

Preface

This book examines the use of assistive technology by a variety of individuals, many of whom experience difficulties in their daily lives because of, for example, acquired brain damage, autism, communication and motor impairment, and Alzheimer's disease. The number of individuals comprising these groups is slowly increasing due to factors such as longer life expectancy, higher posttraumatic survival rate, and lower neonatal mortality. As such, families and professionals largely agree there is an increased need for intervention programs to improve the quality of life of these individuals. While the type of intervention may vary, there is a trend toward increased use of assistive technology to effectively and cost-efficiently manage the proposed interventions. For example, microswitch-aided programs are typically more beneficial and affordable than simple staff-aided stimulation in increasing the activity and self-determination of people with motor and intellectual impairments. Similarly, programs based on speech-generating devices or personal data assistants are considered better and less expensive than direct intervention strategies for active communication and memory.

The aim of the book is to provide a current review of research and intervention strategies for nine groups of people: individuals with acquired brain damage, college students with attention and learning difficulties, people with communication impairment, people with visual impairment and blindness, people with autism spectrum disorders, people with behavioral and occupational disorders, people with Alzheimer's disease, people with learning disabilities, and people with severe/profound and multiple intellectual and motor or sensory-motor impairments. There is a chapter dedicated to each group, which provides information regarding (a) individuals' general characteristics, with personal and social needs to be met; (b) technology available; (c) technology-aided programs assessed in the literature; (d) outcomes of the programs; and (e) discussion of the outcomes and implications for future research and intervention programs. The overall aim of this book is to provide a highly informative and practical outlook of typical issues and potential solutions afforded by technology-aided programs. The authors provide evidence-based guidelines across fields to support initiatives and increase practitioners' probability of success.

This book represents the effort of many authors. As editors, we would like to thank them for their scientific contributions and their positive attitudes throughout the book development process. We would also like to thank the researchers and

technical experts (engineers) who helped us better understand the problems experienced by persons with diverse abilities and the technology-aided strategies that might be used to help them, and the organizations that supported our research initiatives. With regard to the researchers and technical experts, we would like to acknowledge the extensive contribution of Doretta Oliva, Domenico Bellini, Sandro Bracalente, and Gianluigi Montironi. With regard to the organizations, we would like to emphasize the lasting positive role of the Lega F. D'Oro Research Center, Osimo (Italy), the University of Bari (Italy), ONE Research Institute, Raleigh, North Carolina (USA), and the Medical College of Georgia, Georgia Regents University, Augusta, Georgia (USA).

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