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Review:

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Ann Lewins & Christina Silver (2007). Using Software in Qualitative Research: A Step-by-Step Guide. Los Angeles: Sage, 283 pages, ISBN 978-0-7619-4923-7, $ 44.95

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Abstract: Qualitative researchers encounter a diverse plethora of software packages for analyzing text and visual data. This book is designed to help potential users understand the benefits and shortcomings of three main and four additional commonly used such software and based on this understanding, make an informed choice of a software that best fits the needs of particular projects as well as preferences of individual researchers.

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1. Goal and Background

A major strategy in all methodologies of qualitative research is analyzing texts that come from interviews, documentation of face-to-face (such as staff meetings) or written (e.g., web-based) interactions, and, although to a lesser degree, visual images, in order to understand processes and meaning making by people of their lived experience (PADGETT, 2008). Such analysis can be done manually with the traditional index cards and multiple colored pencils or with the use of software (WEITZMAN, 1999) as demonstrated in the growing number of researchers who report the use of software packages in their work (e.g., BERGER & ROSENBERG, 2008; LIEBOW, 1993). Some even view software packages as "complex virtual environments for embodied and practice-based knowledge making" rather than "mere tools for coding and retrieving" (e.g., KONOPÁSEK, 2008, p.1); by providing the means for effectively storing, managing, classifying, organizing, linking and commenting; i.e., they allow researchers to think visually and thus make meaning of the data. [1]

Discussions relative to using software in qualitative research addressed issues of the intellectual process involved (KONOPÁSEK, 2008), classification of programs by their functions (e.g., GIBBS, FRIESE, & MANGABEIRA, 2002), debates about their compatibility with the principles of qualitative research (e.g., ROBERTS & WILSON, 2002), and, their merits and shortcomings relative to diverse qualitative methodologies including discourse analysis (MacMILLAN, 2005). [2]

The past two decades have witnessed a growth in the menu of software programs, often leaving the researcher, and especially the novice who tries to master the principles of a qualitative methodology and a technology to help apply it concurrently, confused and puzzled relative to choosing the software that best fits their specific project. This book written by Ann LEWINS and Christina SILVER offers information and a productive review of some of the most commonly used software programs to permit an educated comparison between them, weigh their strengths and weaknesses, and make an informed choice. [3]

The book focuses on in-depth analysis of three popular packages: ATLAS.ti 5, MAXqda 2, and QSR NVivo 7. In addition, information relative to the features and functions of four packages (HyperRESEARCH 2.6, QDA Miner 2.0, QUALRUS, and TRANSANA 2) is briefly reviewed (Appendix C), so that the reader can decide which package appears to better fit their needs and launch a full exploration of the relevant package. [4]

The writers of this text are best positioned to offer this knowledge. Both have served on the non-commercial Computer Assisted Qualitative Data Analysis Project, which routinely publishes reviews and comparisons of software (e.g., KOENIG, n.d.). In this capacity, they have reviewed, trained, and consulted numerous users and in their writing address the basics of each program as well as issues that their customers raised and struggled with. [5]

In addition to the full version, they published a shorter 47-pages version (LEWINS & SILVER, 2006), which can help potential users get an initial sense of the packages reviewed and the reviewers' approach. However, to get a full sense of the nuances and intricacies, it is strongly recommended to read the full version. [6]

2. The Structure and Content of the Book

Because the goal of the authors is to allow readers to compare packages, they provide a "horizontal" comparison of the way in which each of the packages addresses every individual step in qualitative analysis. Thus, they go step-by-step through the phases involved in qualitative analysis from preparing data to exploring it, coding, retrieving, managing and interpreting it. For each of these steps, they discuss the nature, goals, challenges and processes involved, followed by an explanation how the specific step is performed using each of the packages. For example, if the step under discussion is how to get ready for entering data, the writers first explain which actions need to be taken and then review and illustrate how one takes these actions when using ATLAS.ti 5, MAXqda 2, or QSR NVivo 7. They also provide different demonstrative exercises and discuss possible scenarios regarding each step in each package. Based on real examples that researchers encountered, the writers provide a concrete "this is what may happen and this is what you can do under such circumstances" description. [7]

The book comprises 13 chapters. The first chapter orients the reader to all the packages reviewed in the book and lays the groundwork for the rest of the

chapters by providing a framework for the analysis, introducing a classification of the packages, reviewing different tasks involved in analyzing qualitative data, and providing a "road map" for the following chapters. The second chapter discusses diverse general and program-specific aspects of preparing data for analysis with the help of the programs reviewed. This includes suggestions regarding the format for transcription including "Do's" and "Don'ts" (e.g., a recommendation regarding the best way to identify participants in interviews and focus groups to facilitate retrieving them later in the process of the analysis and efficient ways of identifying participants who are interviewed individually and in focus groups). Chapter three focuses on tasks to be performed prior to the actual analysis such as creating and naming a project and making arrangements for working from different locations (such as home and office computers). Chapter four reviews some of the tools provided by the main packages (e.g., frequency tools), issues of hyperlinking, annotating, and exploration of multimedia data. Chapters five through seven focus on coding and discuss different approaches to coding (e.g., inductive, deductive or a combination of the two), types of coding (e.g., open, axial and selective coding), principles of coding, coding schemes and frames, and clearly demonstrate how to perform coding tasks using each of the main packages. The eighth chapter explains and provides hands-on information about retrieval of coded material. Chapters nine through twelve offer practical tips for the process of analyzing the data, writing and using field notes, journals and memos. It also introduces the process of structuring a conceptual model by linking codes, mapping ideas about the relationships among codes and their meanings and guides the reader in organizing, different types of qualitative data, and, exploring and interpreting them. The concluding chapter summarizes the rationale for the book, challenges faced in the process, and lessons learned. It also discusses in historical context some concerns that have been raised relative to potential effects of using software in the context of qualitative research (e.g., some have raised questions regarding the possibility that introducing a software may compromise the closeness of the researcher to the data). [8]

