Preface

ENHANCING QUALITATIVE AND MIXED METHODS RESEARCH WITH TECHNOLOGY

Introduction

The evolution to qualitative and mixed methods research in a number of fields was initially built on the understructure of experimental research in the “hard sciences,” with the sense of the simple pre-condition, a test intervention, and a post-condition, as compared to the control condition. Researchers in the social sciences and other areas started to ask ambitious questions that could not be answered by experimental research because of research ethics, costs, and complexity. They were left with having to go with non-experimental research achieved by deep empirical observations of the world. The research tools would have to be humans. With their limited perception and limited cognition and their many subjectivities, they would be studying a world that they were part of and immersed in. In this sense, humans are both the researcher and the subject of study, with complex interrelationships and situated contexts in which the research is conducted. How could they create insights that would have relevance and transferability? How could they avoid falling for spurious effects and reified ideas without equivalencies in the real world? How could they know they were on the right path and not on a blind alley?

At this juncture, researchers asked how they could instill rigor in a messy process where certain phenomena would have to be abstracted and isolated from a complex context, analyzed, generalized, and then reinstated in a complex world to have meaning. Early scientists focused on universal and transferable laws that could be abstracted from the Newtonian world but later moved to lesser and more modest forms of knowing. There would not be the pursuit of the once-and-for-all sorts of knowledge. There would be no power of the absolute last word. All findings would be couched, to some degree, in specific space-time. Readings of theorists in the 20th century show applications of mathematical reasoning and formal logic and syllogisms to express hypotheses and their tests based on empirically acquired evidence; they show the core importance of deeply specified language (and nuanced uses of qualifiers and limitations) and defined terminology to limit inexactitude and minimize error. Certain assumptions of the research were defined, with some relegated to metaphysics (such as the assumption of the existence or non-existence of causal relationships in the world) and others to the unknowable. Initial theorizing, not surprisingly, offered purist approaches: qualitative research with a relativist worldview vs. quantitative research with a positivist worldview.
Theorizing has always been a critical part of research. Whatever the inspiration—an observation of the world (in vivo) or the lab (in vitro), a hunch, interpretations of published works—theories proposed ways to understand particular phenomena in the world. Researchers would create methods to test their ideas in the real with experiments, empirical observations, and other data. Researchers pit competing interpretations against each other to see which theories had the most potent explanatory power for a complex world. In qualitative and mixed methods research, there is high importance put to deep thinking about particular phenomena in the world. There is hypercritical analysis of the definitions of terms, the descriptions of mechanisms in a model, the implications of theorizing (to second- and third-order effects, and beyond), and the design and application of research methodologies. Theories imbue the definitions of variables. They inform understandings of what comprise “facts” and even how phenomena are “measured.” In a qualitative sensibility, everything is relativistic and affected by the subjective human observer, even empiricism which involves observations of the world. All observations are distortative and under-represent reality.

In the past several decades, since Miles and Huberman’s classic work on qualitative data analysis, there has been progress in honing and advancing qualitative research methods. These methods include action research, portraiture, ethnography, oral history, experience sampling/ecological momentary assessment, autoethnography, interviews, surveys, Delphi studies (including modified Delphi and modified e-Delphi studies), case studies, hermeneutics (text interpretation), qualitative meta-analyses, and other research techniques. These and other qualitative methods originated from human engagements with a complex world. After all, in some domains, qualitative and mixed methods research are the only ways to query the world because experimentation may be infeasible or excessively expensive. Further, theorizing in a range of fields rejects a positivist, measureable, universalist, and objectivist approach to the world.

While qualitative or quantitative purists (absolutists) would suggest that there are only certain ways to pursue particular research (what one leading researcher calls “methodological strings attached”), the maintenance of purely one approach or another has been blurring in practice. While qualitative approaches tend to be more inductive and quantitative ones more deductive, the practices that have evolved from professional engagement with the world, reflection, and theorizing tend to blur such artificial lines. For all the power of pure theorizing, at some level, all research has some degree of interface with the world and application for knowing and decision-making. Qualitative research does not only exist in a relativist realm; some qualitative approaches are very much in the realist school of research and suggest some sense of ground truth. Mixed methods are synthesized theoretical and methodological approaches which require both intertwined qualitative and quantitative research streams to address particular research questions; one method may be more predominant with the other more supportive or supplementary. Multi-methodology involves the integration of multiple research methods to attain research-based understandings.

