

Editorial: Maximizing success in phonological intervention

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For children whose speech production skills lag behind expected developmental levels for their community, it has become customary in the industrialized world to provide the child with special instruction in order to help accelerate the developmental process (phonological intervention). Phonological intervention is often successful, but for some children, the intervention appears to be ineffective or inefficient, or both. The goal of the current issue is to provide ideas for maximizing success in phonological intervention. In this issue, 'phonology' is defined as the representation, processing and actual pronunciation of speech sounds, syllables, and words in phrases.

Like any behavioural intervention, phonological intervention is a complex, multicomponential process. Factors affecting outcomes concern the child, the assessment and intervention procedures, and the child's communicative partners, both professional and personal (for example, the child's family members and peers, the speech and language therapist, teachers and other educational personnel). In the current issue, papers address factors concerning the child, the intervention procedures and process, and family members.

The papers broaden the scope of phonological intervention and outcomes evaluation in terms of goal setting, programme management and treatment techniques, and include authors from three countries (Australia, the USA and Canada). The issue was stimulated originally by my attendance at a mini seminar at the American Speech and Hearing Convention in 2001 given by Amy Weiss and Ken Bleile (among others), in which they gave an introduction to some of the ideas they present in this issue. A nine-week working visit to Australia in 2002 brought me in touch with Elise Baker, Sharynne McLeod, and Caroline Bowen, and after discussion with Elise Baker at the University of Sydney, the issue started to take shape. Articles range from more theoretical, thought-provoking discussions (McLeod and Bleile, Weiss) to group treatment studies (Bowen and Cupples) to case discussions (Baker and McLeod, Baker

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and Bernhardt). McLeod and Bleile invoke the International Classification of Functioning, Disability and Health from the World Health Organization (WHO, 2001) as a foundation for integrative goal setting for children with speech impairment. McLeod and Bleile argue that phonological intervention concerns more than the accurate production of speech sounds; they propose that the ultimate goals of intervention are enhancement of a child's self-esteem and participation in life. These ultimate goals may be achieved not just through helping a child pronounce more accurately, but also through changes in society, for example, through the reduction of negative societal attitudes about speech differences. In keeping with this broader view of phonological intervention, Weiss (this issue) discusses the child's role in the therapeutic process. As a background for this discussion, she outlines approaches to healing in medicine, psychology, adult aphasia and stuttering that focus on what the client brings to the intervention process. In proposing the application of such approaches to phonological intervention, she gives suggestions on how to enhance a child's engagement in the treatment process, thereby optimizing the potential for faster change. Bowen and Cupples likewise take a broader view, focusing on the family context, and giving specific procedures for helping parents become successful agents of change through their PACT programme (Parents and Child Together). In their study, children whose parents were actively involved in the PACT programme made greater gains in speech development than children in a no-treatment control group. Baker and McLeod and Baker and Bernhardt present case studies, bringing some of the discussions in the broader-based papers to bear on 'real' children. Baker and McLeod discuss two children's progress in therapy, one who did well, and one who did not do as well as anticipated, even though the children's assessment profiles appeared quite similar at first. Their paper exemplifies procedures for determining how well treatment is working during the treatment process. Baker and Bernhardt go on to explore why the second child did not do as well as anticipated, reviewing all of the factors that need to be considered in treatment programmes. They suggest how his programme might have been reconfigured, including basing goals for speech production on more current, nonlinear phonological analyses.

In this issue, none of the papers focuses on the professionals (whether speech and language therapist or teacher) but the volume would not be complete without some acknowledgment of the role of practitioners' knowledge, skills and attitudes in optimizing success in intervention. In recent nonlinear phonological intervention studies in British Columbia (Bernhardt *et al.*, 2003; Major and Bernhardt, 1998), factors concerning the participating speech and language therapists were evaluated in terms of the speech production outcomes for 22 preschool children with phonological impairments.

At the end of each study, the speech and language therapists completed questionnaires that included questions about their educational background, years of experience, confidence level in the nonlinear approaches, and general treatment style (drill, play or a combination of both). Among that set of factors, the only one that was related to child outcomes was whether a therapist had a linguistics degree as an undergraduate prior to their Master's degree in speech-language pathology (an undergraduate degree that included a number of courses in [adult] phonetics and phonology). Children treated by speech and language therapists with an undergraduate degree in linguistics and a Master's degree in speech-language pathology made significantly faster gains in word structure development (CVCV, CVC, and so on) than children whose therapists had minimal linguistics undergraduate training (mean gain in word structure accuracy of 26.9% compared with mean gain of 14%, Mann-Whitney U , $P = 0.03$). There was also a difference in the same direction for Percent Consonants Correct (19.63% average gain versus 12.2% average gain), although that gain was not significant. It makes sense to think that in-depth coursework in phonetics and phonology might enhance practitioners' knowledge and skills in phonological intervention, which in turn might affect outcomes of intervention. The results are resonant with those of Johnston and Heller (1987), who found that speech-language therapy students who participated in a specialty module in preschool language intervention gained greater clinical competency in that area than students who did not take the specialty module. Both of these studies indicate that there is much yet to learn about practitioner training and intervention outcomes. Beyond the individual practitioner, there is much to learn about the effects of the interactions between participants in the intervention process, for example, between the practitioners and the child, between the teacher and the speech and language therapist, and between family members and the 'professionals'. Recent papers on the topic of collaborative practice between speech and language therapists and classroom teachers describe the different strengths that each can bring to the intervention process, the desirability of flexible, open approaches to collaboration, and the need for dedicated time for joint learning and planning (for example, Pershey and Rapping, 2003; Popple and Wellington, 1996; Prelock, 2000). As more collaborative programmes develop, school systems have an opportunity to develop both qualitative and quantitative research studies to evaluate the success of such programmes and determine the critical factors for success. We hope that the ideas and strategies in this issue stimulate the readers to engage in dialogue with their various partners in the intervention process, so as to develop local methods to study and enhance the outcomes of phonological intervention.

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