



HANDBOOK OF GLOBAL USER RESEARCH

EDITED BY ROBERT M. SCHUMACHER

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To Mary Cate, Ryan, Alex, Catherine, and Adam

– Bob

Preface

I met Tim Bosenick, the managing director of the German usability firm SirValUse, in 2003 over dinner in Chicago. He was in the United States with his client, a Japanese usability consulting firm, and their end-client, a large electronics firm, to test the interface of a piece of office equipment. During dinner, we talked about global user research projects and the layers of complexity that make them especially interesting and challenging. This discussion was the seed that germinated into this book.

As consultants in user experience research, my collaborators and I have seen an increasing percentage of work dedicated to global usability during the past few years. Our discussions with others in the field have revealed that practitioners could benefit from sharing their experiences and methods for conducting quality global research with their global colleagues. The purpose of this book is to impart practical, no-nonsense information on global user experience research from a number of knowledgeable sources from throughout the world, each drawing on a broad range of experiences.

As with any sort of large-scale undertaking, global user experience research presents its own set of unique challenges. Researchers have to understand how to deal with potential differences in

- Language
- Culture
- Design sense
- Testing philosophies
- Skill sets

These can be formidable issues. Aspects of the research process differ from culture to culture. What may have worked in Malaysia may not be accepted in Russia, may be done differently in Brazil, may partly work in China, and may completely fail in the UAE.

Equally vexing but often less noticed are the technical, logistical, and planning issues associated with global user, such as hiring qualified translators, region-specific payment procedures, travel issues, global facility setup, and recruiting test participants. This book will *not* cover the globalization and localization of user interface design because there are already many excellent books on this topic.

A note about terminology is in order. There are many ways of referring to the “user experience” and the activities we conduct to understand the user experience, or “user experience research.” For brevity, we will simply use the term “user research.” At its broadest application, user research is meant to support the understanding of not only the user’s specific experience but also relevant information about users themselves and the context in which

they live and work. Although a few of our readers might take issue with this particular phrase, I ask your indulgence since I believe “user research” conveys the intended meaning in fewer syllables.

This book is a global collection of experience-based information *for* user experience research professionals *by* user experience research professionals. This book provides insights into the preparation, fieldwork, analysis and reporting, and overall project management for a global user experience research project. It includes examples of issues involved with global user experience research and approaches to these issues. The chapters are arranged according to a typical project timeline so that you can refer to strategies for each step of a project. Problems, solutions, anecdotes, case studies, and outcomes from actual practice are included to illustrate tactics for the practitioner. We also review emerging trends and issues, such as remote user testing and managing cross-cultural distributed teams. Overall, we are proud to say that our book includes hard-won, best-practice advice in key topics as well as case studies to demonstrate real-world application of strategies.

The book has been written with many voices – contributors from East and West, developed and developing nations – and through multiple languages. We have tried to make the book as relevant to a researcher from China wanting to test in Peru as for a British researcher testing in the United States. Attempting to keep perspective was at times difficult, but we have found our voice with the expertise of our contributors (many of whom regularly collaborate on projects through the User Experience Alliance, <http://www.UXalliance.com>).

As user research professionals, we assist clients in solving different types of research problems, ranging from consumers who download ringtones to diabetes patients who use insulin pumps to business users who seek the latest information about polymers. Although each of us has invested time in documenting procedures for usability, human factors, and other types of user research, these procedures are not usually focused through the prism of global research. As our clients’ products and services extend across borders, we must also effectively cross those borders in our user research. Communication among user research professionals is imperative so that we can learn from each others’ experiences and advance the practice of high-quality international research.

We realize that this book is by no means the last word on the subject. We acknowledge the possibility that readers may take issue with a given point. That is to be expected and is healthy for a growing field such as global user research. The intersection of culture and language, among other things, with user research is vibrant and will never be definitive. In hopes of continuing the dialog in a more dynamic form, readers are encouraged to visit the accompanying Web site <http://www.GlobalUserResearch.com>. A Wiki on global user research as well as supplementary material mentioned and illustrated in this book is available there.

Acknowledgments

Assembling a book with such diversity requires the dedication and skills of many people. With 53 contributors from 25 companies representing 20 countries, there were more than a few details to manage. None of this could have been done without the combined and consistent support of an outstanding group of professionals, my lead contributors: Agnieszka Bojko, Tim Bosenick, Tjeerd de Boer, Frederic Gaillard, Simon Herd, and Thomas Visby Snitker. These contributors were tireless in the coordination, development, and dedication to delivering the quality work in their particular chapters. They also provided constructive comments on other sections of the book. The individual contributors to the chapters (listed in the Author Bios) gave of their precious time to provide insights into the book as a whole and to specific chapters. Their knowledge of and experience in the field of user research provided the foundation on which this book was written.

Equally important to having the book written from the viewpoint of collaborators throughout the world, it was important to have reviewers globally who represented a diversity of thought and opinion. There were a number of reviewers who were not contributors but provided their insights and expertise to the chapter contributors; specifically, we thank Torkil Clemmensen, Owen Daly-Jones, Laetitia Giannetini, José Luis Adán Gil, Changyang Oh, Fernando Oliveira, and colleagues at Snitker & Company.

My collaborators and I owe a debt of gratitude to and are honored to have had the insightful comments of six outside reviewers: Arnold Lund, Ed Israelski, Darren Kall, James Kalbach, Steffen Kehr, and Elisabeth Ling Decitre. These reviewers plunged through pages that were, at times, not quite ripe given the varieties in style, language, approach, and coverage, but they managed to deliver clear and strong guidance nonetheless.

Next, I am truly grateful for the many long hours of reviewing from my colleagues at User Centric: Thomas Green, Cassandra Slimmer, Melinda McElheny, Martin Ho, Heather Rakauskas, Neha Pathak, and, my son, Alex Schumacher. Not only did they do a fabulous job working through the content but also they had to put up with my idiosyncrasies. I also benefited greatly from the assistance of several other very capable staff members – from doing the initial research to the final coordination. Many thanks to Justine Chiapetta, Lisa Morosky, and Krista Smith.

I also acknowledge the forbearance and loving support of my wife, Mary Cate, and my family for sacrificing time together, which is a most precious commodity.

Last, this book would be nowhere without the support, encouragement, and patience of Mary James and Denise Penrose of Morgan Kaufmann. From the earliest discussions

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with Mary and Denise in a breakfast room in Florence to this point, you have been enthusiastic supporters from concept to delivery.

I am humbled to have had such a great team of contributors and reviewers supporting the work, helping to keep it on time and on point. Although every attempt has been made to ensure internal consistency and solid coverage of material, any errors of commission or omission are, of course, regrettable and are mine.

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Many of the contributors to this book are a part of the User Experience Alliance (UXalliance). The UXalliance was founded in 2005 by the leading user research companies around the world. UXalliance partners have conducted over 200 global user research studies in more than 40 countries. With more than 250 researchers and 40 test labs around the world, the UXalliance constitutes the leading international network for user experience. More information can be found at www.UXalliance.com.



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France	Axance	www.axance.com
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Spain	Xperience Consulting	www.xperienceconsulting.com
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Foundations and definition

Robert M. Schumacher

Translator: He wants you to turn, look in camera and say the lines.

Bob wonders what she's leaving out, or if that's the way it works from Japanese to English.

Bob: That's all he said?

Translator: Yes, turn to camera.

Bob thinks let's just get it over with.

Bob: Turn left or right?

The Translator blots her face with a tissue, and asks the director in a Japanese sentence 5 times as long. The Director answers her in a long excited phrase.

Translator: Right side. And with intensity.

Bob: Is that everything? It seemed like he was saying a lot more.

– Lost in Translation by Sofia Coppola (September 2, 2002)

We had a problem. In a usability test that we were conducting for a Japanese client, the interpreter could not keep up and the clients who were observing were getting frustrated. True, the moderator had a fairly rapid rate of speech, but this was not the major problem. We tried slowing the moderator's rate of speech down. This helped a little, but it did not solve the problem. The problem was the language itself: English, when translated into Japanese, expands for linguistic and cultural reasons. Written language is different; Japanese tends to be more compact than English. In addition to slowing the rate of speech of the moderator, we also had to ask her to insert pauses into the flow of the test allowing the interpreter to catch up. The expansion was mildly disruptive to the session flow and resulted

in a change to the schedule, as 60-minute sessions went to 75-minute sessions. All came out well in the end – problem solved, but we learned a lesson. These are the lessons of this book.

1.1 GLOBALIZATION, LOCALIZATION, AND USER RESEARCH

As the world gets smaller and more flat (in the sense of [Friedman \[2005\]](#)), user research is increasingly focused on globalization and localization of products. In the context of user experience, we define “globalization” as user experiences that are common for all users. “Localizations” are those experiences that demand that the experience be different when introduced to different user communities because of either language or cultural artifact (e.g., colors, signs, and rituals). A mobile phone whose hardware does not change as it is deployed from market to market creates the same user experience within each market; it is globalized. However, the method for sending an SMS message must be different between, for example, China and France due to different languages and different text entry methods. These changes are localizations. Localizations are the subject of a series of advertisements by HSBC. These ads are truly remarkable in their simplicity and poignancy to “Never underestimate the importance of local knowledge.” They also point out how our own cultures sometimes blind us to artifacts (e.g., the use of the color) that may be very significant and interpreted very differently by people from other cultures.

As organizations expand markets, they discover that what they know and are comfortable with in their own cultures often falters in other, even seemingly similar, cultures. Case in point: George Bernard Shaw once described England and America as “two countries separated by a common language,” as I discovered in a fruitless search for a “Band-Aid” in London (in the United Kingdom, the term is “plaster”). Much of the purpose of this book is to make practitioners aware of what needs to be in place to both control (where possible) and understand how cultural and linguistic differences influence user research. We must also be mindful of the inequality of technological expertise throughout the world. What is assumed by a Finnish mobile phone user to be a basic technical skill may be an advanced concept for someone in any one of a dozen countries. This reality, more than anything, begs for global user research. Our assumptions must be tested in order to ensure that we have met our objectives as user researchers.

To get a better handle on global user research, it is important to put the term “user research” in historical context. Next, the term is defined in some detail, and then we briefly compare user research to other complementary disciplines.

1.2 ORIGINS OF USER RESEARCH

One of the defining characteristics of human nature is that we make and use tools.¹ Humans use tools to control their environment, from using sticks to extend reach to fashioning pots to boil water to constructing medieval siege machines to make war, and to using iPhones to check e-mail. For the majority of human existence, the development of tools was largely the role of the craftsman who needed the tool. If a blacksmith needed a forge, he built a forge. Surely, a mason might rely on a carpenter to make a hammer handle or parts of a lathe, but the carpenter did not have a research team studying the mason’s shop and declaring “We have an idea that will make your work easier.” This would come later.

Fast forward to the industrial revolution. With the concepts of division of labor, productivity, and workflow, institutional emphasis was placed on understanding how to make tools better so people could produce more. Production increased because we invented machines to mechanize labor (e.g., weaving by machine rather than by hand); it also improved because we facilitated how people used the machines. Craftsmen looked at the piecemeal work that users had to do, and they designed and built increasingly specific tools to better accomplish the tasks.

We increased productivity by continuing to adapt our skills as tool makers. At the turn of the twentieth century, the confluence of two key forces created the kernel of user research as it is understood today. First, whereas previously the task of the tool builder was to improve mechanical advantage, tools were beginning to be necessary to extend cognitive and perceptual functions (e.g., calculate faster using adding machines). Second, theory and method in the behavioral sciences were maturing. Research that had direct implications on how to

¹Throughout this chapter, I use the terms “tool” and “tools” to refer to an artifact that humans use to do something. This is broadly defined to include physical artifacts, such as hammers, as well as virtual artifacts, such as Web sites.

improve human performance was being conducted.² For example, one of the first research programs with practical applications in human performance was conducted by Miles Tinker from the 1920s to the 1950s on the legibility of print (Tinker, 1963). Tinker showed us, among other things, that reading speeds varied by type font, type case, line spacing, etc. With this knowledge, researchers showed that we could communicate more effectively through the form of the printed document. A more rigorous understanding of human capabilities was derived from the development of accepted experimental techniques.

During this period, another movement in “human factors,” as it was known, emerged largely in physical ergonomics and workplace safety. World War II catalyzed the cognitive component as workers moved from *doing* the work to *supervising* machines doing the work. The information age has only served to tune and amplify these advances. As the industrial age gave way to the information age in the developed world (circa 1980s), what began as human factors spawned a new generation of tool designers and tool builders.

Today’s technology designers and builders bear little resemblance to the smithies and carpenters of old, yet they have similar objectives. They augment and extend cognitive functions and enable work to proceed on levels never before imagined. To extend that reach, we have to know what humans (users) need and what they are capable of doing. In short, tools of old were used to magnify physical labor; tools today magnify cognitive labor. To be sure, there are physical characteristics as well, but they are of a secondary concern.

What has this change meant for tool designers and builders? The tendency for the tool’s user to also be the designer has continued to erode as we have progressed from the industrial to the information age. People who build tools are often not the people who design them; for instance, people who program an electronic medical record application generally did not design it. This is true in other disciplines, such as architecture and construction. In information age terms, those involved in construction (e.g., planners and programmers) are not usually those involved in architecture (e.g., system designers and user

²It is not the author’s intention to provide a history of human factors; there are a number of references on history (e.g., Meister, 1999), as well as books on case studies (e.g., Casey, 1998). There is a solid record of improving human performance through applications of human factors methods for more than 100 years.

researchers). Thus, even within modern tool building, we have a division of labor and specialization of labor. Our specialization of labor has gone so far as to have researchers do research on how to do user research.

It may be slightly bold of me to borrow the history of tool building as the foundation of user research, but it is fitting. The mission of user research is to design better tools. Unlike psychology, user research is not directed toward *understanding* human behavior. Rather, user research puts our understanding and knowledge of human behavior into practice in improving performance. From this standpoint, user research shares more common elements with industrial engineering (IE) than with the behavioral sciences. Yet, in general, IE is largely insufficient to explain human cognitive performance. User research lies at the nexus between IE and psychology; in fact, many university programs recognize this gap and offer cross-listed coursework and degrees.

What separates the social part of work in the past from the modern instantiation is scope, scale, and complexity. In the information age, tools are collaborative, and we assume that users have learned to use sophisticated tools in complex ways and can use them in coordination with others. Thus, the user researcher must be mindful not only of the capabilities of individuals but also of those of cooperative groups. Most so-called “knowledge workers” in modern societies are familiar with tools such as WebEx, PowerPoint, and conference calling. Indeed, the process of developing and launching a Web site – the information age equivalent of a barn raising – involves the coordinated efforts of dozens of people who possess, know, and use sophisticated tools and often must do so cooperatively and simultaneously. Today, the scale and complexity are higher than in the past, as work is distributed over time zones, countries, languages, and cultures. Distributed models of application development are also present in user research. For instance, many enterprise software companies hire talented user researchers to understand the users in markets where the tools are to be deployed. User researchers and designers in Sunnyvale, Bangalore, Beijing, and Sofia combine knowledge of human performance, results of user testing, and market expectations and turn those into useful and usable designs. This cooperation is challenging but can be very rewarding.

With this brief history and context in mind, a thoughtful construction of a definition of user research is in order.

1.3 WHAT IS USER RESEARCH?

There are very few specific definitions of user research *per se* in the literature. User research has been called “the process of understanding the impact of design on an audience” in order to design products that fit customer needs (Kuniavsky, 2003). User research has also been defined as the ethnographic approach to gather information about a person, relying heavily on user interviews and by “studying people’s behavior in everyday contexts” (Calde, 2003) or as “the process of studying users in order to develop a design that meets their needs, capabilities, and preferences” (Kreitzberg & Little, 2008). User research in its “extreme” form involves using an information surrogate who gathers information from the actual users of products, such as call center workers (Lafrenière, 2008). According to eBay’s user experience research director, Christian Rohrer, “User experience has evolved from addressing mainly utility, to usability, helping users accomplish their goals, eventually becoming an issue of desirability, which meant liking the way the product looks and feels.” He adds that “the most advanced level of user research addresses brand experience” (BayCHI, 2005).

Type “define user research” into Google and there are no definitional results. Type “define market research” or “define human factors” and there are several. This is the problem. As a field, user research is underdefined or ill-defined despite its growing importance and acceptance in today’s complex world. As a derivative of behavioral science and industrial engineering, most people in the field have a sense of what user research might be, but few have proposed a definition.

I offer the following definition of “user research”:

User research is the systematic study of the goals, needs, and capabilities of users so as to specify design, construction, or improvement of tools to benefit how users work and live.

Unpacking this, we find that this definition relies on four critical elements. First, user research must be a “systematic study.” Although much information can be gained by casual observation, the findings derived from such an approach are generally serendipitous and potentially invalid. User research must be thoughtful and well planned. This implies that the researcher has the knowledge of how and the ability to conduct the research, as well as some knowledge of the domain in question and of the context of use. (See later discussion in this chapter of “discount” usability methods.) With the

increasing popularity of user research, many untrained practitioners are taking a customer-centric approach but gathering bad data and making bad decisions.

Second, we find the essence: “study of the goals, needs, and capabilities of users.” Humans have goals and seek ways to fulfill those goals: pick an apple, buy a vacuum cleaner, take a picture, reduce order entry errors, etc. Some of these goals are known, whereas others are more subtle and are only observed under certain conditions. Goals are accompanied by a set of subgoals and plans to reach those goals. Indeed, the primary job of a user researcher is to gather these goals and determine how well they are met by the tool. Although people have goals, these are often driven by the needs and capabilities of users. Understanding the limitations of users (i.e., what they are capable of) is important for knowing if the goals and needs are realistic.

Third, to “specify design, construction, or improvement of tools” separates user research from the purely scientific nature of the research methods or theories applied. User research is dedicated to the construction or improvement of tools for users; theoretical science is not.

Last, we must ensure that the hard work of user research returns to “benefit how users work and live.” The benefit is in the act of creation or improvement of the tools. If the benefit of the research returns to someone or some organization other than the users (e.g., marketing or advertising), it does not mean that it is not valuable – it is simply not user research in the sense being discussed. The benefits can be both direct and indirect, however. For instance, user research can indirectly help the user by providing the information needed to educate a customer service representative so he or she can provide better service. The output of user research must result in a tangible benefit to the work or life of the user in the form of a new or improved tool. There can be research that has mixed objectives.

Frequently, we find that questions about brand are mixed with usability questions. The relationship of brand and usability is complex. Poor usability reflects negatively on brand. Thus, the logic goes that improving the user experience through user research will improve brand perception. The logic is straightforward. However, branding can simply overwhelm usability. Many products (some very difficult to use) are purchased simply because of positive brand perception and brand awareness irrespective of usability. As brand questions become more central to the research process, user

researchers must be mindful when they are “out of their depth.” The researcher can unconfound brand research from user research by decontextualizing (e.g., removing brand information) the artifacts during the research.

Although all of this definition work is good, it may be beneficial to explore how user research is viewed vis-à-vis other constructs in common use.

1.4 SOME TERMINOLOGY AND CONTEXT

User research should be viewed in context with at least two other constructs: user experience and usability testing. “User experience” is a broad term that describes all of the actions, thoughts, and feelings one has when engaging with a product or service over time. “User research” is used to help define what the user experience is or should be, what features the tool has, how the tool works, etc. There are many parts of the user experience that are often not touched by user research (see preceding discussion on branding).

