Preface

The 21st century has presented the professional researcher with a myriad of challenges and opportunities. In particular, there are a number of new and exciting digital technologies, which offer researchers considerable advantages in terms of speed, access connectivity, and economy. Skype and other Voice Over Internet Protocol (VOIP) applications allow practitioners to carry out face-to-face interviews with research subjects thousands of miles away and in different time zones. Short attitudinal surveys can be sent via text message. Online surveys are now no longer confined to public opinion research, but can be adapted for a myriad of research objectives. These technologies offer a wealth of opportunities to the research practitioner, but without prior knowledge of how these technologies can, should, and should not be used, researchers may experience a degree of anxiety when considering their use.

Researchers all over the world are using these new, innovative methods to design and develop research programmes, but until now, no tome has brought together their work in a single publication. The overall mission of this valuable publication is therefore to aid researchers in recognizing the advantages of speed, economy, interactivity, and connectivity that these technologies offer, to alert them to the pitfalls of these methods, and to provide a foundation on which they can build reliable, sound, and scientific research projects.

This edited volume forms a comprehensive introduction to new media technologies and their applicability to the world of research. The book comprises a collection of case studies detailing the use of new technologies in empirical research in various disciplines, from psychology to political science. It is intended that each chapter can be read alone, or in conjunction with the others. It is hoped that the detail provided in these case studies will reduce researchers’ anxiety about adapting these new technologies for use in their own work.

1. THE MODERN RESEARCH ENVIRONMENT

The opening section of the book presents four chapters that address, in a multitude of ways, theoretical and practical questions about the way in which research is undertaken in the digital age. In Chapter 1, Chinmoy Sahu traces the evolution of technology in the process of research. The chapter argues that technology now plays an important role in each phase of the research process from problem identification to problem clarification, defining the population to data collection. The chapter also discusses the potential pitfalls of a technology-based approach to undertaking research, focusing on the growing threats
of survey fatigue and plagiarism. While recognizing the drawbacks of an over-reliance on technology for research, Sahu argues that the future of research resides in the exploitation of the tools and techniques of Web 2.0. In Chapter 2, Salvatore Iaconesi and Oriana Persico describe the ConnectiCity initiative: a series of urban planning projects that bring together a myriad of the institutions and professionals, including engineers, artists, and architects. The initiative is both novel and contemporary in seeking to design public planning policies by drawing on the ideas, beliefs, emotions, visions, and demands of urban citizens as they are expressed through social networks and other forms of digital communication. The chapter presents the theoretical framework for the project, the methodological approach, research design, and prototyping phases of the initiative. By exploiting multiple strands of readily available information, the authors argue that new opportunities for a more active and aware version of citizenship can be realized.

In Chapter 3, Ester Macrì and Cristiano Tessitore tackle an issue that faces any researcher wishing to undertake an Internet survey: the optimal way to sample, locate, access, and recruit potential survey respondents. At the heart of the chapter are two research questions: (1) Are conventional sampling methods appropriate when conducting research via the Web? and (2) How can a valid survey be conducted over the Internet? Macrì and Tessitore propose a number of strategies for recruiting respondents via Web channels, focusing particularly on two of the most popular social networking Websites, Facebook and Twitter. In Chapter 4, Damien Lanfrey draws on a study of online advocacy to address three issues facing online researchers: how to capture online platforms as dynamic research objects, how to harvest rich, contextual data, and how to capture user engagement.

2. QUANTITATIVE APPROACHES TO RESEARCH USING NEW TECHNOLOGIES

The second section of the book comprises a collection of case studies of empirical research conducted using new technology. In Chapter 5, Blaine F. Peden and Andrew M. Tiry present a practical guide for researchers seeking to utilise Web survey frameworks for experiments. While the chapter discusses psychology experiments specifically, the models proposed have wider appeal. Peden and Tiry consider each stage of the research process: (1) ideation, (2) implementation, (3) distribution, (4) collection, (5) analysis, (6) dissemination, and (7) retention, discussing the ethical, technological, and methodological issues that arise at each stage.

