Understanding Quantitative Design: A Resource for Qualitative Researchers

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Abstract
Quantitative Research for the Qualitative Researcher is a concise text written for students from a qualitative orientation. It provides connections between both quantitative and qualitative research processes, and helps students understand quantitative research design more completely. It highlights the structure and purpose of research design so students understand how to create and carry out effective research projects.

Keywords
Quantitative Research, Qualitative Research, Research Design, Evaluating Research Reports, Beginning Researcher

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Quantitative Research for the Qualitative Researcher is a concise text written for students from a qualitative orientation. It provides connections between both quantitative and qualitative research processes, and helps students understand quantitative research design more completely. It highlights the structure and purpose of research design so students understand how to create and carry out effective research projects. Keywords: Quantitative Research, Qualitative Research, Research Design, Evaluating Research Reports, Beginning Researcher

Quantitative Research for the Qualitative Researcher is a concise supplemental text for both qualitative and quantitative doctoral students and beginning researchers. It serves as a guide to “promote understanding and appreciation of the quantitative tradition in the social sciences especially for those who are most familiar with the qualitative tradition” (p. xiv). The book focuses on providing a conceptual explanation of quantitative methods and identifies the commonalities within both quantitative and qualitative methods. This allows the reader to understand where both methods intersect, so the researcher is better equipped to decide the right method to use. “By providing a clear description of concepts underlying quantitative methodology, we hope to promote openness to this tradition and the recognition that the appropriateness of using a particular method depends on the questions asked and not a ‘posture’ that has come to characterize practitioners in each tradition (Guba, 1981, as cited in O’Dwyer & Bernauer, 2014, p. xv). This is what the text sets out to do – provide a framework for understanding the similarities and differences between qualitative and quantitative designs. It is not a comprehensive text for either qualitative or quantitative research designs, but rather a text that provides foundational knowledge for both traditions.

There are 4 key features of this book that set it apart from other supplemental quantitative texts. First, the text provides the conceptual and practical explanations of quantitative research to help the readers that are not predisposed to mathematical concepts. Second, connections are made to qualitative traditions in each chapter to clearly show how the concepts relate. Third, six published journal articles are referenced throughout the text to provide real world examples of different quantitative methods. Links to the articles and summaries are described to help the reader understand the specific elements of a particular quantitative research design. Lastly, the appendix contains guidelines for evaluating a quantitative research reports. This is especially helpful for those not as familiar with the quantitative research design.

The text is divided into 11 chapters and these chapters are divided into a total of 4 sections. Section 1 titled, “Research in the Social Sciences: Qualitative Meets Quantitative,” is made up of the first 3 Chapters of the book. Chapter 1 focuses on understanding the purpose of research from a qualitative or quantitative perspective. Chapter 2 discusses the purpose and characteristics of research from a qualitative perspective, and Chapter 3 begins the discussion on quantitative research design outlining its strengths and weaknesses. By the end of Section 1, the reader is more acquainted with quantitative concepts and terminology (over 21 key terms are defined) and an understanding of the paradigm differences between qualitative and quantitative traditions.
Section II, titled, “The Sine Qua Non for Conducting Research in the Quantitative Tradition,” focuses on the elements of designing and conducting quantitative research projects. This section is made up of Chapters 4–6. Chapter 4 launches into the purpose of generalizability, population, and sampling decisions. Three published journal articles are presented to highlight how different sampling procedures were carried out. Chapter 5 outlines measurement and instrumentation in quantitative research design. Three published journal articles are discussed to help the reader understand the measurement and instrumentation decisions made in three different studies. Validity and reliability is also covered in this chapter. Chapter 6 focuses on internal validity and common threats to internal validity, and three published journal articles are presented on how internal validity was handled.

Section III, titled, “Research Design and Data Analysis in the Quantitative Tradition,” is made up of Chapters 7–10. This section focuses on the most common quantitative research designs and data analysis procedures used in research projects. Chapter 7 details nonexperimental research designs and Chapter 8 explains experimental designs. Both of these chapters outline the necessary steps in setting up and conducting research using the specific design. Strengths and weaknesses are covered as well as threats to internal and external validity for each design. Again, three published journal articles are discussed in both chapters to provide examples for the reader. Chapter 9 introduces descriptive analyses as a method to analyze data, while Chapter 10 focuses on inferential analyses and describes the most common types of inferential analyses in social science research. Three published journal articles are discussed in both Chapter 9 and 10 providing examples of both descriptive and inferential analyses.

Section III titled, “Reconciling the Paradigms” is the last section of the book, and contains Chapter 11. The last chapter of the book discusses the common threads between qualitative and quantitative research designs, and touches on the possibility of using a mixed method design.

Overall, Quantitative Research for the Qualitative Researcher is an easy text to follow and provides conceptual terms to understand quantitative research more in depth. The authors stress that good research requires many decisions and the subsequent research design should complement the research question. You need the right design to answer your question and to produce quality work. The text provides clear examples and references to real world studies that graduate students would find very helpful in understanding the common elements in quantitative research. Additionally, beginning researchers will benefit from deciphering between the different quantitative research designs, how to go about setting up the research, and the subsequent analysis techniques to help make sense of the data. Personally, I see a direct connection of the books content to my work in higher education. I teach research methods courses to doctoral level graduate students and feel that this book would be an excellent supplemental text to my courses. Students often struggle with quantitative material and this book not only breaks down the quantitative process, but explains the bridge or connection to qualitative research design in very simple terms. The implication of this book’s content crosses various disciplines beyond psychology, education, sociology, or health care. In short, whether you choose a qualitative or quantitative approach to research design, the overall purpose is to discover new knowledge by using a systematic approach. Both qualitative and quantitative designs share that common goal.

References

Author Note

Dr. Bronson received her Ph.D. in Urban Education, specializing in Administrative Leadership from the University of Wisconsin-Milwaukee. She earned her Master’s in Education from DePaul University and her Bachelor’s degree in Psychology from Bethany College.

Carroll is an Assistant Professor in the Doctoral Leadership Department, and teaches many different research methods courses to first through third year doctoral students. Dr. Bronson’s areas of expertise and research interests include small school reform, leadership & organizational change, and virtual teaming. She has presented locally, nationally, and internationally at research conferences on these topic. Carroll has also published several articles in referred publications.

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