One of the many tools or techniques employed during user research is usability testing. It should be kept in mind that one of the main obstacles in creating a useful and operational definition of user research is that user research is frequently confused with the tactics employed to do the research. The name for this is metonymy: taking an aspect of a thing and confusing it or associating it with the thing as a whole. Usability testing is not user research any more than capturing beetles is entomological research. Usability testing is an invaluable tool in user research, but it must not be confused with user research in total. With this confusion, comes an unfortunate simplification of the field into a single technique. A simplification that is easy for those outside of the user research field to latch on to. In fact, much of what is discussed in the remainder of this book is about tactics, specifically the tactic of usability testing, but that is only because it is the best known and most widely practiced method in user research.

When done well, usability testing is a powerful tool in understanding users’ goals, needs, and wants. Usability testing is key to user research; learning and applying the techniques are important. In addition, usability testing must be governed by proper research methods and controls to produce valid and reliable results. Usability testing is thoroughly covered by a number of key resources (e.g., [Rubin & Chisnell](#),

2009); in this book we filter user research and usability testing through a global lens.

Often, user researchers get the charge to improve a product's usability, but many people fail to differentiate usability from utility. One can employ user research to gain an understanding of features that would increase a product's usefulness (i.e., utility), as well as its usability. It is crucial to understand whether the research is focused on utility, usability, or both. Utility and usability are often quite complementary but they are independent. Improving usability can make things more useful, but not always. Improving utility can make something more usable, but not always.

Further complicating how we understand usability is that there is confusion between usability as process (testing) and usability as attribute (e.g., a usable system). We understand and improve a system's usability by doing a usability test. As practitioners we use "usability" rather fluidly and the distinctions make sense, but to those outside the field it can be bewildering.

There is nothing that risks the credibility of user research more than the improper application or execution of "discount usability" (testing) methods. Discount usability testing methods employ informal rapid tests with small sample sizes. Although involving users is almost always beneficial, the use of discount methods greatly increases the opportunity for research bias, and sloppy execution will render the results unusable or, worse, wrong. With discount methods, the consequence is that the researcher may be entirely unaware that the results are invalid and come to false conclusions. Such methods are often taught as part of seminars and week-long classes that fall short in training would-be practitioners about proper controls and techniques. By analogy, anyone with a paper and pencil can draw a floor plan for a house, but that does not make them an architect. Similarly, anyone who can interview or test users is not a user researcher. Professional user researchers spend years in university studying the research, learning the theories and methods, and training in how to conduct research; two weeks of training simply cannot impart sufficient knowledge and experience. Overly simple methods merely magnify potential problems. And to foreshadow the larger context of the book, naiveté about language and culture coupled with poor execution is a recipe for failure. The purpose of writing this book is to ensure that this does not happen.

Usability testing is but one of the methods and tools that may be used to study user behavior. Other new and innovative methods for global user research are cataloged in Chapter 6. User research should use any and all reliable and valid means to understand how people interact with their environment. User research strategies and tactics change with developments in technology and advances in methods. These are discussed in the next section.

1.5 DYNAMIC NATURE OF USER RESEARCH

If we try to confine user research to the previous definition, we immediately encounter some problems, not so much for insufficiency of the definition but rather for the dynamic nature of the domain.

Fueling the field of user research is the pace of technological innovation. The pace of innovation impacts user research in several ways.

1. *New tools.* Technological innovation also helps us develop new and interesting tools for research. User researchers are constantly finding innovations afforded by the technology. For example, the recent availability of low-cost eye tracking equipment has accelerated the use (and misuse) of eye tracking.³
2. *Specialization.* Technological advances mean that some user researchers will specialize in a domain (e.g., web or mobile) or in a skill area (e.g., remote testing).⁴ This will have the effect of stretching the definition of user research.
3. *Complexity due to convergence.* Technologies once considered discrete are converging. For example, there is a development of technology ecosystems whereby an interface in one domain is used to control behavior in another. This convergence can be seen when you pay for parking meters with a cell phone, log in to a DVR from a Web site, or wirelessly update your blood pressure readings in your personal health record.

³Bojko (2009) goes into detail about how heat maps derived from eye tracking technologies are incorrectly used and used for the wrong reasons: "In other words, the biggest danger involved in creating and reading heat maps is that we are often unaware of what we do not know, and thus we do not look or ask for the missing information."

⁴See Chapter 6 for a thorough treatment of remote testing.

4. *Awareness of uneven rates of growth.* People are learning new technologies but not at the same pace that the technology is moving. To exist in this increasingly complex world, users' knowledge, skills, and experiences must be broadened. However, people are still fundamentally bound by their psychology – technology has not changed that yet. We can still only keep seven plus or minus two things in our working memory (Miller, 1956). We do not innately possess knowledge of how to use Photoshop. We see daily innovations in tools and technology and no one can keep up with or understand it all. The point is that user researchers must be aware of how vast the difference is between the user community's knowledge and skills, and the artifact being tested, even if the research sponsor is not aware.

Thus, what is central to global user research is how to understand and unify the wants and needs of a diverse set of users based on culture, language, experiences, and technology literacy in a dynamic world.

Technology is changing faster than we (collectively) can learn and absorb the plethora of tools. Thus, talented designers are needed to make the technology more accessible and understandable. These are all serious and exciting challenges to user researchers. These challenges drove *U.S. News and World Report* to mention "usability experience specialist" as one of the top jobs for 2009 (Nemko, 2008).

Although the practices and principles of user research are sometimes thought to stand alone, they actually derive from, coexist with, and complement a number of other domains that take human behavior as their focus. In the following section, we discuss a few of these and explore how user research relates to them.

1.6 USER RESEARCH AND OTHER DISCIPLINES

User research has its roots in social sciences, and it borrows heavily from many other disciplines. It is rich in methodologies adapted from behavioral sciences, engineering, computer science, and architecture. As user research matures, it will continue to borrow from evolving methods in many disciplines as well as develop methods of its own. As a consequence, new tools made available by new technologies will push the definition of user research. However, user research per se is not about a technology or a method; it entails learning about the evolving user needs and user capabilities.

Next, we explore how user research fits with other related areas.

1.6.1 Psychology

Much of the essence of user research centers on the translation of human wants, needs, and capabilities. Psychology (particularly cognitive and experimental) offers not only the underlying science but also much of the research methods. There are extensive volumes on the theory of cognition, perception, and linguistic behavior, and also practical derivations (Wickens & Hollands, 2000) that serve as touchstones to anyone wanting to tie back the practical with the theoretical. For instance, applications of signal detection theory and decision theory can prove invaluable to user researchers.

Psychology also provides research design methods with an emphasis on statistical control. Something as simple as usability testing with multiple devices and multiple tasks requires knowledge of research methods, such as Latin squares, to ensure valid outcomes. As another example, one of the favorite tools of many user researchers, card sorting, is often analyzed in an inexact or imprecise manner – looking at (i.e., “eyeballing”) the outcome matrix. However, mathematical psychology provides multivariate methods (e.g., cluster analysis and multidimensional scaling) for complex and sophisticated analyses that reveal structures that are simply not available through visual inspection alone.

Psychology offers a solid foundation and a tool set, but it is insufficiently predictive to deal with often the simplest of problems faced by the user researcher. Psychology does not give us the calculus to compute whether an individual user will enter “John” into the phone book of “Phone A” faster or better or with more satisfaction than into “Phone B,” nor is it able to tell us why one group will enter this information any better than another. User research must handle these problems pragmatically.

1.6.2 Anthropology

Anthropology seeks to understand and describe human behavior on a cultural and social level. Because of its emphasis on the social and cultural, its importance to global testing is obvious. There are legitimate concerns about exclusively conducting user testing in a lab environment because people may behave differently in a controlled setting than they would in the so-called “real world.” Thus, another of anthropology’s contributions to user research lies in the ecological methods of naturalistic observation or *in situ* testing.

1.6.3 Marketing research

The line between marketing research and user research is quite indistinct. Marketing research offers rich quantitative (e.g., surveys) and qualitative (e.g., focus groups) methods. As its outcome, marketing research seeks to uncover features, functions, and messaging that will entice consumers to action (typically, purchase behaviors). Although marketing research involves the perceived material “need” or the utility of a tool (e.g., a toaster for toasting bread), it does not often sufficiently address the usability of the tool. Marketing research may discover that “feature X” is needed or preferred or desired on “widget Y,” but it does not necessarily focus on how to implement this feature. Furthermore, by definition, marketing research focuses on the market and not on individual users within the market.

User research, by contrast, does deal with goals and needs, but it deals with needs at a more microscopic, and perhaps esoteric, level. User research also focuses on the usability of the tool in a way that marketing research does not. None of these is an absolute but consider three different dimensions: behavior, attitude, and opinion. On a continuum, user research deals more with behavior than market research, and market research is into attitude and opinion more than user research.

There is also a key difference between projected opinions and opinions informed by performance. In market research, participants provide opinions based on mock-ups or descriptions of an artifact, such as “I would use that. I would pay x for that.” In usability studies, the participant performs a task and the researcher obtains performance measures plus any opinions formed while using the artifact. Although not perfect, using the artifact provides higher ecological validity for opinion than when the artifact is merely observed.

Nevertheless, user researchers can learn from the marketing researcher’s extensive and sophisticated use of survey methods as well as behaviorally directed focus groups and in-depth interviews. Smart organizations would do well to place user research and marketing research side by side, each with its complementary contributions to the enterprise.

1.6.4 Human factors and industrial engineering

When some think of “human factors,” they often associate it closely with physical ergonomics. User research shares many common elements with the more cognitive (as opposed to physical) side of

human factors and is perhaps a more elegant term than “cognitive ergonomics” or “human factors psychology.” If there is to be any differentiation, it is a perception that human factors as a field – having a strong tradition in transportation, power engineering, and manufacturing – has little to offer developers of touchscreen mobile devices, flash-based applications, and late information-age product development. The perception is real but disingenuous. User research inherits most of its knowledge, tools, and methods from human factors.

Industrial engineering’s (IE) rich heritage in process engineering and tool design and building provides not only theoretical underpinning but also the necessary quantitative discipline to what is often seen as a “soft science” (i.e., psychology). IE concerns itself with the analysis, design, improvement, and control of production systems, but it does draw on the behavioral and physiological sciences. When user research goes beyond the individual and looks at the user in the context of a system or process, IE offers techniques to optimize processes and flows.

1.6.5 Computer science

Computer science has introduced techniques suitable for eliciting requirements and engaging users in the tool development process. Some of the more notable ones are joint application design (JAD) and participatory design.⁵ These tools are not so much grounded in a theoretical understanding of user needs as they are in the practical extraction of what people can verbalize.⁶

JAD actively involves users from application user communities and the system developers, in a structured way, to rapidly acquire business requirements in a workshop setting (as opposed to a series of in-depth interviews). JAD, as a political tool, gets stakeholders involved in the application design process and adds momentum to the project. The outcome of the JAD sessions usually becomes a business specification document that details all of the key functionality as articulated

⁵The origins of participatory design come from Scandinavia in the 1970s. Participatory design has been applied in a variety of disciplines. Some of the more extensive use has been in the computer sciences.

⁶Note that there are some excellent researchers in computer science doing work in human–computer interaction; for one example, see Nardi’s work on activity theory (Nardi & Kaptelinin, 2006).

by users during the session. JAD is a positive contribution to user research.

Participatory design seeks to empower users during all phases of design and development, allowing them to make critical design decisions. Ehn (1988) explains the concept as follows:

There is a very significant differentiation between user-design and user-centered design in that there is an emancipatory theoretical foundation and system's theory bedrock on which user-design is founded. Indeed, user-centered design is a useful and important construct, but one that suggests that users are taken as centers in the design process, consulting with users heavily, but not allowing users to make the decisions, nor empowering users with the tools that the experts use.

It is not the intention to cover participatory design in detail. In actuality, the concepts of participatory design and user research are not antagonistic; participatory design is a technique of user research that emphasizes decision making in the hands of the users. As a theory, this is good; in practice, users generally are unaware of core knowledge of human performance. Users simply do not know, for example, how typography affects readability, both positively and negatively. Leaving certain critical decisions to users can have negative effects.

At the extreme end of participatory design is a distributed notion known as “crowdsourcing.” Crowdsourcing is gaining popularity as a means of social interaction and decision making to design artifacts from T-shirts to tennis shoes to information systems. Crowdsourcing will gain in appeal and sophistication, largely because it is very low cost in both time and money, and it can yield intriguing results.⁷

One final note: In the domain of application development there is sometimes confusion between usability testing and user acceptance testing (UAT). These are two very different things. Usability testing, as discussed previously, is either discovery or confirmatory based; it is often designed to find new features, compare functional or methodological aspects of different designs, or identify features and functions that are not working well. By contrast, UAT's main purpose is for a

⁷I am reminded, however, of the aphorism that a camel is a horse designed by committee.

system's users to validate that the delivered application meets the *a priori* specified functional requirements. Utility and usability play little, if any, role in this process. There is neither the room nor the desire for uncovering new and useful features or changing the controls to improve the usability of an application in UAT.

With some of the foundational and contextual items out of the way, we can focus on some of the organizational and implementation models of global user research.

1.7 MODELS OF GLOBAL USER RESEARCH

Global user research is practiced widely by many organizations. Software companies such as SAP, Microsoft, and Oracle all have active global research programs. Similarly, mobile telephony providers such as Nokia, LG, Vodafone, and Motorola are constantly improving their products' global appeal through user research. Many other global companies in areas from health care to banking and energy conduct user research in their important markets. If financial forecasts are to be reached, products must be well received, implying solid user research and high ease of use.

Companies concerned with product usability have a central user research or user experience group located in or near their product development centers. These central research groups set enterprise standards for user-centered design as well as standards for user research. User researchers within product or "line of business" organizations apply these standards to products and services in their business unit. Should a new release of a product developed in India need to be tested in the company's key markets in Russia, Brazil, and Germany, for instance, the lead user research team will either (1) contact the central team for global support for the research and this central team will arrange for the global testing or (2) contact the local teams in each of the countries and organize the local research teams. This model works well if the local research teams exist in all markets and if they have the required expertise and resources. If not, the lead team may need to contract services of an outside agency.

Many of the larger user research agencies can provide research services on a global basis for their customers. Larger agencies already have established relationships with other suppliers throughout the world (e.g., the User Experience Alliance; www.uxalliance.com) and have quality standards in place to ensure consistency across markets.

Often, outside agencies have more experience dealing with the myriad of issues that need to be handled in global research and can manage global projects cost-effectively. How to locate quality resources and coordinate logistics across the teams is the subject of Chapter 2.

Let us now turn to this book.

1.8 WHAT IS THIS BOOK ABOUT?

This book is intended to be a practical guide for user researchers, user experience professionals, market researchers, product designers, and others who conduct user research globally. Many of the techniques, approaches, and lessons taught are applied globally as well as locally.

In discussions with others in the field, it seems that practitioners often believe they lack sufficient knowledge and preparation to conduct quality global user research. The purpose of this book is to share practical, no-nonsense information from a number of leading user researchers throughout the world, each with a broad range of experiences. Much work has gone into documenting procedures for usability, observation, and other types of user research, although few authors focus these procedures with an eye toward global user research. Because many products and services extend beyond borders, researchers must be able to effectively cross those borders. Communication among professionals is imperative so that we can learn from each others' experiences and advance the practice of high-quality international user research.

We will also cover emerging trends in research, such as remote user experience testing and the managing of teams distributed across cultures. This book includes hard-won, best-practice advice in key topics as well as case studies to demonstrate the real-world application of strategies. Further, we have examples of issues encountered when conducting global research, as well as approaches to dealing with these issues. Problems, solutions, anecdotes, case studies, and outcomes from actual practice illustrate actionable tactics for the practitioner. This book will not cover the globalization and localization of user interface design or other design topics. There are several excellent volumes on globalization and localization of design (e.g., [Esselink, 2000](#); [Yunker, 2002](#)).

The chapters are arranged according to a typical project timeline so that the reader will be able to reference strategies pertaining to each

step of a project. There are some repetitions across chapters. Where they exist (e.g., between Chapters 4 and 5), they are minor and only serve to review or preview a more complete treatment in the other chapter.

- In Chapter 2, Bosenick and collaborators take us through the issues and considerations when planning global user research. Although it can be complex, their considerable experience provides the reader with a steady hand in navigating the seas of project planning.
- Bojko and colleagues, in Chapter 3, turn from planning to plans. The most critical aspect of any major project is to create a plan that ensures that the research is done correctly. The considerations can be complex, and Bojko et al. weave a path through them.
- Chapter 4, by Gaillard et al., gets into the essence of the fieldwork for usability testing. This is the area where we see potentially the greatest effects of the multidimensionality of culture: It impacts not only the user vis-à-vis the tool but also when researchers from different cultures interact.
- Herd et al. lead a discussion in Chapter 5 about data collation, analysis, and reporting of research results. This area is problematic at any time, but it can be particularly troublesome when working across borders. Chapter 5 makes the job easier by providing a very practical approach.
- After having spent most of the time, to this point, on usability testing, Chapter 6 provides a survey of methods by De Boer. The diversity and emergence of various methods point to the richness of how user researchers can fundamentally improve the world and design the best tools possible.
- In Chapter 7, we deal, in an encyclopedic way, with sharing research knowledge in different countries. Although we have included a select number of countries in this volume, the companion Wiki to this book (<http://www.GlobalUserResearch.com>) provides a broader set of countries.
- In Chapter 8, Rosenzweig provides a perspective for how involvement in professional societies can benefit global user researchers. There are many ways in which researchers can

leverage professional networks to improve their skills and extend their reach.

- Despite the aim of this book being more practical than theoretical, some level of theory is important in giving us the underpinnings of what we need to know to have a rounded perspective global user research. In Chapter 9, Snitker summarizes the current state of this research and provides a short reading list on key topics.

Conducting user research in this time of technological change is thrilling in and of itself, but intersecting user research with global dimensions is truly invigorating. Where once user researchers saw the improvements they made impact thousands of users, going global amplifies those improvements significantly.

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Project management

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2.1 INTRODUCTION

Good project management is a key success factor in any project, especially concerning international projects. If the project management fails, the entire project is likely to fail. This chapter discusses the following:

- Engaging stakeholders in research activities
- Planning international studies
- Finding high-quality local resources
- Managing an international project team

2.2 ENGAGING STAKEHOLDERS IN RESEARCH ACTIVITIES

2.2.1 Importance of engaging stakeholders

There is often more than one stakeholder in a project: the stakeholders paying for the research (the key stakeholder) as well as those in marketing, information technology, customer support, etc. who have action items once the research is complete based on the outcome of the study. Furthermore, for global projects, stakeholders often extend to the local offices of the client. Because there can be friction between the home office and the local offices over “ownership,” these local stakeholders can complicate the work of the local team (i.e., the in-country team) and make local fieldwork difficult by creating many issues for local teams. As user research consultants, we have had many cases in which local stakeholders disagreed with the purpose, method, and execution devised by the sponsoring home office.

The local stakeholders thus believed that the testing research was not going well or (worse) felt threatened by the project itself. Rather than challenge the home office or “global” stakeholder, they challenged the local researchers on methods, capabilities, translations, credentials, knowledge, and recruitment. These are poisonous situations. The worst thing that can happen to the lead team (i.e., the team commissioned by the key stakeholder) is to be “blindsided” by the stakeholder with problems that the local team had heard previously but did not divulge. Often, the local observers do not have the imprimatur to demand changes to test protocols, and the stakeholders have to be involved to “manage” their own staff. It is for this reason that the lead team must be in close contact with the local team on technical points as well as the softer, social side of the interaction of the local team with local colleagues of the global key stakeholder.

