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## Book Review: Understanding and Applying Research Design

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**Understanding and Applying Research Design. 2013. Martin Lee Abbott & Jennifer McKinney. John Wiley & Sons, Inc., New Jersey, United States of America. (425pp). (Paperback) (\$103.49 ) ISBN 978-1-118-09648-2.**

Reviewed by Mercy Nduku Ngungu<sup>1</sup>

*Understanding and Applying Research Design* is written by Martin Lee Abbott and Jennifer McKinney. The authors employ an in-depth approach in the structure of the book. The book is divided into four parts with short illustrated exercises. The first part examines the premises of research. The second part discusses the procedures of research. The third part explains designs of research and the fourth part: statistics and data management. SPSS screen shots of menus and tables are used to further illustrate the concepts discussed. In the introduction, the authors highlight the importance of good research design and solid analytical skills in the advancement of social scientific research. Both authors have taught research methods and statistics courses at university level for many years. They are also accomplished researchers with published articles and books.

The authors discuss hindsight bias and conforming evidence and how they affect research. Research findings are often assumed to be valid. However, authors warn of making hasty conclusions based on very little evidence. Abbott and McKinney point out that our view of the world is influenced by a range of variables such as class, gender, education, religion and political affiliation among other variables. The authors however, caution that there is need to critique/question research findings responsibly. Most importantly, critiquing research findings responsibly and this includes asking the appropriate questions and having the skills to assess how to answer those questions, not just attacking other perspectives just because they happen to be different. The authors discuss the errors arising from social location, inaccurate observation, over-generalization and selective observation. These, the authors note, hinder our ability to see the world as it is, rather than what we understand or experience.

Abbott and McKinney examine theory and hypothesis in social science research. The authors observe that scientific method provides a systematic way of understanding data. The scientific method ensures as much objectivity as possible in how we think about, observe and interpret the world. The authors examine how induction and deduction are employed in research.

For Abbott and McKinney research designs give social scientists the tools that help determine what observations to in testing hypotheses. The four basic research designs cited in the book are surveys, experiments, field research and secondary sources – which include historical documents, aggregate data and content analysis. The authors also note that it is not uncommon for researchers to combine methods in order to triangulate their data. According to Abbott and McKinney research designs fall into two basic types: quantitative and qualitative. Quantitative designs rely primarily on describing or measuring phenomena in quantity. Quantitative designs include surveys, aggregate data and experiments. On the other hand, qualitative designs rely on the quality of description. Qualitative designs include content analysis.

One of the tenets of research is reliability and validity. When evaluating research designs, two issues are important to assess: reliability and validity. Reliability is the extent to which a

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given measuring instrument produces the same result each time it's used. It is about consistency. Validity, on the other hand is about accuracy. The authors examine the different types of research. While pure research is performed solely to "advance knowledge" or to develop theoretical understanding, applied research focuses on the actual real-world problems in a field of study. Evaluation research is one specific type of applied research to determine whether a specific intervention was successful according to a set of criteria. Action research is applied research aimed at providing insights and solutions to specific issues in a given context.

Ethics in research are also discussed. Abbott and McKinney explain that while the researchers and the public at large have a right to know about social phenomena, as individuals and groups within society, each every individual has a right to their privacy. Professional social scientists are required to be honest, fair and respectful of others in the course of both research activities as well as everyday professional activities, adhering to the highest scientific and professional standards. The expectation is also that professional researchers have a responsibility to their community, by making public the knowledge they learn through their research for the public good.

Censuses and samples are also discussed in the book. Social scientists are often concerned with populations. Surveys are also discussed in the book. The three types of surveys discussed are: face-to-face interviews, telephone interviews and questionnaires. Experimental design is also explored. The experimental settings include: laboratory experiments, field experiments, natural/disaster experiments and survey experiments.

The authors (Abbott and McKinney) examine using SPSS, a powerful statistical software program. Generally, SPSS is a large spreadsheet that allows the researcher to enter, manage and analyse data of various types through a series of drop-down menus. They acknowledge that several statistical software packages are available for managing and analysing data, however, in their experience SPSS is the most versatile and responsive program. Abbott and McKinney to use the statistical procedure of chi square to analyse the differences among the data in contingency tables to determine whether the patterns of difference are different enough to be considered statistically meaningful. In the book, contingency tables and chi-square results are used because they are among the most versatile statistical procedures available. Chi square can be used with any level of data, both in descriptive and inferential analyses and is a straightforward way to represent patterns in the data. In the last part of the book, statistics and data management is looked into. Writing the statistical research summary, the nature of inferential statistics, use and functions of SPSS, using SPSS to recode for *t* test, descriptive statistics and *z* scores are discussed.

The book is a good read for researchers; not only social scientists but researchers in other disciplines as well because the tenets of research are the same. The detailed illustrations and examples used give a better understanding of the basics even to a layman.