In Chapter 6, Stephanie Steinmetz, Damian Raess, Kea Tijdens, and Pablo de Pedraza explore the advantages and drawbacks of collecting wage data via a volunteer online survey. While there are considerable benefits to collecting worldwide wage data via Web methods, including speed, low cost, and the ability to homogenize surveys across countries, the methodology poses a number of challenges. The authors find evidence of bias in relation to several employment and socio-demographic variables. Internet surveys do particularly well at capturing data from young people, those employed in non-manual jobs, and those that work full time. The authors discuss the efficiency of post-stratification weights in correcting for sampling bias, finding both potential and pitfalls in their use.

In Chapter 7, Torgeir Vik describes Altinn, a government funded system that enables enterprises to share information with National Agencies by combining automated reports with online questionnaires, thereby reducing response burden. In Chapter 8, Stéphane Ganassali and Carmen Rodriguez-Santos describe a Web-based research protocol that seeks to bridge the quantitative-qualitative divide, known
as the “wall of pictures.” This approach combines multimedia and interactive technological devices for collecting unstructured data that can later be recoded by researchers. The wall of pictures method has been implemented in the Coberen European consumers’ survey, which is described in detail in the chapter.

To conclude this section, Kristina M. Kays, Tashina L. Keith, and Michael T. Broughal discuss the myriad of issues facing researchers designing online surveys that address sensitive topics in Chapter 9. One key challenge facing researchers is how to reduce item non-response. Kays et al. discuss and describe a number of strategies for reducing item non-response, taking into account gender differences in response rates when material is sensitive.

3. QUALITATIVE APPROACHES TO RESEARCH USING NEW TECHNOLOGIES

In Chapter 10, Komalsingh Rambaree and Elisabeth Faxelid consider a method for analyzing the vast amount of qualitative data that can be generated through technology-based research. The chapter outlines a case study in which data on adolescent sexual and reproductive health is analysed using the Abductive Thematic Network Analysis (ATNA) technique in the software program Atlas-ti 6.2.

In Chapter 11, Donna Z. Davis takes an ethnographic approach to her study of relationships in the online virtual environment, Second Life. Drawing on the results of a two-year study, Davis finds that interviews with virtual counterparts or avatars can yield rich data, as well as a rewarding research experience. In addition to outlining the potential of research in virtual environments, the chapter describes some of the challenges facing researchers collecting data in virtual worlds, such as the validity, reliability, and authenticity of data.

In Chapter 12, Lynne M. Webb and Yuanxin Wang discuss the myriad of opportunities for research that draws on data shared in online blogs and micro-blogs. The chapter outlines a number of methods for conducting both quantitative and qualitative analyses of blog posts, with specific reference to Twitter. The way in which electronically exchanged messages can be analysed is also the focus of Chapter 13. Huseyin Ozcinar and H. Tugba Ozturk discuss the strategies and implications of conducting content analysis and sequential analysis to analyse Computer-Mediated Communication (CMC) in the educational sciences. In the information age, individuals are increasingly exposed to ambient data—information that is experienced and generated through new media such as social software applications and mobile devices. In Chapter 14, Brian J McNely outlines ethnographic methodologies for collecting and analysing ambient data.

In Chapter 15, Danielle Couch and Pranee Liamputtong compare two contemporary methods for collecting qualitative data online: instant messaging applications and email. Drawing on a qualitative study of online dating and sexual health, the authors outline the benefits and challenges of each interview method. In Chapter 16, Vanessa Hinchcliffe and Helen Gavin present a practical guide to using one form of new media technology—Web-based diaries—drawing on an empirical study of the use of university disability support services among students with autistic spectrum disorder.

In Chapter 17, Kimberly Nehls presents a review of the literature on email interviews, outlining along the way the challenges and opportunities of this method of collecting qualitative data. Some of the advantages discussed by Nehls include reduced barriers to participation, speed and cost savings, and automatic transcription, while she identifies a lack of sensory and emotional cues as a drawback of
the method. In Chapter 18, Vincent and Stacey address this concern by discussing the ways in which multimedia stimulus resources can be used alongside electronic interviews to stimulate responses. The chapter describes a case study of professional teachers’ views regarding mathematics education. The researchers found that electronic stimulus material can contribute to building a “shared language” among researchers and their participants. The e-interview is also the focus of Chapter 19, co-authored by Roberta Bampton, Christopher Cowton, and Yvonne Downs. The discussion in that chapter focuses on three areas: the practicalities of conducting an e-interview, interpersonal issues, and ethical considerations.

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