The thinking now is that qualitative and quantitative approaches—melded broadly as “mixed methods” or “multimethodology”—are complementary and often integrated. Clean lines of logic from theory to practice are merely conceptual. In the real world with complex ways of discovery and learning, by necessity, there have to be mixed techniques without artificial constraints. This is not to say that research methodologies are any less contested than they have ever been. Some argue that the mere existence of particular research methods involve meta-critique of other approaches. Indeed, professional reputations are built on methodologies and discoveries. Whether research gets funded or a draft article or chapter makes it into publication depends in large part on the quality (rigor and significance) of the research work. The methodology may make or break the research and even the researcher (professionally speaking) or research team. While research approaches fall in and out of favor, sparkling exemplars of research work
changes, and the “right mixes” of idealized senses of appropriate amounts of theory and research may be debated, it may seem that research work into the future will be a broad mix of theorizing and various methodologies based on efficacy and results.

Regardless of the approach, the researcher(s) has to justify it. Even if initial conceptualizations of the research methodology and the research methods may resonate on paper, researchers often will engage in much lead-up work before solidifying a full approach: exhaustive literature reviews, key informant consultations, pilot testing, instrumentation testing, and other angles. The research process itself may be highly emergent and informed by realizations as they occur. The research shapes the researcher, and vice versa. Why all this attention to method? Research methodology and method, in a sense, is the thread that can unravel all.

Figure 1 shows word frequency occurrences in tens of millions of digitized books. Among the terms “qualitative research,” “quantitative research,” “multimethodology,” and “mixed methods research,” the most popular term in 2000 is “qualitative research” followed by “quantitative research.” The syncretic terms are much less popular and seem to have about the same number of mentions. In general, Google Book’s Ngram Viewer works as a lagging indicator of ideas as they percolate through society and are memorialized in the formal processes of book publishing.

In qualitative and mixed method research, the researcher himself or herself (or themselves) is trained to be an effective research tool, designed to function in various immersive “in vivo” (“within the living”) situations. For many, personal obsessions and interests drive the work, which can take many decades to fully actualize. The human imagination itself is a critical research tool to ponder questions,

Figure 1. Popularity of research terms in (digitized) books historically and of late (Google Book’s Ngram Viewer)
consider research approaches (with full human cunning but also the restraints of ethics and professional standards), brainstorm counterfactuals (alternative worlds if certain antecedent events were different), and ultimately bring together masses of information into a coherent and provocative vision. This is an imagination bounded by rules of engagement and enhanced and constrained through techniques (modeling, theorizing, and mathematical applications) and technologies.

Qualitative and mixed method researchers are trained to use themselves as research tools. As such, they need to build a large skill set in terms of how they engage others and also in how they discipline themselves. They instill rigor in their work through various means: explicit theorizing and specification, triangulating data, research saturation, sampling broadly and/or in depth and/or with maximum variation, applying a range of analytical tools, applying deep self-awareness about their own biases, documenting thoroughly through field notes/video-recording/audio recording, long-term immersions in related settings or among particular communities, and other methods. Researchers interact with their colleagues in research discourses about their respective work and methods. Their engagement with languages is intimate and hyper-precise. This mixed methods work results in a rich range of parametric and non-parametric data, and while they strive for reliability and validity, their data often cannot be generalized broadly across similar types as in quantitative research. Qualitative research is used in a variety of fields, typically, in the social sciences, including anthropology, sociology, political science, education, and other areas. In recent years, a number of technologies have come online to enhance the work of qualitative and mixed methods researchers.

Over time, as researchers conducted their work in the field and human behavior labs, they would draw from both qualitative and quantitative traditions for mixed methods research. While they blurred theories, they were able to combine practices that were more insightful and nuanced. They were able to apply abductive logic by using the world as informant to define “black box” models with relational mechanisms. They could apply coding insights attained through deep immersions in field and from their readings of the secondary research literature.

It may be that people come at qualitative and mixed methods research simply, through a small project with a simple question. This may be in the context of graduate school or a workplace. Anyone who has trained in qualitative and mixed methods research but has not been immersed in it for the past few years will likely be surprised at the changes in the thinking and the practices. My sense is that most researchers are deep experts in some aspects of this research but likely lack total knowledge of other aspects. As with most things in life, while one has been focused on other aspects of life, the world has moved on. To engage a complex world, researchers in various domains and disciplines have contributed new research techniques, technologies, and theories; they have combined and recombined various research approaches and capabilities in new ways. Anyone starting work in qualitative and mixed methods research today likely will find the work even more complex and overwhelming, in part because of the overwhelming mixes of strategies and research methods that may be applied and then the complexities of analysis.

