John A. Johnson and Samuel D. Gosling

How to Use This Book 1

V ery simply, the aim of this book is to help you get research done. If you have already made the decision to use the Internet as part of your research, and if you have a rudimentary understanding of Web-based research methods, then this book is for you. Our goal is to provide you with a practical step-by-step guide—something that can sit by you on the desk as you develop and implement your study. The chapters, which cover a broad array of topics encountered by social science researchers, are short and simple. The authors are world experts on their topics who draw on their extensive experience (read: mistakes!) to offer advice on how to avoid common pitfalls and implement your study as efficiently as possible.

Before You Use This Book

A number of chapters in this book assume at least a basic knowledge of Web-page construction. If you are unfamiliar with hypertext markup language (HTML), Common Gateway Interface (CGI) scripts, and the process of uploading Web pages and maintaining a Web site, we strongly recommend

that you first read Fraley's (2004) outstanding book *How to Conduct Behavioral Research Over the Internet: A Beginner's Guide to HTML and CGI/Perl.* Our book is aimed one level above Fraley's book, at researchers who want more information on more specific topics and on the numerous new methods (e.g., text analysis) that are constantly being developed to take advantage of emerging research opportunities. The goal of this volume is to present the varied methods in short, practically oriented chapters that will allow investigators to integrate the methods into their own behavioral research.

Overview of Book Structure

This book is organized into five parts. Part I, Getting Started, contains the introductory chapter that you are reading now and a chapter by Michael H. Birnbaum that summarizes general issues to consider in Internet-based research. Part II, Considerations When Designing Web Pages, contains three chapters on the construction of Web pages. The chapter by Ulf-Dietrich Reips describes the optimal design of Web pages. The next chapter, by John H. Krantz and John E. Williams, describes how to incorporate graphics, photographs, and dynamic media into Web pages. The final chapter in this part, by Wolfgang Neubarth, explains how to incorporate moveable, drag-and-drop objects into Web pages to allow participants to make visual rankings and ratings.

Part III, Studying Internet Behavior, considers methods of studying human activities that occur on the Internet. Researchers are just beginning to examine the degree to which phenomena such as self-expression and formation of coalitions follow the same patterns as those seen in the real world or whether new psychological principles are needed to explain behavior in virtual worlds. The chapter by Elizabeth Mazur presents methods for analyzing social networking Web sites and blogs. Sonja Utz's chapter brings the researcher a little closer to these new Internet behavioral phenomena as a participant observer. Finally, Matthias R. Mehl and Alastair J. Gill describe a method for automatic analysis of text that is posted on the World Wide Web.

Part IV, Transporting Traditional Methodologies to the Web, contains five chapters, each describing how a long-standing research method can be used on the Web. These methods include ability testing (Ulrich Schroeders and Oliver Wilhelm), personality self-reports (John A. Johnson), informant reports (Simine Vazire), surveys (Tracy L. Tuten), and experiments (Ulf-Dietrich Reips and John H. Krantz).

Part V, Cross-Cutting Issues, covers concerns that are common to all researchers, regardless of their specific research topics or methods.

In this part are chapters on using incentives to recruit and retain research participants (Anja S. Göritz), securing and protecting one's data (Olaf Thiele and Lars Kaczmirek), and conducting research in an ethical manner (Tom Buchanan and John E. Williams).

Structure of Each Chapter

Each chapter in this volume is designed to be a self-contained tutorial on a particular topic in Internet-based research. The chapters may therefore be read in any order. Readers can simply scan the table of contents for topics of greatest relevance to their own research and turn directly to the chapters dealing with those topics.

We have asked all contributors to introduce their chapters in such a way that a reader will be able to determine after reading one or two pages whether a chapter will be relevant to his or her research. Following a brief introduction, each chapter then gets down to the specifics of implementing a method for addressing an issue. Most of the information that is needed to implement a method is contained in the chapter itself. Many of the chapters also provide up-to-date links, additional details, examples, and samples of computer code that can be copied and modified to the researcher's needs; these items are provided at the supplementary materials Web site at http://www.apa.org/books/resources/gosling. Each chapter also contains a list of additional resources for researchers who wish to explore certain topics in even greater depth.