For these reasons, stakeholder engagement throughout a project is integral to success. There are many examples in which the stakeholder attended a single user session and then insisted in subsequent meetings that “this specific user did it like that.” One session cannot convey the complete picture. Applied to global research, this simplistic problem could mean that the one individual user from New York represents all users in the United States, China, Brazil, and Germany. It is critical to engage the stakeholder and provide access to data collection that does not have the “sample size of one” generalization.

The more a stakeholder participates in the research, including observing as many sessions in as many countries as possible, the greater the potential support for, and acceptance of, the study’s findings. The likelihood of actionable change resulting from the findings is increased, and cultural differences, if found, can be addressed. If the stakeholder is unable to attend sessions abroad, he or she should communicate the results either formally or informally on a frequent and consistent basis.

When a stakeholder is not engaged in the research, it is often due to a very busy schedule and not lack of interest. However, there are occasionally uninterested stakeholders. This could be because the stakeholder is obliged – because of organizational process requirements – to do user research in order to move to the next phase. Uninterested stakeholders often fail to energize project teams, resulting in team members simply going through the motions to “check a box.” The challenge for the research team is a political one: Motivate the stakeholder to become more involved and understand the value in what is being done.

Lastly, there is the group of stakeholders who are at cross-purposes or disagreement with the research team. Antagonistic stakeholders can make research miserable because it seems that the credibility and professionalism of the project team are being called into question. Project leaders must be firm in defending their methods, strategies, and tactics. A healthy measure of diplomacy is called for when confronting antagonistic stakeholders, however, it is vital not to compromise the integrity of the research.

2.2.2 How to get and keep stakeholders involved

Consider the following measures as a minimum course of action to engage stakeholders:

- Establish and maintain a pattern of solid communication of the relevant details of the project from the outset. Carefully listen to the stakeholders' needs and provide good counsel in planning all aspects of the study.
- Inform stakeholders, as soon as possible, when important events (positive or negative) occur. If the problem is negative, offer a solution along with the information. Keep stakeholders up-to-date throughout the project. Do not wait for stakeholders to ask how the project is going. Give updates on all relevant milestones, such as on recruitment progress, organization, and findings. Communicate closely at the start of the field phase. Build time into the schedule for a pilot session in each separate location. After each pilot session, debrief with the stakeholders and the local team. Ideally, stakeholders will be present for all the sessions. Offer a debriefing after the field phase and data collection has been completed. Present the results in person at the project conclusion if possible.
- Consider a dashboard-like Web site to communicate preliminary findings as they are acquired.

Providing a continuous flow of data may give stakeholders a level of comfort so that they feel they can trust the lead researcher and all the project members. It is important to strike the correct balance between involving the stakeholder in all important aspects and leaving time to attend to project details while at the same time taking care of things to avoid needless worry. Use this as an opportunity to build a rapport with the client through the continuous flow of information and learn the "hot button" points that resonate with stakeholders.

2.3 PLANNING INTERNATIONAL STUDIES

As with any large-scale endeavor (research or otherwise), careful planning is essential to success. With a global user research project, there are many factors that must be managed to ensure that the study and output are consistent, reliable, and valid. This section describes the planning activities involved when conducting global projects. Coupling this chapter with the information contained in Chapter 3 on preparation will provide project leaders and researchers with clear steps to effectively manage a project up to fieldwork and data collection.

However, perhaps more important to the lead researcher is to learn the underlying nuances and actions that are correlated with successful projects. Thus, this section provides the rationale behind the recommended approach to managing a global study, as well as offers lessons learned at critical stages to help guide and navigate a study from start to finish.

Although you can only control so much of what happens in a research study, what can be controlled is the preparation. One tongue-in-cheek way to think about this is that you can only prepare for 50% of what can go wrong in a global study – and you never know which 50%. Although the exact percentage is more a question of severity and stress rather than counting potential issues, the underlying assumption is that global research is often incredibly and frustratingly unpredictable. Within a research study, there are many variables in constant flux: personalities, languages, cultures, environments, standards, etc. Ultimately, the lead researcher is responsible for the final result and must overcome these inherent challenges.

If you can plan, prepare, and anticipate 50% of the problems that may arise, then you and your team can be proactive and control what you will face. Being aware of potential areas of weaknesses in your plan is good preparation and a solid preventative measure. Proactive and anticipatory action is time well spent prior to fieldwork. Once fieldwork has begun, time is the most valuable resource. Time is even more valuable for international studies than local studies because the necessary time to complete activities can be longer than expected. It is much more difficult to be efficient when variables such as an unfamiliar location, and foreign customs and assumptions are introduced. Consider a simple situation in which you need to get something for testing the next day. Whether it is a broken power cord or a specific type of paper, which can be readily found in your home country, it may take much more time to acquire abroad and may require the

assistance of local resources. These technical problems can be exacerbated for global studies because of different standards in use for electrical power, paper sizes, weights and measures, etc., not to mention any language or terminology differences that are present when searching for items as simple as an adapter. In short, when unexpected problems arise, they tend to have a snowball effect and slow down other scheduled activities related to a project – a situation made worse when in an unfamiliar location. Spending time before a study to anticipate some of these problems will go far in ensuring that the study will run smoothly overall, not to mention reduce the stress levels of team members.

It is important to keep the distinction in mind between planning and having a plan. Planning focuses on the thinking around the project and yields a set of specific tactics and activities. It is where trade-offs are evaluated and decisions assessed with the goal of producing a plan. This process of planning is described in Chapter 3 and discussed as preparation. For this section, the term *planning* describes the decision-making process that occurs before setting specific plans into motion.

2.3.1 **Assess resources and capabilities before assigning responsibilities**

When planning a global study, you must fully understand your available resources. This may seem obvious, but careful assessment of individual team member capabilities and experience is key to optimal resource planning and to limiting project risk.

One of the main duties of the lead researcher is responsibility for data integrity. Identify areas of strength and weakness in each member. This includes the lead team as well as the local teams that will support the project. Look for signs of risk, such as inexperience or communication that is neither responsive nor comprehensive. Inexperience can often be overcome with awareness, a thorough preparation plan, and oversight by other experienced team members. However, communication that requires repeated prompting to yield responses or is vague may be cause for high concern. There are many talented researchers who are simply poor e-mail communicators, but when face to face communicate well and produce excellent research in their own country. The challenge is to manage risk for international research projects. To minimize the risks in communications, you should check with others who have worked with these researchers. In addition, address

and resolve communication issues early in the project life cycle and clarify expectations. The following are other considerations:

- **Replacement resources:** If a team member becomes ill or is unable to perform his or her duties at any time during the project, does the local team have sufficient resources to replace or make substitutions? Ask local teams for contingency plans for given scenarios, and review their past experience in similar situations.
- **Consistency:** Ensure that you have consistent resources in preparation, data collection, and analysis. It seems obvious, but on more than one occasion, our consulting practice has experienced unannounced changes of resources during the project. In those cases, the change was a voluntary action by the local team for logistical convenience (i.e., the resource change was not due to illness or other unexpected circumstance). Whether the resource change is due to illness or local team decision making, the research team needs to take immediate and corrective action. However, not all resource planners think alike – a fact that reinforces the benefit of having a member of the lead team travel to the test location (discussed later) so he or she can ask the right questions and attend to details. Having a presence on-site can often benefit your project because it allows for more open discussions about the subjective preferences in logistics and planning of the local team.
- **Training and philosophical approach:** Through discussions with the assigned local researcher, experience will be better known and the team will have a good idea of how much training will be necessary. Vague answers to specific questions and situations will require more training by your team to ensure that the data collection is consistent in approach and technique. You should also assess the professional experience of the local research team via references and communication. Ask the local resource about philosophies and best practices. Pose scenarios and ask their concerns about research techniques. For example, if the technique is qualitative usability testing, ask the moderators about their concerns when probing. What do they worry about? The answer should be to maintain vigilance and refrain from leading the participant. Ask if their typical research project is more quantitative or qualitative. Do they tend to do more attitudinal research (e.g., focus groups) or behavioral research (e.g., usability testing)? Do not hesitate to

ask direct and detailed questions that relate to objectives for the project at hand. These questions will help determine how closely aligned your research philosophies are and how much effort you must invest to achieve the desired result.

- **Facilities:** Assess the capabilities of the facility based on the technological needs of the study and the needs of the stakeholders. Typically, mismatches occur in technology within each facility, but other practical considerations are often very important as well. Will there be an interpreter? Can the facility stream the sessions to remote observers? Do they use backup recordings? Is there enough space for all the observers? Is there a breakout room available for the teams? Review the project objectives and logistical needs to uncover potential gaps. The differences are amplified when having to secure facilities in several countries. The hard and soft requirements must be understood and communicated so proper planning can occur. You should weigh the choices you make when selecting facilities with similar capabilities against the effort required to achieve consistency from location to location.

2.3.2 **Decompose the research objectives and assign resources**

Once resources have been assessed, regardless of whether you work at an agency, consulting firm, or you are an in-house researcher, a cost-benefit analysis must be performed to evaluate the expertise and capabilities of your lead and local teams. Assignment of resources can often be based on budgetary constraints as well as expertise or optimal allocations; thus, knowing the capabilities of each resource allows you to mitigate risks.

Resources must be assigned to each of the project activities, such as the following:

- General project management
- Preparation (independent of location)
- Translation of material
- Stimuli acquisition
- Local preparation
- Data collection
- Data entry and data cleansing
- Analysis
- Presentation

Once the resources have been assessed and assigned, specific and actionable plans can be implemented. The activities related to plans are discussed in detail in Chapter 3. However, even with a formal plan in place, lead researchers should consider having contingencies in place for problems that may arise. Although it need not be explicit, the lead researcher should have some succession planning in the back of his or her mind. The planning process described previously provides a knowledge base to draw upon should changes occur.

2.3.3 Optimize the schedule

Typically, timelines are created based on a key milestone date that needs to be met, such as the launch of the product or service. Scheduling is much more than simply calendaring dates with resources; it becomes almost an art to assign, negotiate, and intertwine all of the factors associated with project management. There are many things to consider for scheduling related to global research; here we discuss four key topics.

First, the ideal initial location for the start of data collection is the same location as the one where your team conducts pilot sessions to prove in the moderator guides. Typically, the language is in your native tongue for completeness and ease. The goal is to focus on the details of data collection to reduce variability and finalize test elements for consistent application to other locations. Now, when the lead research team moves to another country, the focus can shift to localization and in-country variables.

Second, select the first in-country location so that you will be comfortable with the team, facility, and technical support. Although your team can develop plans to prepare local teams and execute them with precision, there is no substitute to starting the research at a location where you have a high degree of confidence in the local resources and facilities. Because you can only prepare and anticipate for some events, the first location should be a tactical decision. Be judicious in where you set the location – choose it so that you will be most able to handle challenges, whether they are unanticipated or anticipated. Correct these issues and set preventative action to limit the impact on other locations.

A common unforeseen problem is with the test stimuli. For example, assume you are investigating the prototype of a software application. The prototype worked flawlessly during pilot testing in the corporate office, but during review and preparation activities with the local team, the prototype performance was very poor. Instead of a response

time of two or three seconds, the response time is ten seconds. This represents a clear difference between stimuli at various locations. Uneven response times will introduce an unacceptable artifact into the research that must be addressed.

This example reinforces the benefit of selecting a location where you are comfortable with the team, facility, and technical support. If the local team has a well-equipped technical lab and staff, then there are additional resources that can be used to focus on solving the response time issue while the local team continues its review and preparation activities. Moreover, if the local team is experienced and the technical setup is similar to the lead team setup, then little additional technical preparation time will be necessary and the problem can be identified early on. Because this technical issue will most likely occur in subsequent locations, problem resolution is critical. The takeaway point is that an unforeseen problem can be much more difficult to overcome if the research team has concerns or issues with the technical and research skills of the first in-country location. This is the rationale for making an educated decision on the first location of the study.

Third, review the timeline to determine if data collection can occur in a series (i.e., one location is followed by the next location) or if the timeline is so constricted that data collection must occur in parallel (i.e., teams collect data at multiple locations at the same time).

When conducting global research in parallel, planning must account for simultaneous and independent elements in motion.

In parallel situations, planning must consider resources and resource allocations with care because the orchestration of activities can be complex. Situations in which parallel data collection is required highlight the benefit of assessing the strengths and weaknesses of each resource first. Integrity of the data collection is critical and at greatest risk, and effective planning will determine the success of the project.

Start from a position of strength. Select the first location to be one of high confidence because it will allow the team to focus on the core study elements and not be as distracted by the problems that can arise due to unfamiliar or less than ideal locations. As the team learns how the study and session will be executed, the subsequent locations will be easier.

The team members who prepare, observe, and work on the first location are the members who then depart to different locations for

parallel testing. Having the lead team members travel to parallel locations improves consistency because the teams will be synchronized. Keep in constant contact with each team and focus your attention on achieving consistency in approach across test locations.

The challenge of parallel data collection can become even more complex when the schedule necessitates simultaneous sessions within the same location (i.e., simultaneous testing sessions using more than one test team in a location). In this example, the purpose is to increase the number of tests performed in each location, thereby reducing the number of calendar days in each location. Thus, two (or more) test teams are required in each location.

The recommendation for parallel studies requiring simultaneous sessions in each location is exactly the same: Have team members active in the preparation activities and then have them work together in the first location. When the teams split off to different testing locations, the teams will have a common understanding and be in sync. If it is not possible to have team members work jointly on the preparation due to scheduling constraints, then the plan must be very explicit and precise to allow for the proper briefing of all lead team members going to the in-country locations. As described in Chapter 3, the plan for preparation will be descriptive and should include objectives matched to tasks/questions along with sample sessions from each location to better prepare the teams for consistent data collection.

Fourth, consider location-specific items, such as holidays. Again, in the planning stage, your focus should be on getting the resources and overall test plan in order. Do not focus on setting specific plans for each activity because they will naturally occur after the high-level planning is complete.

Consider the example of setting test dates with facilities. In the planning stage, you need to evaluate location-specific holidays and delays to obtain the necessary entry visas. This is part of planning. You need to manage and plan for these challenges before setting the teams in motion.

Consider the following when setting the schedule:

- Allow sufficient time in the schedule for travel mishaps. Weather-related travel delays are frequent and unpredictable. Try not to force tight arrival and departure times; some buffer may be needed for travel emergencies or delays. For example, from personal experience, using the airline recommended, minimum connection time of 45 minutes at the airport in

Frankfurt, Germany, has left one of the authors breathless and harried on multiple occasions. For safety's sake, it is beneficial to carefully manage connection times and seek information about typical connection times and other local nuisances that impact time and effort allocations.

- Consider customs delays when prototypes or test stimuli have to be sent to test locations. Ideally, the team has all test stimuli prior to the start of the project. Often, however, development or creative teams require additional time and introduce delays. An easy solution is to send the test stimuli via overnight delivery directly to the test locations rather than to the test team. However, there is always the chance that the stimuli will be held up in customs – a risk that should not be overlooked due to the often time-consuming process required to clear customs. Two examples are discussed here. The first involves a study in which the device required the use of tiny vials of water. The vials were sealed and part of the study was to assess how intuitive the caps were to remove. The case of vials was shipped two weeks in advance of the study from Europe but was held up the U.S. customs office. Despite all of the proper documentation, customs agents requested more information. Given weekends, holidays, and time zone challenges, providing verifiable answers to the exact questions requested by U.S. customs took all but one day of the two-week buffer built into the schedule. Another example from personal experience involved a new device to be tested in select Asian markets where the devices were held up en route. The test team was already on the ground at the first location, and timing was extremely tight. The good news was that spare devices were available, but someone had to carry the devices to the first location. Luckily, after a plea across the organization for help, it was determined that a trusted employee would travel to the test location within the next 24 hours, so the devices were hand delivered to him at the airport just before he boarded the international flight. He was then met at the hotel close to midnight and the devices were handed over just in time for the study the following day. This was a situation in which the devices were in high supply within the client organization, but this is not typically the case, so be aware of risks when shipping directly to the test location.
- When assessing resource capabilities, also review the length of time necessary to obtain entry visas based on the team

member's nationality and testing location. Some visas require invitation letters and involve complicated or long approval periods depending on the nationality of the traveler. This time needs to be part of the schedule and is a consideration when assessing team allocation and resources because some team members may not require an entry visa.

- Evaluate the impact that days of the week may have on the schedule. Knowing the capabilities of your local team is critical again because some may have limitations on both hours per day and days of the week for data collection. The schedule needs to coordinate other activities and accommodate these constraints.
- Review with the local team any holidays or potential disruptions that could impact the study. For example, weather can be a disruption during the monsoon season in India, where it is advisable to consult lunar calendars for high-tide periods in cities such as Mumbai that are at risk for flooding. Also, check holidays such as the Golden Week in some Asian countries that might make it difficult for recruitment. Check for events that may be city specific, such as festivals or sporting events, because non-natives may not appreciate the local importance of events and the disruption they can cause to fieldwork schedules. If these events cause roads to be blocked, the impact will be on attendance or show rate, and more participants may need to be recruited, which can increase the number of test days necessary. Overall, the specific dates and days of week selected can be calculated with some days having less risk than others.

2.3.4 Plan for the unexpected

To illustrate the point that preparation is important, consider the following:

Preparation was complete. Everything was ready and had been tested prior to data collection. The first session began and the technical setup failed. The team busily tried to identify the source of the problem and correct it while valuable session time was lost. When the problem was resolved, the team naturally breathed a sigh of relief. The problem was unexpected and the stress level was high given the timing of the equipment failure. Then the client came into the room, looked around, and saw all of the work that had just been done, as well as some loss of data. Everyone in the room was extremely stressed. The client, who was a veteran of user research,

looked at the team, smiled, and simply said, "This is research. It is always full of problems and unexpected events. What is important is how you overcome these challenges. So I will leave you to do what you need to do."

The reality is that research is challenging and sometimes quite stressful. With so many moving parts, problems happen. Global research projects add another dimension and make efforts to maintain consistency complex. Good planning is the prescription to overcoming issues and increasing the likelihood of success.

2.4 FINDING QUALITY IN-COUNTRY RESOURCES

There are many issues in finding resources abroad to assist in user research. The following example highlights a few of the problems in trying to locate resources.

Several years ago, SirValUse Consulting, based in Germany, was asked to conduct usability testing in Germany, China, and Egypt. Germany was obviously easy to cover, as was China, where we have a trusted partner. Egypt was not quite as easy because we had never before worked there.

The lead researcher started to search for a usability consultancy by using Google. Search terms such as "usability Egypt," "usability testing Egypt," and "usability Cairo" were used, but these search results did not identify a company solely dedicated to usability research and testing.

That said, a few companies (especially those dealing in IT) featured the term *usability* on their Web sites. Because an e-mail address was included on all these Web sites, the lead researcher immediately sent a general inquiry as to whether a usability test could be conducted in two or three months. None of the ten e-mails sent received a reply. Because similar inquiries to other countries invariably received replies, the most probable reason was the recipient or firm did not really "do" usability research but merely claimed to incorporate usability into their practice.

Next, we turned to universities. The problem here was that the topic of usability doesn't appear to play a major role at Egyptian institutions of higher education as yet. Moreover, due to the timing of my request (i.e., during a school break), it was not surprising to find that these e-mails also did not receive a reply.