Each of the chapters concludes with a brief summary and useful comparative comments relative to the ways in which the three aforementioned main packages addresses the issues covered in the chapter. [9]

To give an insight into the kind of comparison the authors did I review, as an example, Chapter 7, which focuses on coding. In general, coding is a major task in all qualitative analysis because this is the process by which the researcher identifies which of the data appears to be important for learning about the lived experience of and meaning-making by participants. Codes become the building blocks for the analysis and interpretation of the data. [10]

The authors describe the three common ways of creating codes: creating apriori codes (which can be based on available theoretical, empirical and/or clinical knowledge), creating and naming codes as they emerge from the data, and creating in-vivo codes (i.e., identify a direct quote in the data as a code). Then the authors explain the technique of applying codes to text, i.e., how to identify the text of interest and give them the appropriate name (i.e., code them) from the list

of codes created before or create for them a new name (i.e., add a code). They explain how the codes are visible in each of the programs. Following is a discussion of possibilities for renaming codes and reorganizing the coding scheme (e.g., by collapsing two codes that start to appear similar as the coding process progresses). [11]

Software-specific variations are described. For example, one software allows easy "drag and drop" coding and codes are visible in the margins of the document. The authors give specific instructions as to where to go to in the menu, which option to click and in what order. Another software package allows hierarchical or non-hierarchical coding. Again the authors explain how to perform each, how to create sub-codes, list codes and save them. The third software uses somewhat different language for codes. The language is explained and again, a step-by-step process of generating codes from the text, applying codes from the list created before, defining and listing codes, and changing the coding of specific text is clearly illustrated. Finally, the software are compared on aspects such as ease of flicking between options, the way codes are viewed, degree of interactivity and flexibility, available information relative to the frequency in which text was coded using a specific code, and the ease of creating sets of codes. [12]

Because qualitative research is so diverse, no one software package is "better" than others. The main challenge is to determine which package offers the best solution for the needs of a specific researcher relative to a particular project. [13]

3. Strengths and Weaknesses of the Book

This book is an important and updated addition to the scarce literature relative to considerations for choosing a software package to support the analysis of data in qualitative research (e.g., C.A. BARRY, 1998; L.R. BARRY, 2004; DRISKO, 2004; TESCH, 1990). It equips the reader with a comprehensive view of each program including technical basics and provides clues to the language of each program, a productive comparative critique of what one can and cannot expect to accomplish using it, evaluation of the degree of each program's flexibility in conducting various tasks of qualitative analysis, and detailed step-by-step information for using each of the three main packages. The text includes visual representation of menus and pages that the user may encounter during the work with the software and guidance relative to strategies for navigating them, making the diverse software programs become "vivid" and friendly, which is potentially helpful especially for the "technological-challenged" user. Furthermore, the book addresses issues that are common to many situations and offers ideas relative to critical and selective use of the packages as well as strategies to help tailor solutions to the challenges of individual projects. A list of support resources is provided (Appendix D). In addition to guiding the use for individual users, examples of team projects are presented (Appendix A), their unique issues are highlighted, and creative ways for addressing them are offered. [14]

The authors do a good job in helping readers know about possibilities, strengths, and limitations of each program, thus providing readers with the necessary

information to choose the one that allows them to work within their comfort zone. Furthermore, they provide helpful information about "tailoring" the chosen software to best address challenges unique to a project. [15]

One strength of the book is its compatibility with the traditional spirit of qualitative research, which embraces diversity in viewpoints and flexibility in conceptualizations and methodologies. The writers demonstrate openness and support to individual researchers' preferences beyond the "objective" features of the reviewed packages and their respectful attitude and encouragement for researchers to perform within their comfort zone rather than trying to promote "a one-size-fits-all best solution" approach. Another strength is the hands-on approach so that the reader can use the book both to make an informed selection of the programs that best fits the project as well as use it after having made the choice as a road map for actually conducting the analysis. Finally, the clear, concise, and practical language as well as the numerous pictures of how certain menus would look and indications of locations for individual operations on the menu will help any confused, technologically anxious user feel more competent in using technology for the analysis. [16]

The writing is sometimes repetitive, and sometimes a somewhat limited rather than broader definition of concepts is used (e.g., content analysis on p.7). However, the book's benefits for those who wish to use software to analyze their material significantly outweigh its few shortcomings. [17]

I personally intend to recommend this to students in my doctoral qualitative research methods class and especially to doctoral candidates who conduct qualitative studies for their dissertations as well as to colleagues who often seek my advice relative to conducting qualitative analysis. [18]

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