Pros and Cons of Internet-Based Versus Traditional Research Methods

Initial attempts at transporting traditional research methods to the Internet were greeted with a healthy dose of skepticism. Quite reasonably, journal editors and reviewers had a number of concerns about method artifacts and sampling issues. Gosling, Vazire, Srivastava, and John (2004) empirically addressed six of the most common concerns by comparing a large Internet sample with a year's worth of conventional samples used in one year's worth of studies published in the *Journal of Social and Personality Psychology*, the field's top outlet. Their analyses suggested that, compared with conventional samples, Internet samples are relatively diverse with respect to gender, socioeconomic status, geographic region, and age.

Moreover, Internet findings generalize across presentation formats, are not adversely affected by nonserious or repeat responders, and are consistent with findings from traditional methods. Similar conclusions were reached by other reviews addressing the validity of Internet research (e.g., Krantz & Dalal, 2000).

Before you start your research, we think that it is important to keep in perspective the advantages and disadvantages of Internet-based versus traditional research methods. A major advantage of computer-assisted data collection is the efficiency and accuracy with which traditional forms of data could be collected (e.g., surveys, informant reports, reaction time experiments). Prior to the widespread availability of computers, all psychological data had to be collected and recorded by hand, opening the possibility of clerical errors. The advent of scan sheets and recording equipment connected directly to computers may have reduced some recording errors. But the use of the Web allows for the added advantage of data collection from around the world without the delays and expense of land-based mail. The Internet has eliminated the time and space constraints of traditional data collection. Furthermore, the validity of protocols can be checked instantly; the data can be stored automatically; and feedback, which serves as a major incentive for participation, can be delivered instantaneously to research participants.

Another advantage of Internet-based research is the potential for obtaining very large, diverse samples from around the world. By providing personalized automated feedback, researchers in personality (e.g., John Johnson, Sam Gosling, Jeff Potter) and experimental social psychology (e.g., Brian Nosek) have been able to collect data from hundreds of thousands of participants, samples previously unheard of in psychological research. Also, by providing anonymity or by covert observation techniques, researchers have been able to study groups such as sex offenders or White supremacists who might not participate in studies in real life (e.g., Glaser, Dixit, & Green, 2002). Finally, rich multimedia can be included in ability tests, questionnaires, surveys, and experiments, creating a more life-like and ecologically valid environment than ordinarily found in pencil-and-paper measures.

Internet-based research has many pros, but one must also consider the cons. The central problem stemming from the physical disconnect between researcher and participant is lack of control over the assessment or experimental setting. Because researchers are not physically present, they cannot easily assess the alertness and attentiveness of the participants. Furthermore, they will have difficulty in immediately answering questions from participants about the procedure. Because they are not directly observing the research participants, they cannot be aware of possible distractions to the participants such as eating, drinking, television, music, conversations with friends, and the perusal of other Web sites.

Internet users, especially young Internet users, are notorious for multitasking when they are logged on, and this could have adverse effects on the quality of Internet-based data. In the case of ability testing, with all of the information on the Internet at their disposal, what is to keep participants from cheating?

Although the research by Gosling et al. (2004) has allayed many fears about the quality of Internet versus real-life samples, participation in Internet-based research is obviously restricted to people who have access to the Internet; who know how to use a Web browser; and in some kinds of research, who have a functioning e-mail address or instant messaging capability. Excluded from Internet research will be people who are computer phobic, who cannot afford a computer and Internet service and have no public access to the Internet, and who are uninterested in learning how to browse the Web.

Finally, learning to construct Web pages, write program scripts, manage computer data bases, and engage in all of the other activities involved in starting up online research is admittedly time consuming. Entire new sets of skills must be acquired, practiced, and polished. We hope that this book will help you to acquire these skills so that you may enjoy the many advantages of Internet-based research.

References

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