Online ethnography, the study of human communities and cultures, is one major. This research involves the usage of a range of social media platforms on the WWW and Internet, including social networking sites, microblogging sites, Web logs, wikis, immersive virtual worlds, learning management systems, immersive games, content-sharing social sites, and others. This work involves usage of a broad range of technologies and fresh applied techniques (like network analysis, electronic social network analysis, sociometry, and others). The data captures often result in high-dimensional multivariate data.

Enhancing Qualitative and Mixed Methods Research with Technology is not set up to debate various research methods since these vary deeply across fields and domains, and they are hotly contested. This
book does not suggest that the rigors of technologies justify any qualitative or mixed methods work that is not sufficiently well conceptualized and executed. The technologies described here complement, and in some cases enable, qualitative and mixed methods research.

This brief overview was provided only to provide a light sense of the context for the uses of technologies. In this text, the focus is on how contemporary technologies enhance the work of researchers using qualitative and mixed methods theories and approaches. The technologies are foregrounded. One more caveat: This text does not assert that the presented technologies are exclusively designed for the portrayed uses. All have functionalities well beyond this particular general “use case.”

**Some Contemporary Integration of Technologies in Qualitative/Mixed Research Work**

The uses of contemporary technologies (beyond the technologies of pencil and paper) for research are itself contested. There are traditionalists who prefer mostly manual methods to their analysis. Researchers do form habits in how they like to think and process what they perceive. Technology, though, may be used in a range of ways—as “ego extenders” to broaden human capabilities of observation, data collection, analysis, data visualization, and presentation. Some types of information today may only be accessed using a range of technologies such as mass-scale queries of large data sets or targeted large-scale data extractions from websites. Technologies are not seen as replacing human researchers in any sense, but their role as complementary to human capabilities is an important one. There are superb researchers who eschew technologies as there are mediocre ones who use technologies. The competitive advantage for researchers comes from their thinking, knowledge, research execution, intellectual style, professionalism, and ultimate insights, among others.

In the past few decades, there have been a number of advancements in technologies used to enhance qualitative and mixed methods research. While some of these capabilities often required access to high-end computing systems (including those in the cloud) and access to specialized talent sets and specialized programs, many software tools have become available to the broad public in the common marketplace (and using commercially available computers). The learning curve for many of these tools have become less steep. Developers have encapsulated some of the complexity of the analytical tools behind easier-to-use interfaces. These recent innovations have expanded human knowing and the breadth of what is knowable.

Technologies may be integrated with the qualitative and mixed methods research process at any point in the work. The fluent uses of these tools, with clear understandings of what may or may not be asserted from the data and visualizations, are a critical part of the contemporary researcher repertoire. It could be argued that computational research is a necessary part of the researcher skill set. Some have argued that the knowledge of coding (to customized open-source tools and to even create “feral” ones) is important for research capabilities.

While the individual chapters of this text highlight tools that are specific to qualitative and mixed methods research (or general tools that are used in a targeted way for such research), the following overview will be inclusive of tools used during any of the phases of qualitative and mixed methods research. This broader summary view, which is not comprehensive by any means, is more accurate to how various technologies are being used.

Figure 2 depicts these technologies in four main categories relevant to different phases of qualitative and mixed methods research. Broadly speaking, there is the initial secondary information collection, then primary information capture and collection, then data and information management systems, and
finally the “data processing, visualization, and analysis” category. In a more colloquial sense, Phase 1 is related to the learning and context setting. Phase 2 relates to the actual conducting of the research and documentation. Phase 3 relates to project management and work coordination through the management of relevant information. Phase 4 refers to the work of research analysis and presentation of the findings. While the arrows and structure might suggest a linear approach, this is conceptualized as recursive. Research may be inspired at any phase of the process. In addition, while the visual seems to show a condensed process, as many who read the literature know, there may be a long time span spent in especially Phases 2 and 4 (think decades in some cases). There may also be a separation between the research analysis and the presentation of the findings, but those elements were condensed because data visualizations used in analyses are in accessible form for presentations in most cases. While there is still a lot of work that exists between when research has been conducted and data analyzed and when a work is in final presentation form, in terms of the technologies used, the move to the presentation phase is often a small one technologically. (Very little post-processing is required although contextualizing the visualizations to be informative to a general audience may be non-trivial.)