The Usability Professional Association (UPA) Web site did not list a single company in Egypt or the surrounding area. Unfortunately, at the time, no one within our network of colleagues had run tests in Egypt. As a last lifeline, the team lead recalled that Egypt was once a British protectorate and perhaps someone in the United Kingdom might know of such a company in Egypt. A search of the usability mailing list in the United Kingdom produced two hits and inquiries at these addresses that resulted in some possible answers at least.

After some correspondence, the decision was made to use a provider who was a university staff member. This researcher had had experience as a freelancer for companies in the United Kingdom and had performed expert evaluations in the past. The only challenge remaining was to set up a test laboratory because the project required 20 sessions. We decided to bring our mobile lab with us to Cairo, where the equipment would create an observation and test room out of two adjoining hotel rooms.

Overall the project was successful. Challenges included setting up the lab in the hotel, which took much additional time. Moreover, because the project timelines required the fieldwork phase to occur during Ramadan, the testing schedule limited our session times to after sunset. For this project, the lead researcher was accompanied by another researcher from the same firm. This was a tremendous benefit because the freelancer needed more training than expected and the additional consultant was able to spend extra time to ensure that we achieved the consistent data necessary for a successful study.

So how do you find a research partner in unfamiliar locations? The following list will help you identify partners. In our experience, the items at the top work far better than those at the bottom:

- Inquire within your own professional or local usability network.
- Look at firms associated with global alliances such as the UXalliance (<http://www.uxalliance.com>); if the country you are interested in is not listed, ask for referrals from one of the members.
- Ask local UPA groups or usability mailing lists in general.
- If you know far in advance where you want to test, try to contact conference attendees at various professional societies and associations, such as UPA, Special Interest Group on Computer–Human Interaction, and Human–Computer Interaction International.
- Perform a search on various search engines.

- Look at professional association guides (e.g., Human Factors and Ergonomics Society Membership book) to identify members in the local country.
- Look at the UPA consultant list or ESOMAR list. ESOMAR is a global organization of market research companies.

Once you have identified a list of potential in-country providers, how can you tell which is the one you should trust to work with? When you need to find a partner in a particular country, quality is a critical attribute. What are the criteria that can be used to identify in advance whether a usability agency performs good and reliable work?

Table 2.1 provides a set of guidelines for evaluating user research partners.

Activity/item	"Good" reactions	"Bad" reactions
Send out request for proposal (RFP)	Responds within 24 hours and/or sends the a quote within 24 hours.	Reaction takes longer than 24 hours Quote arrives after 4 days
Calculation and timing Tip: Develop a spreadsheet on which you indicate how long each project step (preparation, sessions, analysis, etc.) will take. Give enough background on the research so your potential partner can estimate the effort needed on their part. Check whether the potential partner agrees with your assumptions.	Realistic cost ranges Realistic timing Is flexible with regard to the currency of the quote Does not insist on pricing everything down to the last detail (shows flexibility)	Unrealistic cost ranges (e.g., 5 days of project management for a standard Web usability test with 12 participants). Pricing that is too low can be bad also. It may mean the vendor does not understand the RFP. Unrealistic timing (e.g., more than 4 weeks overall project time for a standard Web usability test with 12 participants)
Questions/additional information Tip: Ask for a sample report, the standard documentation procedure, and a description of the labs. Ask about experience with your test object (e.g., have they tested mobile handsets?). Ask questions about quality assurance (e.g., how do they select suitable participants?).	Puts an emphasis on quality Discovers any potential misunderstandings within the briefing Asks relevant questions about the setup Sends pictures of labs Supports you with travel planning (e.g., directions and recommendations of hotels near the testing venue) Sends relevant (global) industry references Sends sample report	Does not ask any questions even if they have not fully understood your requirement Asks how to deliver standard services (e.g., documentation of the sessions for a Web site test) so it becomes clear they do not have much experience Sends no or irrelevant additional information (e.g., marketing presentation). Sometimes when you send inquiries to multiple vendors, the smart ones ask questions you had not thought of. Those who do not think deeply enough to ask challenging questions should be avoided.

Should I trust my vendor partners or should I travel to all the locations myself? It is very difficult to anticipate everything that may go wrong in an international project. It is even more difficult when requests are made that are counter to what is recommended. Here are some (bad) examples from our experience:

- One of SirValUse's customers reported that a competitor for a test in London flew in a researcher from India to moderate the sessions; the researcher's English was very difficult for the customer to understand and, as a result, the sessions were unusable.
- A German company asked a user research consulting firm to conduct a study in China. The expectation was to have the sessions in Chinese with simultaneous translation to English for the German observers. The consulting firm flew in user researchers from another country who hired local Chinese translators. Sessions included three people. An English-speaking moderator spoke to the Chinese participant through a Chinese interpreter. The interpreter translated English to Chinese for the moderator and Chinese to English for the participant. Is it any wonder the client left questioning the integrity of the data?
- Another company wanted to carry out a test in China. For reasons beyond the control of the project team, these sessions were held in Hong Kong. Because Hong Kong is atypical of mainland China, the tests could not be generalized to represent China as a whole. Furthermore, the sessions were conducted in English, which makes the applicability even more suspect.
- To save costs, a U.S. company decided to carry out a study in Germany. To this end, English-speaking German participants were recruited and the sessions were held in English. However, due to language problems and the participants' difficulties in expressing themselves, the results produced by the sessions were insufficient.

What do we take away? When conducting tests in a second language, recognize that the level of self-reported, second language fluency will vary greatly from participant to participant. At minimal fluency, the ability to freely express one's ideas during a qualitative study may be impaired such that only basic information can be obtained. Thus, consider the return on investment of these types of cost savings, as well as establishing a criteria of fluency that will baseline language and mitigate the risk of data loss.

So, you might ask, "Do I trust vendor partners to do the work without on-site observation during fieldwork or do I travel so as to ensure the

work is done to my satisfaction?" The balance here is quality versus time and cost. Well, the answer depends.

If you have never worked with this vendor partner before, you should go on-site and work with the local team closely. Testing can be done in very different styles with different philosophies so that a general quality check is needed. Take the opportunity during the project to set standards for recruitment, moderation, analysis, and reporting. It will give you peace of mind and enable you to take action immediately if anything does go wrong. Invest extra time and effort in a good briefing – verbal and written. There are more details on this later in the chapter and in Chapter 3. Insist on both a “dry run” – where you act as the participant or you moderate the session – and a real pilot session, even if the local partner thinks this is unnecessary. If the local partner assigns several members of staff for the project, insist that all team members be present for briefing and pilot.

If the project involves a local partner where direct project experience previously exists, then it is probably not necessary to travel; however, the needs of the project may still require it. The following are examples:

- When an important stakeholder or customer is present on-site
- If the project is particularly complex
- If the report has to be produced quickly

The risk of failure can be high if you cannot directly observe the events on the ground. Therefore, we believe that when in doubt (and if resources allow for it), a lead team member should observe in-country testing.

To conclude this section, the question might arise as to whether or not studies should generally be entirely performed internally without the use of local vendor partners. Unless the company has in-country user research staff, it is doubtful whether the necessary local knowledge exists with respect to all of the project planning elements, such as recruitment, localization of test materials, “genuine” understanding of the interviewees, and correct cultural interpretation of the results. For example, the local affiliate office might not be comfortable collecting data, but it might offer support for seemingly “simple” activities such as interpretation. Be cautious; what is simple for work conversation or social interaction is far different from what a trained and experienced interpreter is capable of doing. In addition, there is always the risk that the results will be filtered by their own cultural, corporate, political, and organizational perspectives.

2.5 MANAGING AN INTERNATIONAL PROJECT TEAM

This section focuses on explaining the characteristics of a user research team undertaking international projects. The aim is to explain how to manage the relationship between the lead team and the local team. It is important to understand this section because the success of the project will mainly depend on the interaction between these teams. The local team must understand and take the lead team's goals as its own. Taking ownership is critical because successful execution is not just about reading the moderator's guide aloud – it is about understanding the purpose behind the questions, tasks, and probes. Also, the lead team must understand the local differences to test implementation, so it must allow the local team to work with a certain amount of independence whilst keeping in mind the final project goals and consistency.

The communication among teams will be influenced by cultural and language characteristics, by the methodologies each team uses, and sometimes by the different objectives of each team. Therefore, to successfully accomplish the research study, precise team management at every project stage is critical.

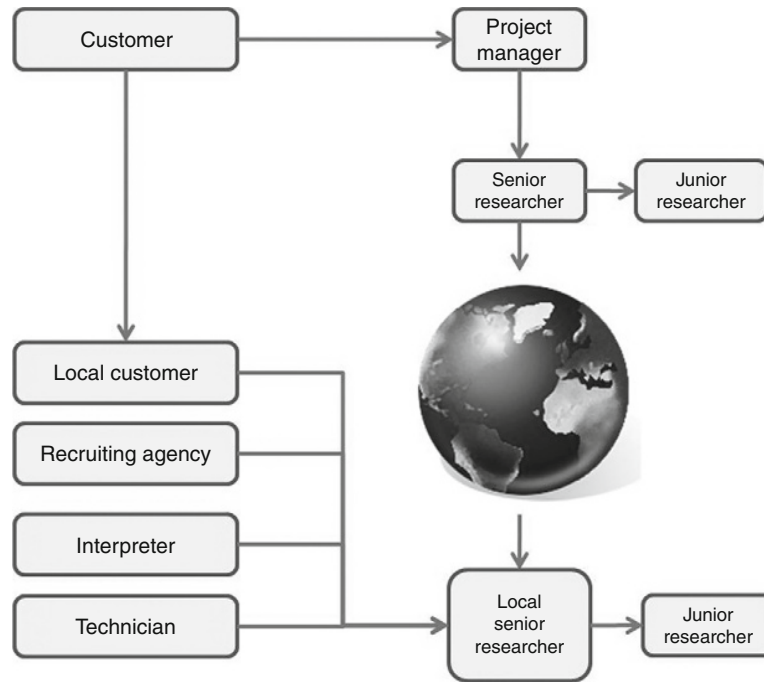
2.5.1 Profiles to be included in an international research project

Clearly, the professional profiles (Fig. 2.1) will vary depending on the type of study, the project details, the scope, and so on. However, certain profiles will be central in most of the cases to successfully accomplishing a global user research project.

2.5.1.1 Project manager

This person defines the research direction, including the methodology applied and the number of countries involved in the project. He or she must consider the budget, human resources, and schedule allocated to the project. He or she also manages stakeholder relationships which may involve an outside company contracting the study to a consultancy company (external), or employees of your own company if the study is requested by an in-house department (internal). The senior project manager negotiates contracts with local suppliers. The following elements are important and should be negotiated and firmly defined to ensure smooth relations among the teams:

- Clearly define the scope of the services contracted, including exact services, profiles, budgets, schedule and deadlines, deliverables, payment terms, currencies, and taxes.



■ FIGURE 2.1 Team supporting global user research project.

- Arrange who will pay for currency exchange differences.
- Discuss who will be responsible for the economic consequences in case there is a change in the project scope, etc.
- Track each stage of the project.
- Take an active role in the review of the final report and conclusions. Make sure the results are comprehensive and answer the key research objectives: Has the initial hypothesis made at the beginning of the project been addressed in the final report? Have the key project objectives been met?

2.5.1.2 Senior researcher (lead team)

This person is in charge of the study implementation and supervises the international fieldwork in the different countries. The main tasks are as follows:

- Define guide and screener
- Define clearly the information to be taken from the study (e.g., time, number of clicks, and number of positive and negative comments made by users)

- Define the structure and format of the final report and the structure and format of the countries' reports
- Make a detailed plan for every country and reach a consensus with the local researchers about the individual elements of the plan
- Carry out briefing sessions with each local researcher team
- Solve problems and answer questions regarding the recruiting process for every country
- During the fieldwork process, travel to the different countries if necessary or possible
- Manage debriefing meetings with the local teams
- Analyze, standardize, and merge all the different reports from each country and consolidate information to form a single report with conclusions and recommendations.

2.5.1.3. Junior researcher

It might be useful to have a junior researcher to provide support to the senior researcher. It is optional, but recommended. The junior researcher's main role would be the following:

- Make and manage the video highlights
- Review the transcription of the sessions in order to get some quotes from users
- Analyze the quantitative data, such as success ratios, time, number of clicks, and number of errors

2.5.1.4 Local researcher

There should be one researcher in every country responsible for implementing the fieldwork. The organization of the local team is dependent on the type of project and the type of company. At the very least, there needs to be one researcher to implement the fieldwork process, although sometimes the researcher works alongside a project manager and junior researcher on their own end. This researcher will do the following tasks:

- Plan and gather project information, working with the lead researcher
- Localize and possibly translate project documents (e.g., guide, screener, and note template)
- Manage the local recruitment
- Run logistics, simultaneous interpretation, and technical aspects
- Implement testing
- Analyze, complete report, and do final debriefing

It is important to note that, with the aim to simplify, we have highlighted three main roles: lead team researcher (project manager), lead team senior research, and local team researcher. However, many more people (e.g., translators, recruitment agencies, and facilities managers) will take part in the project, and smooth communication and planning between every team member is necessary for a successful project.

2.5.2 What abilities and competencies should the researchers have?

- **Open-minded:** Those involved in an international project must be very open-minded in order to understand and accept different cultures, styles, and practices. They must be aware that the way in which they typically implement a study or recruit users may not be the only valid approach. For example, Spanish people are known for being friendly and extroverted, but it is surprisingly very difficult to get them to participate in a think-aloud technique while doing tasks in sessions. Alternatively, some Asian researchers are surprised at the ease and amount of verbal information that can come from American participants in think-aloud techniques. Based on experiences using the identical session guides for sessions in Asia, the U.S. estimates of session time are often too low.
- **Flexible:** As noted previously, even when the initial planning between the countries and local vendors is very precise and accurate, changes often occur. For example, the criteria used for recruitment might force modifications. Moreover, the technical requirements defined at the project starting point may not be possible in each country. In these cases, the project manager and the senior consultant must be flexible enough to accept these changes and adapt their initial planning to the new reality, given that the initial research objectives remain untouched and quality still needs to be delivered.
- **Decisive:** Sometimes there are unexpected situations that will demand key decisions. The lead researcher must have team members who are capable of making key project decisions very quickly. These decisions can often have implications for data collection and analysis. They might even require planning part of the project again. As an example of an extreme situation,

a lead researcher from Xperience Consulting (Spain) arrived in Brazil on the test implementation day to conduct an eye-tracking study. During setup, the eye tracker would not work. The team lead needed to make the decision whether to go ahead with the test or to cancel the test until the eye tracker problem could be resolved and it was able to collect data. The impact would have been timeline shifts with the rescheduling of participants, and they would have had to do the recruitment again. Assuming the problem could have been resolved in a day or two, the implication was a one or two day delay in the foreign country to do complete fieldwork. If not synchronized properly, there would have been subsequent delays in the other countries. In this case, the lead team decided to stay in-country until the equipment was fixed, recruit the users again because it was the most important country of the study, and reschedule the users in the following countries. In another example, the “no show” rate in one study was unexpectedly high, yielding a lower number of participants per profile than expected. A decision was needed as to whether to extend the field phase for one or two more days in order to get all of the required users in that country or to prepare the report in that country with a smaller sample. These are decisions that researchers sometimes have to make quickly based on knowledge of the project requirements, stakeholders, budget, schedule impact, etc. In these cases, the ability of the team to make the correct decisions as well as local team flexibility will mark the success or failure of the project.

- **Organized:** There is no need to restate the importance of good organization in international research and to have a well-organized project manager.
- **Multilingual:** It might sound obvious, but researchers who are proficient in the language spoken in the country where fieldwork is conducted have an advantage. The ability to review translated guides, listen to interpreters, and analyze the probes of moderators based on participant feedback in the language of the fieldwork is a major advantage for a global research study. A lack of proficiency in the language can lead to misunderstandings, project inefficiencies, and uncertainty between one’s team and the local vendors. If researchers are not familiar with the local language, plan to allocate extra time to review and discuss issues with the local teams.

- **Travel-experienced:** It is advisable that researchers traveling to foreign countries have some prior foreign travel experience. They will be more familiar with traveling issues and procedures. Foreign travel experience can reduce stress and effort concerning visa difficulties, food and water, security in the cities, electrical plugs and power, and jet lag.

2.5.3 The interaction between the lead research team and the local research team

When dealing with the management of an international research team, it is necessary to go deeper into the relationship between the lead team and the local team than might be necessary from the same company or even different companies in the same country. As discussed previously, in either case, the relationship between the teams may not be an easy one. This section discusses the relationships between the lead research team and the local research team. Although the discussion is more from the perspective of the outsource model, the lessons apply to both outsource and in-house models.

A global project is often divided into stages in which the connections between the lead team and the local team can be described. For every stage, recommendations are provided to assist lead researchers with techniques designed to avoid friction among teams, generate team trust, and improve the quality of the project output for the benefit of the stakeholder.

2.5.3.1 Requesting a proposal and negotiating

The lead team is responsible for

- Project scope
- Necessary resources for implementation
- User profiles
- Required technology
- Information and format of the final report

Therefore, when asking for a proposal, it is important to be very specific about these elements. In many cases, the local team is asked to quantify and estimate the budget of a project with very little information. This may be the very first interaction the lead researcher will have with the local team, so he or she should make the effort to set expectations and help the local vendor. If possible, have the lead researcher make an initial estimate of the number of working days

necessary to complete each activity. This can limit initial confusion and improve clarity about the work, as well as potentially speed up the proposal creation process because the lead researcher's expectations on effort is set upfront.

When problems arise, it is important to be clear and forthright. Provide all the relevant information to the local teams. Even in situations in which there might be further consequences to the budget (e.g., a change in the recruiting profile), recognize that the issue must be dealt with sooner or later. It is better to handle potentially detrimental issues immediately. Recognize that issues will occur sooner or later. What might be viewed as detrimental can be best handled when disclosure is immediate. Integrity is important, and because issues will eventually emerge, do not risk future negotiating power by damaging your credibility.

As the local vendor or team supporting a global project, if you identify that you may not be able to carry out the project as a whole or if there is a particularly complicated component that cannot be completed as intended, inform the lead as soon as possible. In many cases, it is easy to see that the user profile as requested is impossible to recruit; raise this issue immediately. Also point out if the technical requirements (e.g., live video streaming) cannot be met.

A truthful relationship must be shaped from the beginning. Sending exceptionally high budgets that do not agree with the local costs can undermine the relationship and build suspicion that will linger throughout the project. For example, when uncertainty is very high, vendors choose to bid up costs rather than provide more realistic estimates with assumptions. When vendors engage in this practice of bidding up for uncertainty, the underlying assumption is that insufficient information exists. Whenever possible, spend the time to clarify. Besides improved information, it shows responsiveness and consideration for project details. At the other extreme, budgets that are suspiciously low indicate that maybe the local team does not understand the project properly or may not be as experienced given the price.

2.5.3.2 Kick-off meeting

As the lead team, conduct a kick-off meeting – in person or by phone. It is tempting to rely on e-mail and not communicate live at this stage; resist this temptation. Not only does live interaction improve clarity and solicit discussion but it is also an opportunity to interact and assess the interest and energy for the project. Live communication can also motivate local researchers to invest more in the project.

