



Essentials

of **School Neuropsychological Assessment**

Third Edition

- Clear and timely guidance on how to integrate neuropsychological assessment information into clinical practice
- Over 100 commonly used tests classified into a comprehensive Integrated School Neuropsychology/Cattell-Horn-Carroll Model
- Conveniently formatted for rapid reference

Daniel C. Miller

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of School

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THIRD EDITION

Daniel C. Miller

Denise E. Maricle

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To my loving wife, Michie, who for 32 years has been my best friend and supporter, and to Dr. Richard W. Woodcock whose life's work has inspired Denise and I and several generations of other professional colleagues to sharpen our assessment skills with the children we serve.

Daniel Miller

Children have always been a source of joy and inspiration for me.

A few children have come into my life and never left, and those relationships are among my greatest treasures. The next generation is our future, and the future of school neuropsychology is in the hearts and minds of the students I have worked with and the children they serve.

My efforts in this book are dedicated to a special individual who has been a light in my life since she was born and who is in the process of becoming a member of the next generation of awesome psychologists. Sarah Ryan Reynolds, this one is for you!

Denise Maricle

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FOREWORD

The first and second editions of the *Essentials of School Neuropsychological Assessment* by Daniel C. Miller were the first user-friendly books written for school psychologists who were training in, or were trained, in school neuropsychology. They were an excellent addition to the Wiley *Essentials* series and true to form delivered current, accurate, and focused information for busy professionals who needed to apply what they were learning on the job. The third edition of this seminal work, by Daniel C. Miller and Denise E. Maricle, delivers a summary of progress in the field over the past five years in the same efficient manner and brings us up to speed with the most current and exciting developments in school neuropsychology. It also demonstrates that the thirst for this kind of reference work is still very much in demand, is stable, and very much a part of school psychology training.

In the 1960s and 1970s when school psychology was formed as a field of practice, very little was known about brain-behavior relationships compared with today. School psychology practitioners had to assemble quickly after the passage of the first laws that guaranteed children with special needs rights to a free appropriate public education. Researchers struggled with very vague technology to document what was going on in the brain. In kind, school psychologists struggled with their duty to bring science down to the everyday level of the classroom. The gap between the laboratory and the classroom was wide indeed.

Perhaps the most dramatic changes in neuroscience and school psychology began as technology improved in the 1980s and 1990s, when researchers were able to observe the brain processing information with increasingly clearer media and the natural progression of trying to apply these imaging results to real-world situations began in earnest. Studies investigating dyslexia, concussion, attention deficit/hyperactivity disorder, and autism (to name a few) gave us direct inroads into understanding the physical processes that underlined the behaviors that we were seeing in the classroom. In turn, the following first decade of the century witnessed direct remediative attempts that were based in concrete imaging neuroscience.

Work by eminent researchers such as Sally Shaywitz, Bob Schultz, Ami Klin, Peg Semrud-Clikeman, Erin Bigler, Lisa Feldman-Barrett and many others showed serious and powerful attempts to bring laboratory findings directly into clinical practice. Interventions that were previously based on theory and speculation were now becoming interventions based on concrete attempts to encourage neural plasticity and all of the benefits of strength models of remediation. Therefore the gap between science and practice has been steadily decreasing and school psychology practitioners are finding themselves in the middle of a constant deluge of new information that must be translated in to practice.

At the time of the publication of the first edition of the *Essentials of School Neuropsychological Assessment* we could all acknowledge that there was a movement afoot in school psychology to include neuropsychological assessment principles in everyday practice. This movement did not evolve as a strong reactionary force loudly proclaiming its right to be heard, but more as a reflection of practitioners trying to keep up with the advances of modern science. Some years later, there is evidence that this quiet and serious grassroots movement is mainstream and continuing to strengthen as research on neuropsychological aspects of autism, traumatic brain injury, and specific learning disabilities are common in school psychology journals and trade publications. Indeed, medical survival rates, improved premature birth rates, increases in student rights and the demise of the discrepancy model of learning disability identification has given way to powerful and theoretically based methods of determining cognitive strengths and weaknesses as they relate to academic skills. The latter requires inquiry into brain-behavior relationships and cements school psychology's commitment to translating neuroscientific knowledge to the individual level in the classroom.

This quiet movement of applying neuropsychological information into school psychology practice has now crystallized. Leaders in the field are recognizing the need for training and school psychology training programs across the country are enhancing their programs to include courses on neuroanatomy, neuropsychological assessment, consultation, and competencies in medical liaison activities. Indeed, school psychology doctoral programs that have a strong emphasis on pediatric neuropsychology are now becoming common as the grassroots movement for continuing education grows.