Figure 2 is a generalized and over-simplified typology based on practical and necessary research functions. These are not mutually exclusive categories, and in the real world, there are some software tools that cover several of these groupings. These categories are also not necessarily unique to qualitative and mixed methods research; they could apply to any sort of original research. The four main areas are presented as general phases of research: 1) Secondary Information Collection, 2) Primary Information Capture/Collection, 3) Data and Information Management Systems, and 4) Data Processing, Visualization, and Analysis.

1. **Secondary Information Collection with Publication (and Data) Repositories, Electronic Publications, Referatories, and Bibliographic Data Management Systems:** The capture of secondary research and metadata (such as for literature reviews) has been enhanced with the wide access to a broad range of information in online libraries, databases, referatories, repositories, and the wilds of the Web and Internet. Published works are currently more accessible than ever. There is also much more “grey literature” (less formally published works) available as well as a lot of crowd-sourced information. Publication repositories are databases that make a wide variety of prior published works available to a broad audience; electronic publications are periodicals which offer directly published work; referatories are annotated collections of content-related metadata and links that point to resources hosted elsewhere; bibliographic data management systems enable mass downloads of articles along with their metadata (often in various formal citation formats).

There have been discussions about the publishing of qualitative and mixed methods data sets to the public to further the value of the research and to extend further exploitation of the original data set by other
researchers. Because of potential challenges to the privacy and confidentiality of research participants (through re-identification possibilities) and issues with copyright protections (of the secondary research that may be included in full data sets), this phenomena of releasing qualitative and mixed methods datasets for public consumption likely will not occur until some of these issues have been addressed. However, the release of quantitative datasets linked to social research is laying a strong path for something similar.

2. **Primary Information Capture/Collection with Inter-Communications, Recording, Sensor, and Data Extraction Tools:** These include software programs that enable data extraction and acquisition and mapping from electronic sources, such as understandings of various network ties on the Internet. There are open-source and proprietary tools that enable the extraction of social network and other information from a wide range of social media platforms. There has been dynamic network mapping and analysis by using humans in social networks as “sensors.” One well-known approach has been the machine capture and analysis of microblogging messages across various geographies and time zones in order to understand unfolding events. The structure or “topology” of social networks may be analyzed to understand social power dynamics, respective roles, organizational features, and other features. Various case studies surrounding human interactions and learning have emerged in immersive virtual worlds and simulation environments. Online surveys have been deployed to capture both parametric and non-parametric information. Various mobile devices have been deployed to support the collection of research data—whether automated sensor data or human-submitted information. Eye-tracking programs enable the capture of eye-movements as human test subjects engage visuals on a computer screen to illuminate insights about human perception and attention. Web conferencing has been used to bring together various researchers with their research subjects. Various technologies may be used to collect primary information. There are intercommunications tools like Web conferencing tools, Voice Over IP (VOIP), shared virtual worlds, and other dedicated spaces. There are a variety of recording devices such as camcorders, screen recording tools, digital audio recording devices, and others to enhance qualitative and mixed methods research. There are mobile sensors that people may wear for various types of recording, such as mobile devices with digital journaling capabilities. There are also data extraction tools that enable the capture of social networking data from social media platforms (such as for online ethnography and social computing). The nature of qualitative and mixed methods research suggests that the human researcher or researcher team have to be honed along with the other research tools—and there are technologies that enable researcher brainstorming and journaling to enhance the work of shaping the researcher.

3. **Data and Information Management Systems:** With the collection and representation of information in a range of digital and analogic ways, a range of software tools have been created to manage and store this data. This data management enables more efficient searchability and findability of various types of electronic and digitized information. A simpler version of this may include various folder structures for data archival. These newer integrated systems enable metadata annotation, cross-referencing of resources, and other data analysis tools. Indeed, various technology-based systems supporting research blur the lines and boundaries of various research tool types. These systems often provide ways for researchers to organize and visualize the data in various structures.

4. **Data Processing, Visualization, and Analysis:** Researchers have a number of technology tools that enable them to process their data. Machine transcription of live or recorded speech has improved for easier text rendering for rough-copy text. Network graphing tools provide analysis of
large data sets of relational data and offer rich 2D and 3D visualizations of that data. Geographic Information Systems (GIS) enable rich uses of geographical data and its mapping. A variety of statistical analysis tools enable ways to query the data and to report out the findings in visuals.

Texts are a core aspect of qualitative research. There are quite a few software tools available for the analysis of textual data to identify patterns and represent new meanings (through text frequency counts, word searches and word trees, cluster analysis, and others). There are tools that enable the searching of vast book corpora for first mentions of particular terms and phrases (decontextualized ngrams). There are tools that enable stylometry, or the understanding of individual writing “tells” and “fists.” There are software programs that serve as ego-extenders, tools that extend the capabilities of the researcher in terms of information coding and meaning-making.