The time necessary for these briefings depends on the type of project and how the project is organized, but briefings should accomplish the following:

- Review the project plan: Communicate the project objectives – i.e., what the project is intended to discover and the hypotheses.
- Review the users' profiles to be recruited: Sometimes, recruitment criteria set up by the sponsor for the lead research team might not apply in certain countries. Besides providing the structured questions, the briefing delivers more detail for the type of user required. Thus, it will be easier for the local team to suggest different terms or properties should the translation and/or questions not apply. The parameters that determine socioeconomic status in one country may not be applicable to other countries. As one example, having "a maid in your household" applies to more potential participants in some South American countries than in European countries. Providing even a few sentences of description of the target market can help to more accurately set the participant recruiting criteria to find the right users for the project.
- Provide study requirements: Prepare explicit technology requirements and include examples of recordings from similar studies or other locations. Provide and review templates (structure and layout) and expectations for deliverables.

The following are less tangible objectives that are also very important to be taken into account in the briefing meeting:

- Show interest and enthusiasm for the project: Highlight the significance of the job to be done by the local team. Generating some excitement about the study objectives or implications improves focus during the fieldwork.
- Show empathy to the local team regarding complex issues: the lead researcher may provide comments such as "You are not the only one having problems in the recruiting stage; this is also happening in other countries," "Yours is the only country in which we have located every user with the required profile," or "The experience in other countries has shown the test was too long; if this is happening to you we may skip questions X, Y and Z." Regarding the local team, it is crucial to understand the study approach, the methodology, and the meaning of every question, task, and exercise before the study begins. There is a

difference between asking for clarification and questioning the study details. The local team must recognize that the study is part of a global effort in which consistency is important. Unnecessary changes risk jeopardizing the validity of combining the data across locations.

2.5.3.3 Recruitment and preparation

If problems with recruiting occur, tensions between teams may arise. It is vitally important for the lead team to maintain continuous contact with the local team so these problems can be resolved quickly. Most problems emerge when the teams are establishing the criteria to define the user profiles. Sometimes these profiles are difficult to find, especially when taking into account different incident rates across countries (i.e., some profiles are easy to find in one country but difficult in others).

The lead researcher needs to be both understanding and firm. Taking an overly demanding stance puts pressure on the local team. When the local team expresses concern, the lead must be sympathetic but also push for the local team to keep trying. The lead should help the local team find a solution or consider other options with the recruitment process. Some steps are as follows:

- Identify variables causing the problem. Sometimes these variables do not materially affect the user profile and they can be modified or eliminated. For example, in a project led by a German team with a Spanish test location, five variables defined the user profile: female, 25–40 years old, housewife, children, and university degree. The incident rate of these participants is not as high as it is in other countries. In Spain, few women with university degrees stay home to take care of their children, and Spanish women tend to enter the working world later than in Germany. The result is that women in Spain who have university degrees tend to not want to leave their career behind to take care of their children. In Germany, however, this is more common. Thus, recruiting was challenging in Spain, where the only solution was to find other variables and redefine the user profile.
- Consider authorizing the local team to use more than one recruitment agency.
- Divide the tests between two different cities in the same country. This might make it easier to find the total quota of users.

- Increase the incentives when profiles are difficult to find.
- Reduce the sample or change the mix of the sample.
Underweight the users of the segments that are more difficult to recruit, as a last resort.

Maintaining continuous contact between teams is essential during the recruiting process. Establish milestones with dates to assess progress. When milestones are missed, the team can consider implementing different strategies with sufficient time to complete the recruitment.

The local team should give frequent updates on their recruiting progress. Typically, lead researcher anxiety is often high due to lack of information rather than bad news. Regular updates also enable lead researchers to update the stakeholder in a regular manner. The communication that is provided to the lead researcher must be honest and truthful. It does not serve anyone to report “no problems” with the recruitment process if things are not going to plan. “Hope” that the recruitment will work out is not a plan. The sooner a problem is identified, the sooner a solution can be found.

The local team should not take unilateral decisions and authorize changes to the screener or “stretch the truth” about user profiles. The local team needs to be responsible for the actions of its recruiting teams, even if the teams are external vendors. Maintaining a high standard of professional ethics is very important. Keep in mind that the lead team faces the consequences of any actions taken by the local team.

2.5.3.4 Fieldwork

If the lead team travels to observe the fieldwork, then the interaction is more fluid and collegial, especially if the stakeholder observes locally as well. Problems with translations or a particular participant or stylistic differences in moderation can be dealt with efficiently in real time with all parties involved. Kirillova and colleagues discuss fieldwork in detail in Chapter 4.

If the lead team does not travel, there are still options for closely monitoring the status of fieldwork. First, the lead team should demand and expect that the local team apprise the lead team if there are any irregularities or any deviations from plan. This can be done via e-mail or phone. Second, technologically, it is increasingly possible to observe fieldwork via Internet video streaming. Even listening via a teleconference bridge or using an instant messenger application might be sufficient to ensure that the fieldwork has kicked off well. Remember that time zones can make this somewhat of a challenge,

but viewing a stored recording of early sessions soon after they have been done may be sufficient.

Because the fieldwork phase is the most critical point, the lead team needs to know the details. It is certainly imaginable that a stakeholder's colleagues observe local testing; if they report serious testing issues or problems to the stakeholder that the lead team is unaware of because it was not informed by the local team, then the lead team is in a terribly embarrassing position. The motto should be "no surprises." Overcommunication is always better than undercommunication.

If a member of the lead team has not traveled to observe the local team, the representative of the lead team should have decision authority, as well as the authority to adapt and change things as need be or as advised by the local team. By the time fieldwork commences, the plans are set and little should be left to chance. The local team should provide a summary daily (or more frequently) as to the progress of the testing. The summary should include exception reporting (i.e., what has *not* gone according to plan) as well as raw observations of the findings. Furthermore, the local team should provide a full report about the local team and the work under way.

It is best practice for the local team to conduct a dry run of the fieldwork prior to "going live." This is for two principal reasons. First, nothing creates familiarity with moderator's guides better than practice. This practice session can be viewed by the lead, and possibly the stakeholder as well, to ensure consistency across test locales. The moderator can also ask clarification questions in points during the session. High quality data collection can often depend on the flow of questions and knowing when to probe rather than letting the user continue. Thus, timing and spacing of questions and stimuli can be very important and practice helps improve moderation. Consider also how timing impacts language. Some languages differ in their efficiency to communicate concepts. For instance, Chinese is more efficient in written and spoken form than German. A session that might take 60 minutes in Chinese may take 75 minutes in German. This is simply an artifact of the language and has nothing to do with the quality of the session or moderator. Understanding timings can be critical because, depending on the schedule, some things might need to be omitted if time is running short. Having planned what can be jettisoned gives the moderator more flexibility in conducting a usability test.

2.5.3.5 Reporting and debriefing

One of the major points of failure in any global research project is the failure to communicate expectations over reporting. Although Herd et al. provide much detail in Chapter 5, there are some points to make with respect to planning for the report.

Is the local team expected to produce a polished report, key top-line findings, or a data summary? In any of these cases, it is incumbent upon the lead team to provide detailed expectations as well as any templates for reporting. In fact, reporting templates are among the most valuable documents to the research teams. Templates operationalize the objectives in concrete terms, and they dictate what data is to be collected and how this data is to be manifested.

If a full report is required, the lead team should indicate all the main sections to be included as well as any stylistic points. It is important to include a specific outline, branded template, conventions for marking priority and severity of findings, conventions for callouts, and even typography. If these elements are not laid out explicitly, when the lead team begins to integrate the findings from multiple locations, it will involve enormous amounts of time simply to unify presentation styles, much less trying to make analytic judgments across geographies, languages, and cultures. If the lead team has already completed its findings, then these could be shared with the local teams (putting aside proprietary and confidentiality concerns). However, there is a risk in sharing findings to local teams before they have completed their analysis. The risk is that the local team will be biased (consciously or not) by findings from the lead team or another local team. Thus, we believe the lead team should use discretion when sharing completed results or share partial or “sanitized” results.

Once the local team provides its report and the lead team has reviewed it, the lead team and the local team should meet to discuss and clarify the findings. This enables the lead team to have both a written and an interactive perspective on the report. Ultimately, this will enable production of a final report that includes the solid findings as well as the nuances. Furthermore, it allows the lead team to speak with much more authority. Depending on the relationship with the stakeholders, it may be appropriate for a representative of the local team to be at the read-out with the stakeholder.

2.5.3.6 Further considerations

It is advisable for the lead team to provide feedback on the contribution to the local team because this provides a sense of closure. The lead should provide some general feedback on the findings (not violating stakeholder confidentiality, of course). However, it is most important that both teams should have the opportunity to discuss and learn about areas that can be improved in future research. The lead researcher should initiate this discussion. The best forum for this is via phone or face to face if possible. Recognize that friction can occur between teams depending on the *form* of communication in addition to the content. Germans, Spaniards, Chinese, and Americans have different ways of expression. E-mail masks the different shades of meaning embedded within the give and take of discussion, tone of voice, a smile, or even a silence.

2.6 KEY TAKEAWAYS

- Engage stakeholders continuously and in all stages of the project, from the initial planning stages and recruitment through testing and the final write-up. Keep them informed of all relevant details and occurrences, both good and bad.
- Prepare, prepare, prepare. Spend time anticipating problems before traveling and either try to prevent them from occurring or develop contingencies if they do occur. Thinking about potential issues beforehand will help save time in solving them when in-country.
- Communicate frequently with the local team. Be specific about your needs throughout the study and keep lines of communication open.
- When scheduling international projects, begin in the country with which you are most comfortable and with a local team whose reliability you trust. Ideally, this location should have a capable technical support team to assist if there are problems with the test stimuli.
- Bear in mind that testing abroad carries variables that are potentially time-consuming. Allow time for stimuli to clear customs, to obtain any necessary visas, and for any potential travel delays due to weather or when transferring at airports.

- Deal with problems as they arise; do not wait. If a problem occurs in one location, especially with the test stimuli, chances are high that it will occur in another location.
- Travel to the local site whenever possible. Having a representative from the lead team on-site allows for instant decision making on any problems or issues that may arise. It also allows the lead team researcher to ensure consistency in moderator performance and data integrity across countries.
- International testing and travel can be stressful. Select both a lead team and a local team composed of researchers who are open-minded, flexible, and experienced in carrying out international studies.

Ultimately, the lead researcher must recognize that the responsibility for success and failure does rest on his/her shoulders. Common leadership principles apply. The lead can assign fault, but the lead must also take the burden of managing the situation to an acceptable resolution.

A successful project depends on many factors, many described in this book, but problems can arise. Proper preparation can mitigate problems and provide clearer next steps for remedial action.

Preparation

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3.1 INTRODUCTION

Chapter 2 provided high-level project management and planning information, and a perspective on the roles and responsibilities of the team members. In this chapter, we dive into the tactics used to prepare a study. Proper preparation is essential to the success of any research study. This is especially true for studies that involve multiple countries, cultures, languages, and research teams. Preparation for global studies involves three processes:

- Comprehensive study planning
- Local team training
- Creation of backup plans

Comprehensive study planning for a global project includes typical study planning activities, but at a greater level of detail than a single location study might require. The main goal is to make sure that the study answers the right questions, building on a foundation of high-quality data. The lead research team (i.e., the team that has a relationship with the study stakeholders) has to understand the research objectives, review the stimuli to be studied, determine the appropriate methodology for data collection, and create the testing and recruiting materials.

The second process of global research preparation, local team training, involves communication with teams in other geographies. The objective is to ensure proper and consistent recruiting and data collection. This communication can take the form of a detailed test plan

with pictures of the lab setup, explicit recruiting instructions, additional explanations of the procedure in the moderator's guide, sample video from the study conducted in the lead team's country, and a debrief following an on-site pilot session.

Even the best of plans can go wrong, so backup plans must be set in place. Being prepared for the worst-case scenario is always important, but in a global study it is crucial. For example, it can happen that the devices to be tested do not make it through customs or that the Internet connection necessary to access the online stimuli is down. Postponing the study is often not an option, so alternative solutions should be at hand.

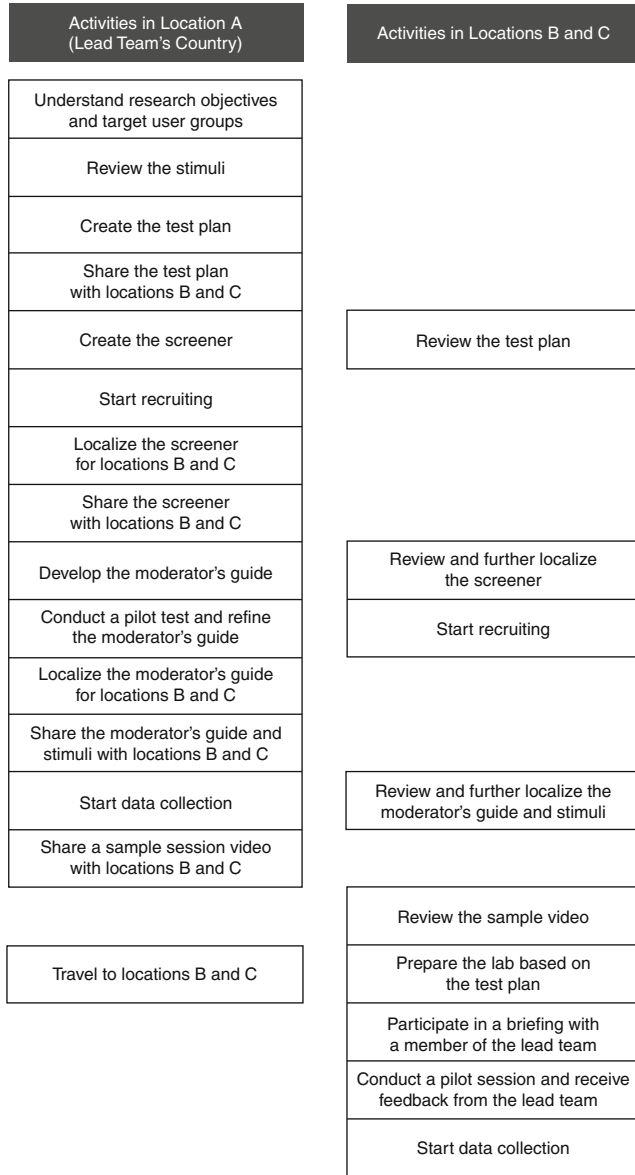
In this chapter, we focus on global aspects of research preparation and present them in approximate order of their execution during a project, as shown in [Figure 3.1](#). We discuss the following topics:

- Understanding the research objectives and target user groups
- Reviewing the stimuli and making sure they work in all test locations and are properly localized
- Creating the key document of any project – the test plan
- Recruiting participants, including screening, scheduling, and compensation
- Developing research materials such as the moderator's guide for user testing
- Localizing the research materials
- Sharing research materials with the local teams
- Briefing the local teams
- Training local teams through internal and external pilot testing

We conclude with a number of key takeaways based on the insights, tips, and examples discussed in the chapter.

3.2 UNDERSTANDING RESEARCH OBJECTIVES AND TARGET USER GROUPS

The first step in any research study is to identify the key research objectives, thus enabling the appropriate approach and methodology to be employed. In a global study, it is particularly important to understand how the test locations were selected, what the stakeholders hope to learn from each country, and what their expectations and concerns are for each country. There are several ways to choose countries for a study, including the following:



■ **FIGURE 3.1** An example of the order of preparation activities in a three-country study, in which data are first collected in the lead team country (location A), followed by parallel data collection in locations B and C.

- Countries with the highest market share for the artifact studied
- The top markets from each continent of interest
- The top markets from each language group of interest
- Developing markets
- Problematic markets

Based on its communication with the study stakeholders, the lead research team should determine what cultural aspects are being studied. Is the study focused on the differences among the locations, similarities, or both? As much as we may sometimes be curious to pursue country- and culture-specific findings, common themes across the locations may be more valuable to the stakeholders. Focusing on the common themes is especially important if only one version of a product or interface can be created and a high degree of customization, beyond basic localization, is not feasible. For example, the primary goal of global usability studies for existing products is usually to make sure that the product is fundamentally usable, regardless of the users' culture or location. Recognizing issues specific to each location or culture is also valuable but the bulk of the research is driven by the need for global acceptability of one product.

If the research objectives involve particular product brands (e.g., competitor products in a comparative study), the market share of these products and their brand perception in the selected countries should be thoroughly understood because they may impact both recruiting and testing. For example, certain mobile phones that are common in Europe may be used by very specific and difficult-to-find user groups in North America. If that is the case, the lead team should provide feedback to the study stakeholders so that either recruiting timelines can be extended or project scope can be adjusted to reflect local reality.

In addition to establishing clear and achievable research objectives, the study stakeholders and the lead team should define the target user groups that should be represented in the study. As the first step, they should determine if the user profiles are valid across countries and cultures. Basing user profiles on demographics alone may be misleading because the meaningful similarities across locations may be goals, needs, or other less tangible characteristics. Therefore, it is often beneficial to create international personas when preparing for a global study. More information about personas and detailed steps on how to create them are provided in Chapter 6.

3.3 REVIEWING THE STIMULI

3.3.1 Taking care of localization issues

Once the objectives are clear, the next step is to become familiar with the product or interface of interest and understand its capabilities and constraints. In a global study, the research team should pay particular attention to localization issues. Unless an existing product is being tested or the focus of the study is on how well a product has been localized, poorly localized stimuli can produce skewed or unclear results.

For example, if Western imagery is displayed in a prototype of a Web site tested in Asia, participants may not be as receptive as they would be if it featured Eastern imagery. Complicating matters even more is the fact that participants may not be willing or even able to verbalize why they cannot relate to the site. Another common example is an improperly translated link or button label, which can prevent participants from accessing the task-relevant section of the interface, thus causing an unnecessary failure. In this case, unless participants are told directly where to go, it may be impossible to gather data on the usability of further steps in the task.

Ideally, the local teams should review the translation of any prototype stimuli, and necessary changes should be made prior to testing. If there are known issues that cannot be fixed before the study, the lead team needs to decide how these issues should be handled during the study to avoid data loss. For example, the moderators can be provided with a list of acceptable hints they can give to participants who stumble over an improperly translated task-relevant term.

The lead team should also verify the availability of the stimuli in all languages that are needed, even if the stakeholders believe that all language versions exist. It may be too late if, for example, the device about to be tested in Germany turns out to be available in Dutch rather than “deutsch” (the German term for “German”). Another important consideration involves language differences between countries that speak “the same language.” For example, Portuguese used in Brazil is different from Portuguese used in Portugal. Certain technical terms commonly used on mobile phones may not make sense to Brazilians if they are asked to interact with a phone in European Portuguese.

Because keyboard keys and layouts are not the same in every country, problems can arise when the research stimuli are preloaded onto laptops and cannot be used on any other computer. There are several different keyboards for Latin scripts (e.g., QWERTY, QWERZ, AZERTY,

and QZERTY), non-Latin alphabetic scripts (e.g., Arabic, Hebrew, and Russian), and East Asian languages (e.g., Chinese, Korean, and Japanese). Even if the countries of interest to the research use, for example, the QWERTZ layout, there are still several variations of it based on the location of symbols and special characters. Even keyboards used to type in the same language can differ. For example, the keyboard layout that Austrians use to type in German differs from the layout used for Swiss German.

