*Quantitative Data Analysis Using Microsoft® Excel: A School Administrator's Guide.* Gerard Babo and Leonard Elovitz. Ypsilanti, Michigan: NCPEA Publications, 2015. 226 pp., 10 Chapters.

Reviewed by Theodore Creighton, Professor Retired, Virginia Tech.

*Target Readership*

Though authors Babo and Elovitz wrote their book for those who work in our nation's schools (superintendents, principals, curriculum directors, and teachers), this book may also be useful to those of us who teach the preparation of principals and superintendents in our university graduate programs.

Babo and Elovitz begin by identifying their primary goal: To provide graduate students with a basic analytical set of skills to assist them in exploring, analyzing, and making sense of data using a conventional and relatively simple computer software program (Microsoft Excel). The authors estimate that 99% of school practitioners have free access to Excel, but many have not even used the simple spreadsheet.

*Format*

In the *Introduction*, after presenting a broad view of quantitative data analysis (including terminology and concepts), the authors state up front they use Microsoft Excel as the tool of choice. They further suggest though researchers (and their doctoral students) use the Statistical Package for the Social Sciences (SPSS) for their analyses and dissertation studies, school leaders do not often conduct such high-level research and are more concerned with such analyses as curriculum reviews, program assessments, writing reports, and using data to assist in running and administering schools or school districts with action-based research. In addition, many school administrators are already familiar with Excel and will find the use of the statistical functions easy to incorporate into their individual skill sets.

If your knowledge of Excel is very limited, you might want to start with *Chapter 1*, where authors provide some Excel basics to get you going. Additionally, they include a section on how to code qualitative data for quantitative analysis. If you are already an Excel user and have a working knowledge of quantitative analysis, browse or skip this chapter and move on to what you want to learn about. To assist you they have enclosed what we are calling an Index of Statistical Terms and Excel Functions in the Appendix. If you want to learn how to do a t-test for example, one can simply check the Index, which references the specific page number.

*Chapter 2* discusses some elementary concepts in descriptive data analysis, including frequency distribution, relative frequency, cumulative frequency, percentile rank, central tendency (mean, median, and mode) and graphing or charting data.

In *Chapter 3*, authors extend the concepts of descriptive data analysis and the Excel operations to determine standard deviation or how observations (scores) vary across a

population. They also include a section on sorting and analyzing a large data set from a typical public school. This is followed by a little bit of probability, the normal curve, and the calculation of standardized scores in *Chapter 4*.

The authors address the comparison of means for two groups that are either independent of each other or from the same group of subjects by using Excel to perform t-tests in *Chapter 5*. This is logically followed by the comparisons of more than 2 groups by using Analysis of Variance, better known as ANOVA, in *Chapter 6*.

*Chapter 7* is devoted to exploring relationships. To this end, the authors utilize Excel to develop scatter plots and calculate the Pearson *r* and Spearman Rho correlation coefficients. This is followed naturally by linear relationships and predictions using Excel to run simple bivariate regression and multiple regression in *Chapter 8*.

Finally, the authors display cross tabulation tables and go into a brief exploration of nonparametric statistics by looking at the calculation of simple Chi-square (goodness of fit) and *r* X k Chi-square in *Chapter 9*. The last chapter of the book, *Chapter 10*, introduces the reader to how to use Excel as a large database, which might be extremely beneficial for many school administrators.

*Companion Website*

For those who have no experience with Excel, the authors provide easy to follow directions and videos on a companion Website to help the reader through. This website (http://www.ncpeapublications.org/index.php/ncpea-press-author-showcase) is open access, and includes author/narrated videos for each of the statistical examples provided in the Chapters 1-10. One can even access the videos and review each BEFORE purchasing the book. Although the videos have been recorded using Excel on the Windows platform, the authors are currently working on another set of videos recorded using the Macintosh version of Excel. Students and professors will be able to use the version of their choice.

*What the book IS NOT?*

It is important to stress what this book is not. It is not a standard statistics textbook and in no way attempts to be. Yes, authors do include some statistical vocabulary, some equations, and some basic theoretical concepts. However, in no way do they go into any depth for any one of the many statistical processes covered. The book introduces and teaches the reader a number of quantitative analysis functions using Microsoft® Excel in order to explore and analyze his/her data. In the process, the authors introduce the reader to a host of different statistical analyses by actually doing them using real school data.

Additionally, this is not a textbook on research methodology and/or design. In using real school data, authors do propose some ideas for analysis but in no way do they suggest that the methodology used would be appropriate for ensuring external validity or results that could be generalized to larger populations. However, many of the analyses used in

the book might be appropriate for local action research projects where the user is attempting to find out what works or doesn't work at a very local level and has no interest in generalizing the results to a larger population. . I strongly recommend that this book be used in conjunction with a more formal text, or as a book to help master the use of Microsoft Excel

*Special Note*

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