“Noisy” datasets may be used with greater clarity with cleaned data. Large heterogeneous (unstructured) datasets may be reduced through clustering and other forms of data reduction. Machine-enhanced analytics have enabled the identification of aspects of interest (such as pattern recognition, themes, correlations, and anomalies) from “big data” (represented as having an “N of all” or massive datasets with millions to billions of records). “Big data” datasets are queried for pattern recognition and anomalies. Human analysis is brought into play with hypotheses of causation and causes-and-effects (beyond the correlations). It is now no longer unusual to read of datasets with tens of millions of records and to see coherent analysis of the data using data visualizations and cogent descriptions and analyses. The “datafication” of information (the transformation of some data point in the world into electronic information) in machine-analyzable ways has also enabled richer ways of analyzing data. The broad collection of sensor data from a range of equipment, mobile devices, and wearable computing is feeding the so-called Internet of Things.

Researchers may run models or simulations out simplified systems and inter-relationships over time. Models are created, tested against real-world data, and re-calibrated, over many cycles. Decision-making processes are specified and actualized in neural networks, which are then compared to real-world outcomes.

Various software tools enable data visualizations: word clouds, two-dimensional and three-dimensional relational graphs, mind maps, spatialized mapping, and other methods of depicting the data. These visualizations not only inform the analysis by showing relational features, trendlines, and entity features, but also highlighting anomalies. Data visualizations are often published out through interactive displays on the Web for user learning and further potential discoveries.

An Overview of the Book’s Contents

*Enhancing Qualitative and Mixed Methods Research with Technology* opens with three original forewords by three accomplished individuals, all of whom served on the Editorial Advisory Board for this work. Each of the three forewords was written without an overview of the text, which was still in development while these were written. As such, they reflect the thinking of the three, who have variant areas of professional expertise and high accomplishments in their respective fields. It was in my interest to protect the originality of their perspectives and voices. I am appreciative of the prefatory writings of Dr. William H. Hsu, Dr. Rob Gibson, and Nancy Hays.

The body of the text is broken into six sections:
Section 1: Setting the Parameters for Technology Use: Qualitative and Mixed Methods Theories and Models.

Section 2: All-Environments Information Collection.

Section 3: Technology-Enhanced Data Management, Data Processing, Data Visualization, and Human-Machine Analysis.

Section 4: Data Acquisition and Extraction from Social Media Platforms.

Section 5: Cases of Technology-Enhanced Qualitative and Mixed Methods Research (and the Converse).

Section 6: Technologies for Presenting the Results of Qualitative and Mixed Methods Research.

Section 1 offers foundational thinking about technology use in qualitative and mixed methods research work. Section 2 highlights technology used in information collection for research in “all environments.” Section 3 focuses on the uses of technology for data management, data processing, data visualization, and human-machine analysis. Section 4 addresses issues of data acquisition and extraction from social media platforms, given the wide availability of publicly released data in social spaces. Section 5 offers a range of real-world cases of technology-enhanced research and/or high-method-based qualitative or mixed methods research applied to technology questions (and those arising in technology environments). Section 6 introduces technologies used for presenting the results of qualitative and mixed methods research.

Section 1, “Setting the Parameters for Technology Use: Qualitative and Mixed Methods Theories and Models,” consists of three chapters that help set a baseline for understanding the potential roles of technology in contemporary research. Kakali Bhattacharya takes on the resistance to the uses of technology for qualitative and mixed methods research with her opening chapter, “Coding is Not a Dirty Word: Theory-Driven Data Analysis using NVivo.” As a theoretical heavyweight and qualitative researcher par excellence, Bhattacharya applies a leading qualitative and mixed methods data analysis tool to explore where theory, technology, and insightful research interact. In Chapter 2, “Online Focus Groups: Lessons Learned from 15 Years of Implementation,” Oksana Parylo explores the role of technology-mediated and geographically distributed focus groups in research for data collection. Then, Shalin Hai-Jew explores the work of research e-journaling as a method for mixed methods research rigor in Chapter 3, “Research E-Journaling to Enhance Qualitative and Mixed Methods Research: Mitigating Human Limits in Perception, Cognition, and Decision-Making.” This is a work that takes into account recent findings in human tendencies toward perceptual shortcomings and cognitive illusions and the reality that all research is ultimately conducted, framed, and interpreted by people.

