ends with two thoughtful papers, each of which address critically important issues in designing effective AAC intervention. The first paper by Ogletree and Pierce relates back to the opening paper by Didden et al. in considering issues specific to individuals with the most severe disabilities. These researchers provide a tremendous service by highlighting the numerous complex issues that need to be considered when designing AAC intervention for the nonsymbolic communicator. Given this complexity, professionals often lack sound ideas for how to go about implementing AAC with this client group. Ogletree and Pierce go on to provide an equally valuable service by their careful delineation and analysis of good AAC practices for this difficult to serve population.

The final paper by Reichle and Drager is a masterful examination of strategies for navigating communication devices. The focus here is on the configuration of communication devices that display graphic symbols. How should these symbols be

arranged and how should the AAC user be taught to search for and select symbols from the display? These are extremely important questions. Reichle and Drager's work helps to fill some of the biggest gaps in the literature on implementing AAC with individuals with developmental and physical disabilities. Their impressive work provides a fitting end to this special issue.

Epilogue

There are many people to thank for bringing this special issue on AAC to fruition. First and foremost are the contributing authors. Thank you for responding so enthusiastically and quickly to my call for papers. Your work will greatly advance the evidence base for AAC, which will in turn go some way towards improving the quality of life for individuals with developmental and physical disabilities. I must also thank Dr. Michel Hersen for giving me the opportunity to serve as Guest Editor for this special issue of the *Journal of Developmental and Physical Disabilities*. I consider it a great honor. I would be remiss if I did not also thank Debora Kagohara and Larah van der Meer, two very capable doctoral students who I have the pleasure to be supervising. Thank you for your diligent assistance in processing the submissions for this special issue. I hope you learned as much about reviewing and editing as you clearly did about AAC. Finally, I owe a tremendous debt of gratitude to Carole Londerée, who is without doubt the most capable and good natured Editorial Assistant that I have ever had the pleasure to work with. She was extremely patient with, and helpful to, this novice Guest Editor.

Reference

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