Because asking participants to type on an unfamiliar keyboard may affect the results of the study, the lead team should investigate how different the layout is from a local keyboard and determine if the differences may influence what participants will be asked to do. Pictures of all available Windows keyboard layouts can be found in the Microsoft Go Global Developer Center (<http://msdn.microsoft.com/goglobal>) under Learn > Tools and Utilities. If a test location may be affected by an unfamiliar keyboard layout, it is best to connect the laptop to a monitor and a local keyboard. Attaching a different keyboard to the system may require a change to the setting for the keyboard type in the computer software.

3.3.2 Making sure the stimuli work

In addition to taking care of localization issues, the local teams should make sure that the stimuli are compatible with the facilities used for the study. A sufficient number of appropriate adapter plugs and voltage converters (Box 3.1) should be secured prior to the study. If the study uses mobile phones that need service, then it is also important to check network coverage and availability of particular mobile services in each location. For example, if participants are asked to surf the Web on the phone, the phone will need a data package. Although pay-as-you-go SIM cards can be easily obtained in Europe, they are not as prevalent in the United States and may not include features such as data plans.

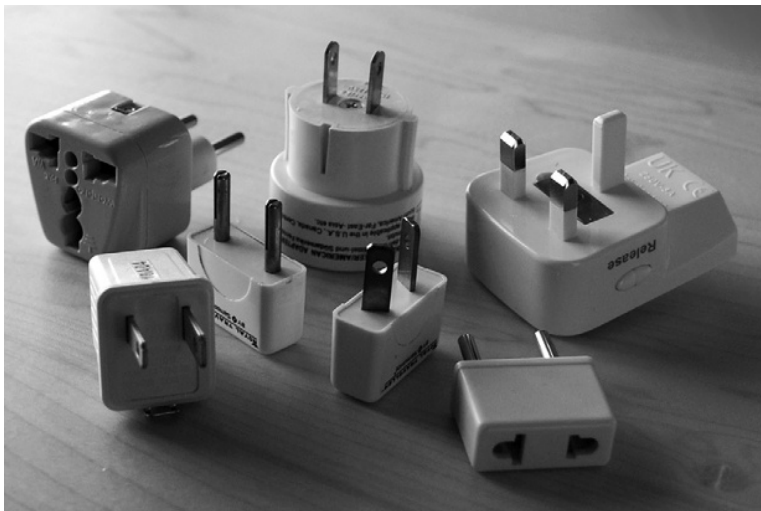
If the study stimulus is a consumer application that connects to a telephone line, it is important to know whether the application uses an analog or digital line. For example, most residential homes in the United States have analog telephone lines, whereas many businesses, including focus group facilities, have digital lines. A dial tone simulator should be obtained if an analog device is tested on a digital line. Appropriate phone jack adapters may also be necessary for studies in which devices need to be connected to phone lines.

BOX 3.1 ADAPTER PLUGS VERSUS VOLTAGE CONVERTERS

An *adapter plug* is a device that enables the connection of a power cord to an electrical wall outlet that has plug holes of a different shape, number, or arrangement than the plug. An adapter plug does *not* change the voltage of the power source. Sixty-four percent of countries use one outlet type, 30% use two, and 6% use three (e.g., Iraq, Kenya, and Singapore). Examples of adapter plugs are shown in Figure 3.2.

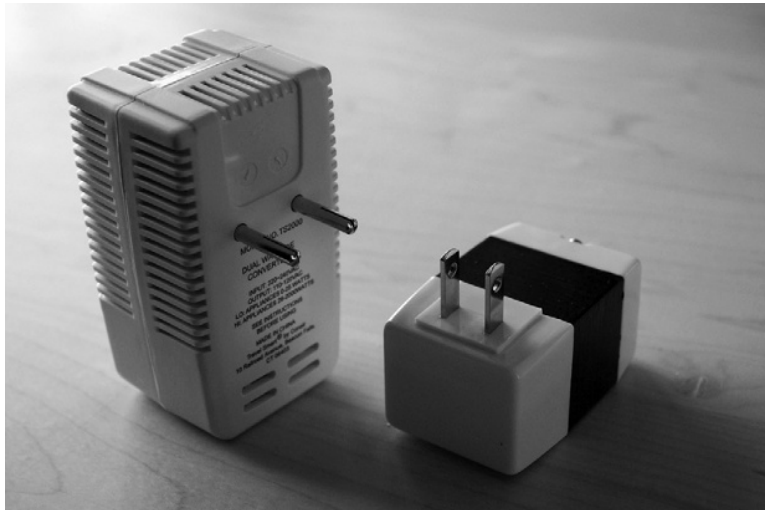
A *voltage converter* is a device that changes the voltage of an electrical power source. Most single-phase alternating-current electrical outlets throughout the world have a voltage range of either 210 to 240 V or 100 to 120 V. Converters usually halve or double the voltage to make it suitable for electrical devices made to work in the other voltage range. Each country tends to have only one voltage range (78% of countries have the higher voltage range and 15% have the lower range), but some countries (e.g., Algeria, Korea, and Peru) have both. Examples of voltage converters are shown in Figure 3.3.

A comprehensive list of plug and socket types, voltages, and frequencies can be found in a publication titled “Electric Current Abroad” available at <http://www.ita.doc.gov/media/Publications/pdf/current2002FINAL.pdf>.



■ FIGURE 3.2 A variety of adapter plugs.

Ideally, the local research teams should have access to the stimuli well before data collection begins so that issues can be identified early on and there is enough time to secure any necessary additional equipment. If the stimuli need to be mailed to the local teams, the lead team should do it as early as possible in case they get held up at



■ FIGURE 3.3 Two different voltage converters.

customs. However, even if the stimuli are not available ahead of time, some basic research (e.g., checking the strength of a 3G mobile signal at the test location) can still be useful.

Sometimes, even after the stimuli have been confirmed to work, they may fail to function during data collection. For example, the Internet connection in India can go down during the monsoon season and that can affect studies that require online access. A good backup plan will ensure that the study can be conducted according to the timeline. If the research stimulus is a Web site or a Web application, the local teams should have a copy that can run locally on a computer. Even using a hard copy of the interface screens can provide valid data about the usability of the interface. Also, in case the power goes down, computers and other devices should be connected to battery power units so that they can stay on for a while and the sessions are not interrupted.

3.4 CREATING THE TEST PLAN

A *test plan* is a document that helps organize all information about a study. It is an excellent communication tool among the lead research team, local test teams, and the project stakeholders. A detailed plan will ensure that all local teams have a clear and consistent understanding of the study and can start planning and

preparing before the recruitment and test materials are ready. The test plan should be continually updated as changes occur and more details are discovered or clarified.

A good test plan contains the following:

- Objectives of the study broken up into specific questions that the study has been designed to answer.
- Description of the stimuli, including versions or model numbers where appropriate (the same products can have different model numbers in different countries).
- Description of the target users with an indication of strict requirements, allowable variances, and criteria that may need localization.
- Description of the methodology, including the procedure (e.g., use of a think-aloud protocol and within- or between-groups study design) and measures used (e.g., time on task, ratings, and rankings).
- Requirements for equipment needed for testing (e.g., size of TV or computer screen, computer operating system, and types of cameras).
- Pictures/sketches of the lab setup denoting how the stimuli should be arranged, where the moderator and participant should sit, and where the camera(s) should be set up. These pictures are especially beneficial if the setup is complex and includes multiple elements (e.g., three or four different camera shots and several artifacts).
- Screenshots of expected video output and acceptable video formats.
- The project schedule, including test dates, times, and locations in every country as well as deliverable deadlines for stakeholders, local teams, and the lead research team.
- Contact information of all team members in each country, their time zones, and their availability, which is especially important if team members are working on multiple projects or if testing is taking place near holidays.

Ideally, the test plan should be written in a language with which all local teams are familiar. Alternatively, it can be created in the lead team's native language and then translated into a common tongue, such as English or Spanish. If not all teams have a language in common, the test plan should be translated into their respective languages. Regardless of the language, the test plan should be

comprehensive and concise. Bulleted lists and diagrams help convey important details in a clear manner. Convolved sentences, long paragraphs, and unnecessary words and phrases make information more difficult to process and should be avoided. Figure 3.4 shows excerpts from two different test plans – one for a Web site study and the other for a comparative mobile phone study.

3.5 RECRUITING

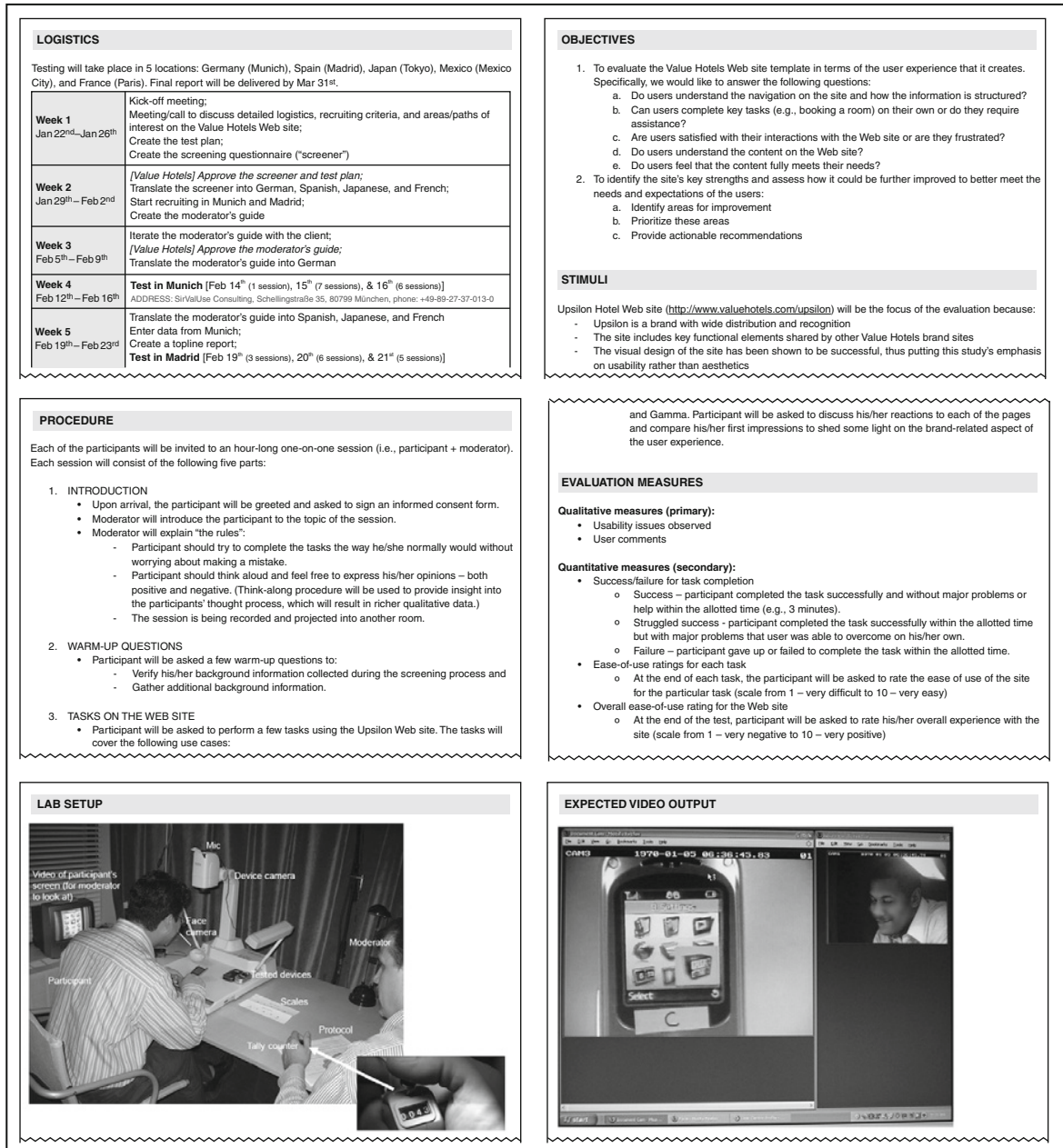
3.5.1 Screening

The next step in study preparation is recruiting. Based on user profiles, the lead research team creates a screening questionnaire (“screener”), according to which the study participants will be recruited. The screener questions should be clear and unambiguous because too much latitude can lead to poor participant selection.

Once the screener has been created, it needs to be translated into the local languages of the test locations. The translated questions and recruiting criteria must be further adapted to the locations in which they will be used because countries and cultures differ in many ways. Levels of education, race descriptions, and household income ranges for social classes are some of the basic differences between locations. Also, certain job titles can represent different job functions. For example, a “manager” in the United States may have the same responsibilities as a German “Operator.”

Quantitative screening algorithms (i.e., procedures that feed candidates’ answers into formulas that calculate numerical scores) that work well in one location can be impossible to use in other locations because the same score can have different meanings in different countries or cultures. For example, the score that indicates a “low-tech user” in one country can indicate a “high-tech user” in a less technologically developed country. Localization of an algorithm requires high sample size market segmentation research, which should be conducted well before usability research begins.

Even the number of participants to recruit may need to be adjusted based on the location of testing because no-show rates (i.e., percentages of participants who do not show up for their interviews without cancelling) can vary significantly. In certain locations (e.g., some northern European countries), rarely will participants not show without notice. In other locations (e.g., some Arabic countries), it can be a common occurrence. To determine how many extra participants



■ FIGURE 3.4 Excerpts from two different test plans.

should be recruited to meet the quota (i.e., the required number of participants from each population segment), the local teams should provide the lead team with their typical no-show rates for the targeted participant profiles.

Local teams should also be in constant communication with their recruiters and forward key updates to the lead team, whose task is to centrally monitor the recruiting progress. Recruiters should be given a spreadsheet template that accounts for all the information about the participants that is of interest. If the recruiters use the template to enter the recruited and terminated participants' responses to the screener questions, the lead team will be able to detect any discrepancies between the intended meaning of the questions and their actual comprehension. If such discrepancies exist, any necessary adjustments to the screener should be made immediately.

3.5.2 Scheduling

When determining the test schedule, there are a number of considerations that the lead team should keep in mind. First, the researchers need to find out if there are any holidays or other events (e.g., Carnival in Brazil, Diwali in India, and the Olympics) that take place at or near the time of the planned data collection period in the locations of interest. Those times should generally be avoided when planning test dates. If there are holidays or special events prior to testing, longer recruit times should be built into the timeline. A list of each country's holidays can be found in a number of places on the Internet, for example <http://earthcalendar.net>

Once the lead team has decided when the data collection should take place in each location, the next step is to set a session schedule. In some locations (e.g., northern Europe or Japan), participants tend to come in early or on time. In others (e.g., some Latin American and southern European countries), time tends to be less rigid, and it is culturally acceptable for research participants to be late, sometimes even up to 30 or 45 minutes. Fortunately, these participants usually do not mind staying later. The test schedule in countries where time is perceived as flexible should be more relaxed with longer breaks between sessions than in countries where punctuality is more highly valued.

If the schedule needs to be changed at any point during preparation, the impact of rescheduling participants can vary across countries. For example, participants in the United States tend to take the recruiter less seriously if their test sessions get rescheduled more than once. As a result, the show rate dramatically decreases. However, in other regions (e.g., southern Europe), participants' behavior is not affected if their appointments get rescheduled.

3.5.3 **Consent forms, nondisclosure forms, and compensation**

Participants' reactions to consent forms and nondisclosure agreements vary across cultures. Some participants may be hesitant to sign a document containing a lot of legal language. Therefore, forms should be written in simple language and include only the necessary information. Local research teams can either localize the original form provided by the lead team or use their own after adding the details of the study. Local teams should also be aware of the legal requirements in their country and make sure that the documents fulfill them.

As in any study involving participants, compensation depends on the studied artifacts and the target user groups. For example, to test a recently launched high-end mobile phone in a developed country, the remuneration should be higher than typical. Alternatively, other country-appropriate compensation forms (e.g., dinner for two in an upscale restaurant) can be used because people with a high socioeconomic status are not easily convinced to participate in studies.

Because the "market value" of the same user groups varies from country to country, test locations will differ in the amount of participant incentive. There are also differences in the method of payment. For example, in some countries (e.g., China, the United Kingdom, and the United States), cash is used for most user groups, whereas in others (e.g., Finland, Japan, and Spain), gift cards or other forms of compensation such as magazine subscriptions are more prevalent. The noncash incentives are considered to be "more elegant" than cash and are often used to minimize taxation issues.

The local team in each country should be able to determine the proper form and amount of participant incentive. For participants who are prohibited from taking any compensation directly, the local team can make a charity donation on their behalf.

The presentation of consent forms and compensation may also differ across locations. In some locations, participants are handed the consent form in the waiting room prior to the session and are paid after the session either by the research team or by the recruiter. In other locations, participants sign the consent form and are compensated by the study moderator at the beginning of the session. When there is no impact on the results of the study, it is usually best to give the local teams freedom to do what they normally do, rather than impose the procedures employed by the lead team in its home country.

Table 3.1 shows a comparison between two countries across a number of recruiting activities. This example illustrates the extent to which customs can differ between two nations. Only local recruiters are fully aware of their market's nuances, and it is unrealistic to expect one recruiter to know the differences between all countries.

3.6 DEVELOPING THE MODERATOR'S GUIDE

A good *moderator's guide* for a global study should be easy to translate into other languages. Therefore, abbreviations, unnecessarily rare terms and phrases, and idioms should be avoided as much as possible to reduce ambiguity. The guide should also be explicit and detailed to ensure correct and consistent data collection procedures across locations. Besides questions and task instructions that the moderator has to say to the participants, the guide should include other information that will help local moderators understand the purpose of the tasks and questions, task priority (e.g., which tasks can be skipped if there is not enough time for all), required depth of probing, and allowed latitude of probing.

The information for the moderator can be inserted in appropriate places in the guide in a way that is easily distinguishable from main content of the script. This information should also include stimulus-related instructions, such as on which Web page each task should begin or how to reset the test devices prior to each session. Figure 3.5 shows a sample page from a moderator's guide. The black text indicates what needs to be said to the participant. The grey italics are instructions for the moderator.

To finalize the moderator's guide, the lead team should conduct one or more pilot tests. Pilot testing will help refine the wording, order, and priority of tasks and questions; determine proper time management strategy; and make sure that the guide is in perfect alignment with the tested artifact(s).

Table 3.1 Observed similarities and differences in recruiting activities between the United States and Italy

Recruiting activity	United States	Italy
Sourcing candidates	Ads (online and in papers) attract large numbers of “fresh” candidates. Cold calls work well too but take much more time.	Few people answer ads because many Italians have not had direct experience as research participants. Most assume the ad is a camouflaged sale or fraud. Cold calls work slightly better than ads, but candidates tend to be suspicious because of their previous experience with unethical salespeople. The best way to source fresh candidates is to call your social network including previous participants and ask for referrals. It is often necessary to relax the screening criteria because of the limited number of candidates available.
Prescreening via brief e-mail survey	E-mail communication works well. Answers tend to be clear.	E-mail communication does not work as well as in the United States because answers can be unclear.
Interviewing	There are sophisticated liars who have made a profession out of participating in research studies. However, the majority of interviewees are honest.	Sophisticated liars are uncommon because few people have participated in user research before. Liars can be easily identified and exposed.
Making the appointment	Before making the appointment, participants tend to check their calendars to make sure that they will be available.	Some participants make the appointment without a careful evaluation of their previously scheduled engagements.
Calling with a reminder	Participants appreciate the reminders, but most already have the appointment in their calendars and would not have forgotten.	Reminders help identify those who had not checked their calendars when making the appointment. Calling two days prior to the session is better than calling the day before because participants who forgot about the appointment and made other commitments will have more time to readjust their schedules. Also, the recruiter will have more time to find a replacement if the participant cannot make it.
Predicting no-shows	Most no-shows are predictable as a result of the reminder call. Candidates who do not intend to show up either do not answer the call or sound unmotivated.	No-shows are less predictable based on the reminder call. Some poorly organized candidates may have last-minute situations that will prevent them from attending the study.
Compensating participants	Paying cash at the end of the research session is the best option. Checks are less preferred.	
Following up	Participants appreciate the follow-up call and tend to give spontaneous referrals. They are also likely to spread the word about research participation among their friends and acquaintances.	

