
Michael S. Matthews
UNC Charlotte

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Thinking back on some of the hostile comments that colleagues and I have received from editors and reviewers when we try to submit manuscripts on gifted education topics outside the narrow confines of our field, it is good to see high-quality work related to giftedness being published by a large, mainstream organization like APA. Thompson and Subotnik have brought together an impressive cadre of measurement experts to contribute chapters to this edited volume. As Robert Sternberg’s introduction points out, recent years have seen remarkable growth in the number of methodologists who also work in gifted education, so now is a propitious time for the publication of a book on this topic.

Three sections organize the book’s 12 chapters into Advanced Techniques (including factor analysis, effect sizes, confidence intervals, and mixed methods); Complex Analyses (including structural equation modeling, hierarchical linear modeling, and missing data imputation); and Reflections (including three commentary chapters by gifted education leaders Paula Olszewski-Kubilius, Tracy & Jennifer Cross, and Betsy McCoach). Typesetting is clear and is nearly free of errors, though one error on page 218 incorrectly identifies the SAT used in talent search as the Stanford Achievement Test. As many members of this SIG probably are aware, the SAT is now the complete name testing as the Scholastic Assessment Test. As many members of the SIG also know, the SAT was recently written by the author of a different chapter. A related issue that struck me is that authors of a few of the technical chapters appeared not to have performed even a cursory search of the gifted education literature. These lacunae are troubling, given the editors’ goal of bringing together methods experts and gifted education topics. Some authors, such as Kline in the chapter on structural equation modeling, seem to have done a far better job than others in this respect. In the two chapters mentioned in the previous paragraph, one contained no citations for gifted articles, while the other included only two citations of a single researcher on gifted education topics.

Discussion of effect size reporting in two different chapters completely neglects to mention the SIG business meeting session on this topic presented at AERA in 2006, or the associated paper published in the Journal of Experimental Education (Matthews, Gentry, McCoach, Worrell, Matthews, & Dixon, 2008). Authors of another chapter neglect to cite an important book on their topic that was recently written by the author of a different chapter. A central rationale for this book is the belief there is substantial room for improving gifted education research, and I agree that this is important; but I wish that the stronger research that has been done in gifted education had been considered by more of the book’s contributors.

My point of view is as a researcher in gifted education who has an interest in measurement, though measurement is not my primary training or focus. From this perspective, I found most of the content to be appropriate for someone at my level of expertise. Most chapters also provide good suggestions for more in-depth reading on a given topic, which is helpful because these methods are in most cases too complex to be contained neatly within the confines of a single book chapter. Measurement experts are still relatively rare in the gifted field, so with the possible exception of those few scholars among us who may already know a lot about these techniques, I believe this book is targeted at an appropriate level for most researchers working in gifted education. Several of the chapters offer step-by-step instructions for generating output using hypothetical data sets their authors have provided, so possibilities abound for self-directed study.

While many important topics are included, it would have been nice if the book had been a few chapters longer to include other salient topics such as item response theory, Tobit models to correct for ceiling effects, and various quasi-experimental designs. Also, a few of the chapters come across as being substantially similar to these authors’ writings published elsewhere. Self-citations were extremely prevalent on occasion; for example, in one chapter 44% of citations were to works authored or coauthored by its first author, while the self-citation rate was 42% in another chapter I examined. While the high degree of self-citation speaks to these authors’ great expertise on their chosen topics, it would be helpful to see citations from other scholars who also have made important contributions on a topic.

Though I have mentioned some of my impressions about aspects of this book that might have been done differently, I do not want to convey the impression that I did not like it; I did, and I also think this book would be appropriate as an assigned text for an introductory graduate course on research methods or, especially, on research methods in gifted education. I found the chapter on HLM by Roberts, Nimon, and Martin particularly helpful because it walks the reader through an example that illustrates the difference between a repeated measures ANOVA analysis and a multilevel repeated measures analysis using the same data. These authors offer clear step-by-step instructions (including the simulated data set and associated code for running the analysis using the R statistical software), and they use this example to point out specific advantages of the multilevel model in interpreting these and other data. These advantages include the ability to analyze data having unequal cell sizes (such as n = 2 gifted and n = 24 non-identified students), and the ability to consider different rates of change over time among different groups.

Several other topics included in the book also offer keys to improving the sophistication of research in gifted education. The chapter by King and Dates on methods for handling missing data also walks the reader through an example illustrating less effective and more effective methods for handling missing data, and the chapter by Kieffer, Reese, and Vacha-Haase on reliability...
generalization promotes a conceptual understanding of this important yet often-overlooked aspect of educational research. Henson’s chapter on exploratory factor analysis also provides a hypothetical data set and walks the reader through its analysis using SPSS v.15. Each of these chapters makes a clear and compelling case for the importance of understanding their topic in order to improve our research in gifted education.

Perhaps the most frequent conversations I have had related to this book concern the chapter by Thompson on Q-technique factor analysis. Readers I have spoken with seem to be either intrigued or repelled (or perhaps a bit of both) by this approach, which Thompson traces to the work of Cattell in the 1960s. This chapter also illustrates the role of judgment calls in implementing advanced statistical methods, as Thompson’s preferred analytic approach to factor analysis differs in some details from that suggested by Henson in the other chapter that considers factor analysis methods.

Commentary chapters conclude the book with perspectives from scholars inside gifted education. Each considers what they have learned from reading the chapters in the first two sections, and offers possible future directions for their own work in gifted education based on this new knowledge. These examples may be especially helpful for readers who are trying to frame how these more sophisticated methods and understandings might inform their own scholarly agendas.

In summary, this is a useful book that will appeal to scholars in gifted education. Its primary obstacle is the failure of some authors to identify studies within the gifted field as examples, and of course such variability in presentation across chapters is an issue shared to some extent by all edited volumes. Readers who already are sophisticated methodologists may find only a few topics that are new to their experience, but they likely will gain some interesting new perspectives. For those of us who are not methods gurus, but simply researchers trying to make sense of our observations about highly able children, there will be a lot here to think about and to integrate into our scholarly practice.

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