Section 2, “All-Environments Information Collection,” sheds light on the importance of technologies for data collection in both physical and cyber spaces. Tabitha Hart’s “Technologies for Conducting an Online Ethnography of Communication: The Case of Eloqi” describes a unique training platform for foreign language learning and virtual community that was used for a qualitative study. In Chapter 5, co-authors M. Banu Gundogan, Gulsun Eby, and T. Volkan Yuzer describe their use of an online Delphi study for capturing public definitions to aid in the development of a sustainable distance education ecosystem, in “Capturing Definitions for a Sustainable Distance Education Ecosystem through an Online Delphi Study.” In “Video-Conferencing Interviews as a Data Collection Method” (Chapter 6), co-authors Kimberly Nehls, Brandy D. Smith, and Holly A. Schneider study the application of real-time synchronous video interviews for social sciences research. Then, Tianxing Cai describes “Data Integration Technology for Industrial and Environmental Research via Air Quality Monitoring Network” in Chapter 7.

Section 4, “Data Acquisition and Extraction from Social Media Platforms,” provides deeper insights into the capture and usage of data from Web 2.0 social media sites. In Chapter 12, Sara Steele Hansen offers a riveting chapter on the study of the cultural meanings of virtual hair in a (now-defunct) virtual world, in “Trendy Avatars and their Hair: Studying a Symbolic Cultural Artifact with Multiple Qualitative Methods.” Hers is a chapter about the uses of an immersive virtual space for cultural studies research. “Tweet Portraiture: Understanding the Gist of Electronic Identities through Microblogged Messaging in Social Media using NCapture and NVivo 10” (Chapter 13), by Hai-Jew, addresses the uses of Tweet streams to understand electronic identities through self-expression. Further, “Sampling Public Sentiment using Related Tags (and User-Created Content) Networks from Social Media Platforms” (Chapter 14) describes a functionality that enables the association of various tags based on co-usage (expressed as proximity or clustering) in social media content platforms.

Section 5, “Cases of Technology-Enhanced Qualitative and Mixed Methods Research (and the Converse),” consists of chapters which both address unique cases of application of technologies on qualitative and mixed methods research, and the converse, the application of qualitative and mixed methods research on Information Science (IS) applications. Eamonn Caffrey and Joseph McDonagh explore “The Theory and Application of Process Research to the Study of IT Strategy-Making” in Chapter 15. Theodora Issa and David Pick, in Chapter 16, “Mixed Methods Research Online: Problems and Potential in Business Ethics Research,” explore the nuanced challenges of applying online survey research to business ethics. Brian Davis and Joseph McDonagh, in “Applying Grounded Theory to a Qualitative Study of CIO Interactions with External Peer Networks” (Chapter 17), introduce the uses of grounded research to the enhancement of CIO knowledge especially in relation to professional peers. Authors Brian Dempsey and Joseph McDonagh focus on the causes of information systems failure through the application of creative research methods in “Integrating Process Inquiry and the Case Method in the Study of IS Failure” (Chapter 18). In Chapter 19, Mohanad Halaweh describes the fresh “Discount Focus Subgroup Method: An Innovative Focus Group Method used for Researching an Emerging Technology” study of
near-field communications and its implications through structured discussions with convenience-sample focus groups.


Text Objectives and Target Audience

This edited book updates the state-of-the-art of technologies used in qualitative and mixed methods research, with practical and applied insights. As every other text, this one is also limited in its focus given the affordances of the development process in this time. The scope of technologies used in qualitative and mixed methods research is broad, and their ranges of applications make the topic practically infinite. The ambition of this work then is to provide a broad and real-world sampler. The intended readers for Enhancing Qualitative and Mixed Methods Research with Technology are faculty members, research practitioners, graduate students, technologists, and software developers. It is hoped that this book will encourage others to experiment with various tools to enhance their work. Too often, graduate students are imprinted in graduate school about how to engage technologies, and if they did not acquire some fundamental skills then, many are prematurely satisfied with their skill set. It is non-trivial to learn how to use technologies in research work, but I am hopeful that researchers of all stripes carry their lifelong learning into everything, including the application of technologies into their respective field research and labs. These tools are eminently learnable and applicable to research, and they stand to benefit work in a wide range of fields. I also see the intended audience as those in the future who may look back at this time for understandings of technology-augmented (and technology-based) qualitative and mixed methods research work.

One more note. While the images here are rendered in the highest quality possible, the b/w print production means that there is some loss of information and quality. Please refer to the electronic versions for the optimal quality.

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