PART A: Free Exploration of the ABC Application

[Hand the participant a phone with the ABC application running and set to the home screen.]

What do you think this application does?

If this was your new phone, would you like to find out more about this application? *Yes/No*

Let's say that you were curious about this application and wanted to know what it does and how to use it. While exploring it, please think out loud. Tell me what you are doing and what you are thinking. If you are confused, see something unexpected, or are unsure of what to do, please let me know. Take as much time as you need and let me know when you are done.

[Record the participant's actions and comments. Make a note of what tasks the participant accomplished, where he/she encountered difficulties and why, what tasks he/she tried to accomplish but couldn't, and any comprehension issues with the interface terminology.]

[If the participant stops thinking out loud, remind him/her.]

[Do not prompt the participant to explore more than he/she would normally do. The goal is to determine how much users would be able to find out on their own.]

[When the participant indicates he/she is done exploring:]

How would you describe the application that you were just using? Pretend that you are explaining it to your friend who has never seen it.

PART B: Tasks

I will now ask you to try and complete a few tasks. Even though you might have done some of them already, I will ask you to do them again so that we can talk about them in more detail.

[Present Tasks 1–5 in a counterbalanced order according to the table below:]

	Order of the tasks				
Participant 1	1	2	5	3	4
Participant 2	2	3	1	4	5
Participant 3	3	4	2	5	1
Participant 4	4	5	3	1	2
Participant 5	5	1	4	2	3
Participant 6	4	3	5	2	1
Participant 7	5	4	1	3	2
Participant 8	1	5	2	4	3
Participant 9	2	1	3	5	4
Participant 10	3	2	4	1	5

[Allow 2 minutes for each task. After 2 minutes are up, stop the participant.]

■ FIGURE 3.5 Sample page from a moderator's guide.

3.7 LOCALIZING THE MODERATOR'S GUIDE

3.7.1 The importance of formal localization

After the moderator's guide has been finalized in the original language, it needs to be localized to all test locations. Some local moderators who are proficient in the original language (e.g., English) may be able to moderate in the local language using the original version of the guide. This is *not* recommended, however, because real-time translation can have a detrimental impact on the precision and consistency of data collection. Instead, a fully localized version of the moderator's guide should be developed for each country.

Even if the study is conducted in another country that uses the same language as the guide's original language, the document may still need to be adapted to regional differences and dialects. For example, a moderator's guide used in Spain should be localized before it is used in Argentina because Spanish-speaking countries differ in vocabulary, and common words in one country can confuse or even offend participants in another. Because localization involves not only translation but also cultural adaptation, scenarios, tasks, and questions may also need to be modified to make sense for participants in different countries.

The moderator's guide can be localized either by local teams or by professional translators. Each of these methods has its advantages and disadvantages, which are discussed in the following sections. Regardless of the selected method, the translator should be a native or near-fluent speaker of the language into which the guide is being translated. The lead team should make sure that the translator knows what needs to be localized. If the moderators understand the original language of the guide, localizing only the parts that will be spoken to the participants will be less costly and time-consuming than localizing the entire guide, including moderator instructions.

3.7.2 Localization by local teams

Engaging the local moderators in the task of localizing the moderator's guide increases their involvement in the study and improves preparation. The moderators should interact with the stimulus while localizing the guide to ensure a close correspondence between the guide and the stimulus. For example, if the guide mentions terminology that appears in the tested interface, the moderators should look it up in the localized version of the interface. This is preferable to independently generating the equivalent terminology in the local language because the

terminology may not necessarily match what is used in the interface. Sometimes, to avoid leading questions, the terminology in the guide should *not* match that of the interface. The moderators can then make sure that the terms in the guide are synonymous with, but not identical to, those used in the interface.

Localization of test materials by local teams only works if the moderators are familiar with the original language of the guide. However, even if the moderators are perfectly bilingual, the localization of the guide may take more time and be lower quality than if it were done by trained professional translators.

3.7.3 Localization by professional translators

Localization by professional translators tends to be more exact, faster, and less costly (because it takes less time) than localization by local research teams. However, translators may not be familiar with the language used in the user research field, and they may use phrases that can sound awkward when talking to a participant. For example, the expression “there are no right or wrong answers” can usually be translated in more than one way, but not all of the possible translations may be appropriate to say during a user research study.

There are established language practices for these types of phrases, and ideally, the researchers should find an experienced translator who is familiar with user research or market research. The translator should also be informed of the setting in which the guide will be used. For example, interviews with teens in video game stores require a more casual language than interviews with adults conducted in hospitals or financial institutions. Regardless of how skilled the professional translators are, local teams should review the translated material prior to data collection. If necessary, the local teams should adjust the language to fit the particular user research setting and ensure that stimulus-specific vocabulary matches (or does not match) the tested artifact. Issues caused by an incorrect localization of the moderator’s guide may be difficult to detect and overcome once data collection has begun.

3.7.4 Reverse translation

Reverse translation requires the guide to be translated into the target language by one translator and translated back into the original language by another translator. The resulting document is then compared to the original, and any discrepancies are investigated

and corrected. Reverse translation greatly reduces the uncertainty that the moderator's guide matches the intentions.

Because a reverse translation increases time and expenses involved in study preparation, a cost–benefit analysis should be performed before the decision to conduct a reverse translation is made. For studies that require a very high degree of precision in data collection, such as validation studies in the medical field, a reverse translation procedure may be appropriate or even necessary. On the other hand, a formative usability test of an entertainment Web site may benefit very little from a reverse translation of the test materials compared to the cost involved.

3.8 SHARING MATERIALS WITH LOCAL TEAMS

The lead team of a global study will share a number of materials with the teams in all test locations. The test plan is usually the first document that should be available to the local teams. The screening questionnaire and participant spreadsheet template should follow so that recruiting can start while the lead team may still be working on the moderator's guide and other materials. Once the guide becomes available, the local teams should be provided with the stimuli so that they can become familiar with the procedure in the context of what will be tested.

If the study requires interpreters, they should be able to review the moderator's guide ahead of time as well. Assuming that the study sessions will be simultaneously translated into the original language of the moderator's guide, it is a good practice to give both guide versions to the interpreters – the one in the local language and the one in the original language.

When data collection begins (ideally, the lead team's country would be first), and once the lead team is comfortable with how the procedure is being executed, a session video should be selected and made available to all other locations. This is especially helpful if the local teams understand the language in the video. The opportunity to watch a session will significantly increase consistency of data collection across locations.

At some point during the preparation phase, the lead team should also share the datasheets and report templates with the local teams so that the output from all test locations is exactly as needed and consistent across locations. Datasheets and report templates are described in more detail in Chapter 5.

Although sharing electronic test materials via e-mail works well for smaller projects, larger projects conducted in three or more locations may require a temporary shared online workspace where the lead team can post documents as they become available and update them when necessary. In addition, local teams can post questions and everyone will benefit from the lead team's answers and clarifications. Many free options are available, such as Google Groups, Ning, Nexo, Wiggio, Windows Live Groups, and Yahoo! Groups. Fee-based online collaboration sites include Basecamp, Convos, HyperOffice, Project-Spaces, SharePoint, and Sosius. For most projects, a free service will suffice and be simple to set up. Before inviting members, the lead team should evaluate the site's features (e.g., discussion list, calendar, file sharing, polls, and task lists) and limitations (e.g., storage space and maximum number of members) to ensure that the site will meet the needs of the project. In addition, the site's security policy should be carefully reviewed against confidentiality standards required for the project.

Ideally, all language versions of the materials should be available to all teams. If something is unclear in a document translated into a local language, the team can compare its document to the one in English or another language with which team members are familiar and determine the intended meaning of a term or phrase.

3.9 BRIEFING WITH LOCAL TEAMS

Even if all materials seem self-explanatory, there should always be a briefing between the lead research team and the local teams. If members of the lead team decide to travel to the test locations, this briefing can be conducted on site, a day or two prior to data collection. If the timelines or budgets do not allow for travel, a phone briefing (possibly using a video conferencing tool) with the local teams will have to suffice.

In addition to some general information covered in the test plan and other materials, the briefing should include a detailed walkthrough of the moderator's guide in the context of the tested stimuli. The teams should discuss objectives for each task and question, the type of data to collect, and the required degree of probing. Also, the lead team should make sure the local moderators understand task priorities and are prepared for contingencies.

When on-site, a member of the lead research team should talk to the interpreters if they are involved in the study. Not all interpreters are trained in the same way, and they should be provided with a list of guidelines so that sessions in all locations are interpreted in a

consistent way. These guidelines can include translating in the first person, translating verbatim rather than paraphrasing, and translating all task instructions even though they are the same for each participant. If the lead team is not on-site and it is impractical to hold an additional briefing call with the interpreters, the lead team should provide the local teams with the guidelines to be shared with the interpreters before the study.

3.10 LOCAL PILOT TESTING

3.10.1 Practice and refinement

Conducting a pilot test will allow the lead research team to check and correct the execution of the procedure prior to data collection with actual participants. If a member of the lead team is on-site, the pilot session can even be conducted on the same day as the testing, as long as there is time following the pilot for any necessary course correction. If no one from the lead team is traveling to the test locations, each local team should share a video of its pilot session so that the lead team may provide feedback. Ideally, there should be as many pilot sessions as there are moderators in the study.

Issues noticed during pilot sessions can be corrected only after their causes have been determined. Issues can arise due to an improper translation of the moderator's guide, the moderator not following the guide, or the interpreter's loose or incorrect translation. Thus, sometimes a change to the guide translation will be necessary, sometimes the moderator will have to be asked to follow the guide more closely, and sometimes the interpreter will need to learn new terminology, especially if it is very domain-specific.

The lead team should make sure that all moderators understand the concepts and objectives of every task and do not "just read the script." This is especially important in qualitative studies. If a participant's answer to a question in the guide is unclear or incomplete, a moderator who understands the study will probe in alternate ways, making sure he or she obtains sufficient information to satisfy the test objectives.

If it is necessary to reset the stimuli at the end of each session (e.g., delete all added contacts and appointments on a mobile device), the local team should run through this procedure at the end of the pilot session to ensure that the instructions are clear and that they work for the local version of the stimulus. Similarly, if the local test team has a dedicated note taker, he or she should use the provided datasheet during the pilot session so that the lead team can review the entries and offer feedback.

3.10.2 Internal versus external pilot

There are two types of pilot participants – internal and external. An internal pilot participant can be anyone from the local team who is not involved in the study (e.g., office assistant). If the study will have two parallel sessions and there are two moderators and two interpreters, one of the interpreters can be a pilot participant and the other can interpret the pilot session. A second pilot session can be conducted with the other moderator and the other interpreter as a participant. Being a participant can be beneficial for the interpreters, especially if they are unfamiliar with the tested technology.

Internal pilot participants are usually flexible in terms of time, and they do not need to be compensated. Therefore, if a member of the lead team is on-site, he or she can bring up moderation and interpretation issues as they arise during the session, which is usually more effective than bringing them all up afterwards. However, this will make the internal pilot session longer than the scheduled session, which must be accommodated when creating the schedule.

An external pilot session involves a participant recruited according to the screener and who usually needs to be compensated. For a study testing a specialized product or application, an external pilot may be a better option due to the appropriate domain knowledge and experience. An external pilot session should, in general, not be interrupted, so any moderation or interpretation issues should be addressed after the session. The best approach is to conduct an internal pilot, have a debriefing with the team, and then conduct an external pilot; however, this may not be feasible if budgets and timelines are tight.

3.11 KEY TAKEAWAYS

- Identify the objectives for the study overall as well as targeted objectives for each of the countries. Determine the reasons why certain countries were selected for the study and whether similarities or differences are the focus.
- To avoid artifacts in the study results, review stimuli for the different test locations, make sure the correct language versions are used, and, whenever possible, correct obvious localization issues in prototypes and newly developed products.
- Make sure the stimuli function in all locations. The local teams should obtain the necessary hardware and test the stimuli as early as possible. Have a backup plan in case the stimuli fail to work during data collection.

- Create a detailed test plan to help you communicate with the local teams and ensure consistency. The test plan should be a living document that includes information on the project schedule, objectives, stimuli, target user groups, methodology, lab setup, expected output, and team members' contact information and availability.
- Create and localize the screening questionnaire, which defines how participants in each country will be selected. Adjust the number of recruits based on local no-show rates and set the test schedule to accommodate local holidays and customary behavior.
- Keep consent forms and nondisclosure forms brief and simple. Rely on the local versions of these documents instead of creating your own.
- Ask local teams to help you decide on the appropriate amount and form of participant compensation in each country.
- Prepare a detailed and explicit moderator's guide. Include what the moderator will say to the participant as well as information and instructions for the moderator. Refine the guide through pilot testing prior to localization.
- Localize the moderator's guide using the local teams or professional translators, but be aware of the advantages and disadvantages of each of these options. A moderator's guide translated professionally should still be reviewed by the local teams in the context of the stimuli.
- Consider reverse translating materials for studies requiring high precision.
- Make all recruiting, test, and reporting materials available to the local teams ahead of time. Include a video from a session conducted in the first location of the study. For studies with three or more locations, use an online workspace to share the materials and post questions and answers.
- Conduct a briefing prior to the study either in person or via conference call. Include a detailed walkthrough of the moderator's guide in the context of the stimuli.
- Provide the interpreters with guidelines to which they should adhere when simultaneously translating the sessions.
- Have the local teams conduct a pilot test prior to data collection so that you have a final chance to correct any translation, moderation, or interpretation issues.

Fieldwork

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4.1 INTRODUCTION

This chapter discusses methods and guidelines for the planning and execution of common fieldwork activities. Whether research is carried out by the sponsoring organization or a specialized agency on its behalf, there are best practices that should be understood and kept in mind throughout the project.

Best practices for each of the following are discussed in this chapter:

- Planning logistics for a global study
- Preparing test materials for a global study
- Assembling and training the team
- Conducting the fieldwork
- Analyzing data and reporting results

Chapters 2 and 3 discussed the steps to take in order to locate partners and facilities, translate materials, and complete preparations. The following sections provide examples of cultural differences between countries when sessions are run with a local moderator and translated material. We also address the need for sensitive localization of the moderation guide and the impact this has on the way questions are structured and presented, as well as how a skilled moderator asks these questions. Some examples of templates for collecting data are provided, included tips to organize and share results with local teams.

Moderation is an important part of fieldwork activities in general and of global fieldwork in particular. To ensure standard moderation

procedures, certain rules should be followed, and all involved members should know the objectives of the project. Most of these skills are detailed in [Dumas and Loring \(2008\)](#); working with multiple cultures does not have much impact on the structure of a usability session. It is divided into four or five parts: greeting of test participant, introduction and preliminary background questions for the test participant, tasks and post-tasks, wrap-up, and post satisfaction survey.

For global user research, language and culture should be taken into account, especially when selecting moderators and interpreters.

The project leader who is responsible for planning a global user research study should do each of the following:

- Localize the research material to get consistent answers when asking questions in different languages and countries
- Adjust the presentation of certain types of questions between countries (e.g., introductions, task questions, follow-up questions, ratings, and general feedback)
- Evaluate the effects of localization on moderation in each country
- Maintain overall consistency in global moderation while being open to regional differences during moderation
- Pilot with skilled interpreters or translators who understand that negative as well as positive feedback is acceptable
- Plan for sessions that will require an interpreter or a translator

4.2 PLANNING AND LOGISTICS FOR A GLOBAL STUDY

To ensure that the user research study is a success, it is important to carefully plan the logistical side of research in an unfamiliar facility. The more user sessions you conduct, the more you realize how powerful Murphy's law is: If something can go wrong, it most certainly will (and if it does, chances are that the project lead will have to spend a lot of time and energy fixing it).

This section discusses what should be taken into account to avoid the pitfalls of poor logistical planning and to make the most of user session.

4.2.1 Selecting location

The first step is to choose the location where the research will be conducted. Generally, facilities in major cities are preferred because they provide access to a representative sample of that country's or region's

population. Large cities will also tend to have an airport nearby, which makes travel more convenient for the research and client teams. Once a city within a target country has been identified, the project lead should pick a facility that is easy to access and well connected to the public transport network. Most of the time, this will be in the center of the city, which is more likely to have hotels and shops nearby should last-minute supplies or equipment be required.

Tip:

In some countries, local teams may seek out facilities near shopping malls because it is easy for floaters (people who wait on-site so they can participate in case of a last-minute cancellation or no-show) to wait.

Note that floaters are even more important in international projects, because it is usually difficult to postpone and reschedule user sessions because of travel plans and because clients may follow sessions remotely.

Above all, the location must suit the research to be conducted. For example, if the study is about suburban teenagers, it may be more appropriate to choose a facility in the suburbs rather than in the city center.

4.2.2 Selecting research facilities

To select an appropriate research facility, the project lead will have to identify the team's and the client's requirements.

The following are key points to consider when searching for a facility that matches your needs:

- Is only an interview room needed or is an observation room also required?
- Is a separate room needed for the interpreter?
- Do observers insist on the presence of a one-way mirror, or would an audio-video link between the two rooms be sufficient?
- How many participants are expected to be in the interview room at the same time?
- How many observers will be in the observation room?

- Does the interview room need to look more like an office space or more like a living room or kitchen?
- Is Internet access needed in both the interview and observation room? Wired or wireless?

Also consider any special needs of participants, such as the following:

- If the study involves single parents, the facility should have a day care service.
- If the study involves physically disabled people, wheelchair access is a priority.

Tip:

When researching for the most appropriate research facility, project leads should not hesitate to request photographs and floor plans to make sure the space can accommodate the research team and the required lab setup.

It is important to choose a facility that has flexible hours. It must open early to allow for setup and stay open late so the team has enough time to debrief after the last session. Depending on the type of participants who are invited for the sessions, the facility may also be needed on weekends. All of these conditions should be checked in advance if possible. However, keep in mind that facilities often charge extra for late hours and weekends.

4.2.3 Ensuring appropriate technical setup

4.2.3.1 Technical equipment for software testing

In terms of technical requirements, not all facilities provide the same equipment by default. For instance, facilities that cater mostly to market research scenarios, such as focus groups, might not be familiar with the standard setup for user testing.

First, the research team must agree on the required technical specifications, which may include the following:

- Computer equipment: laptop, desktop (keyboard, mouse, webcam, etc.)
- Required operating system and software in the desired language
- Administrator rights to install software on the test machine
- Screen size and resolution

- A standard “picture-in-picture recording” of the user and the interface (video or software based)
- Support for simultaneous translation
- Different cameras for handhelds or devices that require the user to stand or move around
- High-speed Internet access and wireless access for the research team
- For mobile projects: good reception of the target cellular network (and possibly 3G signal for laptop access)
- TV or projection screen for showing the video feed from the interview room
- The ability to stream sessions live over the Internet

Regarding the deliverables, it is important to specify the format of the recordings. Does the project team require DVDs? Editable video files? Audiotapes? MP3 files? How many copies of each?