There is enough established activity and interest in school neuropsychology for some authors to suggest that the time for a specialty within school psychology has come. The issues surrounding credentialing and competencies for such a specialty are quite complex, but regardless of the outcome of such issues, *the fact that the ethical demand for school psychologists to be aware of and incorporate scientific*

information into everyday practice will remain. Efforts to codify and express practice guidelines, such as those found in this book, are needed at this time to direct and assist school psychologists in navigating their way in the future. It is not possible to wait for all issues to be resolved before applying new knowledge: that day may never come. After all, as a child stands before us today, we are charged to bring everything that we have and know to help them meet the demands of everyday living in the real world—not a clinical setting, not a hospital or rehabilitation center, but a real classroom where most of the children have few problems and can easily perform learning and social tasks that sometimes seem insurmountable to the children we serve.

We can now safely say, after the major success of the first two editions, that the *Essentials of School Neuropsychological Assessment—Third Edition* will continue to sustain practitioners adapting neuropsychological principles to the school setting. It provides us with clear and concise guidance on how to bring neuropsychological information and research into our nonclinical settings. This third edition, with Denise E. Maricle added as a co-author, furthers the theoretical and practical application of neuropsychology with the Cattell-Horn-Carroll model, which will hopefully assist those familiar with cross-battery methods in translating information to educational personnel in the school system. The third edition also provides an update of rapid changes in the areas of the school neuropsychology and CHC integrated model, updates to classification systems, and research particularly in areas of executive functions and processing speed. The report-writing chapter reflects the movement in the field to provide defensible but readable reports, and directs clinicians in a step-by-step manner to create a record for outstanding comprehensive evaluations. Drs. Miller and Maricle have also updated the tables of numerous new tests and assessment measures to reflect a commitment to using the best current tools of the trade within a practical model. All in all, the additions to the third edition are abundant and accurately reflect the rapidity and breadth of progress in school neuropsychology in the past five years.

The guidance in this book is not elementary, it is complex and will require much effort on the part of the reader to assimilate and translate into everyday practice. Drs. Miller and Maricle emphasize the need for formal training, appropriate supervision, and ongoing education. They also infuse the text with an exceptional level of competency, enthusiasm, and excitement for the subject matter that is contagious and motivating. It is gratifying to acknowledge that the third edition of the *Essentials of School Neuropsychological Assessment* stands alone as the most comprehensive and efficient reference guide for practicing school neuropsychologists.

We can say with certainty that this third edition will be a welcome addition to the school psychologist's library and the easiest way for busy clinicians to stay up-to-date with the breadth and depth of neuropsychology needing to be translated in to everyday practice!

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SERIES PREFACE

In the *Essentials of Psychological Assessment* series, we have attempted to provide the reader with books that will deliver key practical information in the most efficient and accessible style. Many books in the series feature specific instruments in a variety of domains, such as cognition, personality, education, and neuropsychology. Books like this *Essentials of School Neuropsychological Assessment – Third Edition*, focus on crucial topics for professionals who are involved with any aspect of assessment and intervention with school-age children. For the experienced professional, books in the series offer a concise yet thorough review of a test instrument or a specific area of expertise, including numerous tips for best practices. Students can turn to series books for a clear and concise overview of the important assessment tools, and key topics, in which they must become proficient to practice skillfully, efficiently, and ethically in their chosen fields.

Wherever feasible, visual cues highlighting key points are utilized alongside systematic, step-by-step guidelines. Chapters are focused and succinct. Topics are organized for an easy understanding of the essential material related to a particular test or topic. Theory and research are continually woven into the fabric of each book, but always to enhance the practical application of the material, rather than to sidetrack or overwhelm readers. With this series, we aim to challenge and assist readers interested in psychological assessment to aspire to the highest level of competency by arming them with the tools they need for knowledgeable, informed practice. We have long been advocates of “intelligent” testing—the notion that numbers are meaningless unless they are brought to life by the clinical acumen and expertise of examiners. Assessment must be used to make a difference in the child’s or adult’s life, or why bother to test? All books in the series—whether devoted to specific tests or general topics—are consistent with this credo. We want this series to help our readers, novice and veteran alike, to benefit from the intelligent assessment approaches of the authors of each book.

Essentials of School Neuropsychological Assessment – Third Edition is a book which provides up-to-date resources for assessment specialists who integrate neuropsychological principles into their professional practices. In this third edition, the esteemed authors have provided an updated classification of 100 commonly used tests of cognition, achievement, and neuropsychological functions into an easy to understand model. This edition will be an excellent resource for graduate students and established practitioners.

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Thank you to our colleagues whom we have had the pleasure of working with on their Texas Woman's University's School Psychology Doctoral Program and/or Dr. Miller's School Neuropsychology Post-Graduate Training Program. We continue to be inspired by our graduates' professionalism and passionate commitment to school neuropsychology.