It is important to communicate the specific technical requirements to the facility not only to validate the fact that the facility can meet them but also to get a detailed and comprehensive quote, which helps control costs.

In addition to the client’s recording requirements, it is necessary to clarify what the project team needs for efficient data analysis and reporting. Careful planning at this stage ensures that the team will not run into unexpected problems once it arrives at the facility. Upon arrival at the facility, the research team should schedule time to set up the equipment and test it thoroughly before the first test session or interview starts. Make sure the facility has an in-house technician to help with the initial equipment setup, and make sure the technician will be available throughout the study to troubleshoot any problems that arise.

Tip:

Once everything has been set up, it is best practice to conduct a pilot session with a participant to ensure that everything works as it should (this is especially important when dealing with complex equipment such as eye trackers).

4.2.3.2 Recording requirements

In a standard user research study, the computer screen will be recorded along with the user’s face and audio. For Web testing, it is also possible to record mouse clicks, keyboard input, and screen text,

depending on the encoding software used. These features can be very powerful for detailed analysis or just accessing a specific segment of the video using a keyword search. Such software also makes it very easy to produce video clips without needing special video editing skills.

When teams are distributed throughout the world, it is not unusual to rely on online conferencing software to share participants' screens, sometimes even with webcam and audio feeds, over the Internet. Some conference applications, such as WebEx or GoToMeeting, also allow sessions to be recorded in their proprietary video formats, which can then either be viewed using the provided player or converted to standard video file formats for further editing.

Provided the test computer has enough RAM, the moderator can run both encoding software, such as TechSmith's Morae or Windows-Media encoder, and an online conferencing system such as WebEx to satisfy the team's analysis needs and the client's remote viewing requirements.

4.2.3.3 Recording small screens

Recording the screens of handheld devices, such as PDAs or mobile phones, requires a specific setup. First, it is important to determine whether the tests will be conducted in the lab or in the field. Although it is easier to control variables and equipment in the lab, some research objectives are best met by observing usage in a naturalistic setting. Another important consideration is whether to record the screen only or the entire device. Often, the entire device needs to be filmed to capture how users interact with the hardware as well as the screen.

If only the screen needs to be recorded, some phones and mobile operating systems allow for the phone video signal to feed directly to a computer, which means no glare issues and a high-quality image that can also be captured by encoding software.

In most cases, however, this convenient solution will not be possible, and instead, the team will need to use a camera that films the screen. Most commonly, this takes the form of a normal video camera mounted on a tripod on a table or a document camera. These cameras will only film a defined space on the table, so make sure that space is clearly marked with paper or tape. This setup will also be sensitive to glare, which makes it especially important to define how much users are allowed to tilt the device so that the moderator can guide participants and ensure that usable videos are created.

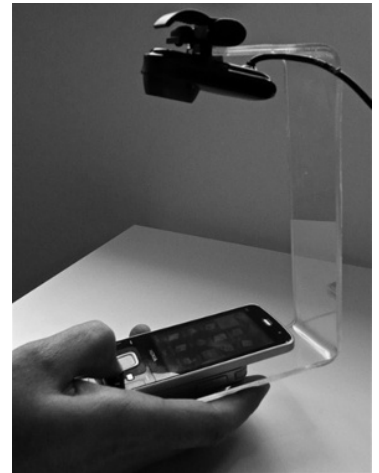


■ **FIGURE 4.1** Example of testing with a mobile device system.

A more flexible solution is to use a purpose-built small camera attached to a handset holder. With the right equipment and skill, such a camera can be built in-house, which will be cheaper than buying a commercial version (Figs. 4.1 and 4.2). The advantage of this setup is that it allows the user to move around freely and the device can be held at any angle. Also, this is the only current method to capture usage in the field. However, if interaction with the hardware is of interest, a less intrusive solution may be more appropriate because participants' behavior may be affected by the modifications made to the device.

4.2.3.4 Audio requirements

In international multilingual user research projects, it is important to specify which audio feed(s) needs to be recorded during the study. It may be sufficient to record only the moderators and participants in their original language. If there is a native speaker on the team, it is best to analyze data in the original language. If, however, there is no native speaker on the team or if the project sponsor wants to be able to watch the videos in his or her own language, the interpreter's simultaneous translation of the sessions must also be recorded. Ideally, the final recordings should have two audio tracks – one with the native language and another with the translation into the observers' language.



■ **FIGURE 4.2** Example of a small device camera holder built of Plexiglas.

If only the audio and no video needs to be recorded, digital recording software such as RecordPad or Audacity can be used for easy storing, sharing, and editing.

4.2.3.5 Remote observation (broadcasting sessions to remote viewers in real time throughout the world)

Some project stakeholders or clients might need to attend sessions remotely, which may impact the test setup. If the test computers and the remote observers' computers are on the same LAN (e.g., on a companywide network), one of the most common solutions is to use TechSmith's Morae solution.

When that is not the case, alternative live streaming solutions can be used, such as WindowsMedia or FlashMedia encoders, to stream a webcam or a computer screen over the Internet (can be used to stream a home visit, for example, with live interaction between the project lead and the local moderator).

Another option would be to use online conferencing software such as LiveMeeting, WebEx, and GoToMeeting or even VoIP (Voice over Internet Protocol) software such as Skype. Keep in mind that when using online conferencing or VoIP software, a high-bandwidth (approximately 1000 Kbps) Internet connection is required to preserve audio quality and intelligibility of speech. Low-quality audio connections not only impact understandability of the speech but also impact the timing. This can negatively affect the impression that the listener has of the participant and the moderator.

We have already established that it will likely be necessary to record the interpreter's simultaneous translation of the session. If remote observers need to have the session simultaneously translated into their language, this needs to be addressed in the technical setup as well. One solution would be to have an interpreter listen to the original audio through headphones and, while he or she is translating, speak both into a microphone for recording and into a separate conference bridge. This allows stakeholders to choose which language they want to listen to.

4.2.3.6 Checklist for technical setup in an external facility

When preparing for a study at an external facility, a project lead should always keep the following checklist in mind:

- PC: Verify that the required version of the appropriate operating system has been loaded on the test PC (in the correct language), and also check that it comes with a local keyboard.

- **Web:** Verify that the required version of the appropriate Web browser has been loaded on the test computer (in the correct language) with all required plug-ins, and make sure the computer is connected to the Internet at the speed required for testing.
- **Mobile device:** Make sure the language can be changed on the test handset and that it is unlocked (e.g., that it can work with a foreign SIM card). If a 3G network is required for testing, verify that it is available on-site and that signal strength is sufficient.
- **Observation setup:** As a backup for seeing the participant's screen from the observation room, bring a video splitter, an additional monitor, and a cable approximately 15 meters in length.
- **Remote observation:** Check that the required bandwidth for streaming/upload is available at the facility and that the team will not have firewall problems.
- **Electricity:** Take two plug adapters, a power strip, an extension cord, and a universal charger.

4.2.4 Planning the number of sessions per day

Scheduling sessions that will maximize efficiency, allow for thorough debriefing, and minimize the potential for team burnout is especially important during global user research.

As a rule, no more than 6 hours of sessions should be scheduled per day, which amounts to three 120-minute sessions, three or four 90-minute sessions, or five or six 60-minute sessions. More than 6 hours is exhausting for the entire team but especially so for interpreters, who must constantly translate throughout the day.

To maintain accuracy and quality of interpretation, some interpreters work in pairs and take turns (or have frequent breaks). However, this is more expensive because two interpreters have to be hired. If more sessions are required in a day, it will be necessary to hire more moderators and interpreters and run multiple sessions simultaneously. If the study runs more than 1 day, it is important to make sure that the same interpreters will be there each day. Retraining new interpreters during a study is to be avoided.

Sometimes, test schedules need to be very flexible to accommodate the schedules of participants who work in a particular industry or live in a certain area. For example, hospital-based physicians in the United States may prefer early morning or late evening sessions

so that they can still make their morning or evening rounds. Physicians' hours can vary widely in the private U.S. health care system, however, so depending on the city in which the research will be conducted, physicians may have a strong preference for evening over morning. In contrast, physicians' work hours in the United Kingdom and France may be determined by the public health care system, and they may need to hold evening clinic hours, which means that morning sessions may be preferred in these countries.

4.3 PREPARING TEST MATERIALS FOR A GLOBAL STUDY

4.3.1 Translate and localize testing material

Project managers should be aware from the beginning of their product development life cycle that content should be both translated and localized, especially when wording and labeling are important for their products. Localization differs from translation in its emphasis on editing translated material so it makes sense in the local language in terms of grammar, culturally accepted terms, and country-specific terminology.

Materials that need to be translated and localized include the following:

- All product material to be tested (e.g., Web site, prototype, packaging, brochure, or software)
- The moderation guide (see Chapter 3)
- The participant session guide and questionnaires
- Any other study material that will be shown to participants or used during the study (e.g., consent forms, nondisclosure agreements, and driving directions for participants)
- The data collection grid (see Chapter 5)

A professional translation service may be hired to complete the translation, or local moderators may be able to do the translation themselves. Although a professional service is generally less expensive, if the translator does not have domain knowledge or knowledge of how user experience studies are conducted, the translation may lack context. For some languages, it may also be important to instruct the translator to use a formal or informal tone when translating. As a result, local moderators will need to do a final read-through to ensure the translations make sense in the context of the study.

Example:

Consider this example of an inaccurate translation in a moderator's guide that was made by a professional translator who did not understand the context of the sentence. In English, the original text read, "Please, look around the page"; it had been translated in French as "Veuillez regarder autour de la page," which translates word for word as "Look around the page." However, the word "autour" actually calls for the participant to look at the edges or outline of the page rather than the page as a whole. It is almost impossible to understand the original meaning of the request using this translation, which could result in the collection of irrelevant data and, more important, a failure to collect the relevant data.

Because local moderators are generally domain experts in usability testing, they may be able to complete the translation quicker and more accurately than other services. Still, the translation service or the local moderator needs to be given enough time – at least 1 or 2 weeks – to deliver all requested materials.

Tip:

For some very important content (e.g., labels on a human–computer interface), the best way to ensure that all material has been properly translated is to do a cross-check by having a native speaker translate the material and then have the material translated back to English by a native English speaker.

English can be used for research materials with non-English speakers in the following situations:

- When testing content in English: In this situation, participants may not be able to express themselves in English, but they can read and react to it naturally when it is presented in written materials.
- When testing happens during early design stages, such as validating a general concept before creating a full prototype: In this case, the research material may be kept in the original format and the most important elements (e.g., interaction elements) may be translated in real time with the participant if need be.

If user sessions are conducted with material that has not been translated or localized, participants should be provided with all the help they need to understand the material as fully as possible. This can be in the form of an index or glossary listing all terms used in the interface and the corresponding localized terms.

Example:

The word “browse” is usually translated from English to Russian in the same way as “search,” so if the difference between the terms is important, an additional explanation is required in Russian. This makes the moderators’ role crucial because they must be able to detect and distinguish between hesitations and errors caused by non-localized wording issues and those due to poor design.

4.3.2 Moderation guide

The consistency of the data gathered from each country will depend largely on the structure of the moderation guide and the quality with which it is translated and localized.

Because the objective is to compare similar data, it is advisable to begin research in the project leader’s country first (if this country is included in the global campaign, of course). This will provide the project lead with an opportunity to become familiar with the study setup as well as any aspects of the product or system with which participants tend to struggle. Sometimes, adjustments to the questions are necessary to address local needs and to produce the needed results. For example, testing the same e-commerce Web site in multiple countries requires adapting the moderation guide to each local market (i.e., the products available on the e-commerce company’s Web site in France will most likely differ from the products available on its Web site in the United States).

When local representatives of the research team are involved in the localization of study materials, they can be invited to meetings in which the team discusses the objectives of the study, the technical setup, the user profile, and so on.

Tip:

As the involvement of the local research team increases, so will the quality of localization and the consistency of findings across countries.

Involving all members of the global research team at an early stage is an important step to achieving a successful project (in some circumstances, however, relationships between headquarters and local operators can be tricky, and any collaboration between the two can make the work more difficult).

4.3.3 Prepare a consistent datasheet

Data collection is a very critical step of the study, especially when multiple researchers are involved (it is less of an issue when only one person follows all of the sessions and does the note taking in each country). This section provides tips for organizing and formatting data to enhance the quality of results. Templates for note taking are provided to help with structuring the data.

Data can take many forms, including the following:

- Answers to a question (e.g., “Yes, I prefer this version because it is more engaging.”)
- Spontaneous user comments (e.g., “This really looks like a poor site.”)
- Task completion (e.g., “Finished,” “Partial,” and “Failed”)
- Timing data (e.g., “Task A was completed in 4 minutes 30 seconds.”)

To compare the results from each country, all data should be collected from each moderator in a consistent document. Providing the same template to note takers in each country will be instrumental in the effort to aggregate data. This document should be flexible enough to do the following:

- Guide the moderator about which are the specific components to be evaluated (e.g., page, features, and processes)
- Provide cues about the types of data to be gathered (qualitative or quantitative)
- Facilitate rapid analysis of quantitative data
- Accommodate any comments or additional feedback provided by participants

Tip:

We recommend using an Excel format template because it is easy to add/remove questions, to measure quantitative results, and to compare results between countries (by importing data from multiple files in one document).



■ FIGURE 4.3 Three different home pages for the same e-commerce site in three countries.

As with the moderation guide, the data gathered (and therefore the datasheet) may need to be adjusted for each country to accommodate region-specific research objectives. Figure 4.3 shows examples of one Web site available in three countries.

In this example, many aspects were consistent across the three versions of the e-commerce Web site (e.g., 60% of the products were available in all three countries), but there were also some aspects that differed across the three sites (navigation bar, directory of products, advertisement areas, etc.). Therefore, the moderation guide and datasheet needed to contain general objectives, questions that addressed the parts that were consistent across all three sites, and specific questions that pertained to each country's site. The moderation guide and datasheet must address all of these and be adapted for each country (Fig. 4.4).

Beware of moderators' and note takers' differing interpretations of what is to be measured. When possible, there should be data validation in drop-down menus ("yes/no," "1/2/3/4," etc.) for task success, ratings, and any other fields where the answer is constrained based on the moderation guide (this will aid rapid and accurate data analysis). It is also very helpful to provide hints on how to enter data into the template for the note taker. The easiest way to do this is to run a pilot session, enter the data from this pilot, and walk through the results with the moderator during a briefing meeting.

Provide hints to evaluate the success of a task:

- The expected response can be provided in the template (e.g., success if the participant anticipated the type of content that was behind the link).

Landing on a category page	Participant 1	Participant 2
Note user's comments or difficulties on the page or the browsing if any		
Category page 3 (Fr & UK)		
What would you do next?		
It is clear?		
Note user's comments or difficulties on the page or the browsing if any		
Please proceed		
Product list page (Fr & It)		
It: participants may choose whatever copier paper they like		
What would you do next?		
Note if user would visit product details page or add item to basket from here directly.		
Prompt user to go to product details page		
It is clear?		
Please proceed		
Note user's comments or difficulties on the page or the browsing if any		
Product details page (All)		
What did you think of the browsing?		
What do you think of the categories presentation?		
Was it quick and easy?		
Why (not)?		
What is this page? What is it about?		
Is it clear?		
Is there enough information to make your decision?		
How easy did you find the browsing to the product (1-5 scale)? Why?		3
Note success		
What would you do here?	1	
Did you notice the 'add to shopping list' button?	2	
What is it?	3	
Explain this feature allows to create and save one or several lists of items	4	
What is a shopping list for?	5	
Explain that you can use shopping lists to reorder items on a regular basis		
Do you find it useful?		
What for?		
Why?		

■ FIGURE 4.4 Example of moderation questions for all countries and specific questions for one country.

- Add any comment to understand the underlying reason behind the result (e.g., the participant was confused by the label).
- The overall results can be compared from country to country more precisely (e.g., the number of participants who anticipated accurately the type of content behind this link).

4.3.4 Organize the datasheet

When there is a known sequence of screens to work through (e.g., with a prototype), the moderator can record notes directly in the moderation guide. When the task sequence is not clearly defined

(because it is a user-driven scenario), then it becomes more difficult for the moderator to locate the appropriate pages to fill in, particularly in a fast-moving session. Even if the moderator manages it, his or her attention can be distracted, so the moderator should be helped by a second person (a note taker) in the observation room. The moderator continues to record notes in the moderation guide and can cross-check them with the note taker's notes when the session is finished.

Organized note taking can make data analysis much easier. The project lead should divide the moderation guide and datasheet into several sections or sheets to support organized note taking. Each can be divided into sections corresponding to pages of the site (or a function of the site or even a whole process), which will help the note taker understand where to record data that relate to a specific page/function/process.

In the example datasheet shown in [Figure 4.5](#), the first column lists the questions to be asked to the participants for the task called "Matchmaker." All responses given by each participant must be recorded in the other columns. The moderator can switch from one task to the next using the tabs at the bottom of the window.

Tip:

To ensure that the note taker's attention is not drawn away from the session for too long, the sheet titles should correspond to the name of the page, function, or process.

In the left column, each question is written in one cell to make it easier for the note taker to know where to record data and also for the person in charge of data aggregation to know exactly where to find specific information. Whenever one scrolls the page right, the participant columns "slide" behind the question column so that questions remain visible at all times (with the "window > freeze panes" option).

A downloadable version is available from this book's Web site.¹

One column is used to take notes for each participant. In each of these columns (Participant 1, Participant 2 . . . Participant *n*) the note

¹To download an Excel version of our data collection sheet, visit the Web site <http://www.globaluserresearch.com> and choose the menu "resources."

	A	B	C
1	Matchmaker (recherche rapide de cartouches, ricerca rapide cartucce)	Participant 1	Participant 2
2	You only need one more item now to complete your order: the cartridges for your printer, an inkjet HP Deskjet 720 C You want to order 5 cartridges of each colour - black, red, blue and yellow.		
3	How would you proceed? <i>Note which path the participant chooses</i> <i>Note comments or difficulties if any</i> <i>if participant did not choose the matchmaker feature:</i> <i>Did you notice the matchmaker?</i> <i>If no: why wasn't it obvious to you?</i> <i>I would like you to use the matchmaker now, please proceed</i> <i>Fr & It: the matchmaker is available on the HP and the 'Informatique' / 'Informatica' page</i> <i>UK: the matchmaker is available on the "Technology" page only</i>		
4			
5			
6	Cartridge search page		
7	What would you do next?		
8	It is clear?		
9	<i>Note user's comments or difficulties on the page or the browsing if any</i>		
10			
11	Printer brands page		
12	What would you do next?		
13	It is clear?		
14	<i>Note user's comments or difficulties on the page or the browsing if any</i>		
15			
16	HP printers page		
17	What would you do next?		
18	It is clear?		
19	<i>Note user's comments or difficulties on the page or the browsing if any</i>		
20			
21	HP Deskjet 720 C cartridges page		
22	What did you think of the browsing? What do you think of the categories presentation? Was it quick and easy enough? Why? What is this page? What is it about? Is it clear?		
23	Why?		
24	What would you do next?		
25			
26	Basket feedback page		
27	<i>Note user's comments or difficulties if any</i>		
28	How easy did you find the task (1-5 scale)? Why?		
29	<i>Note success</i>		
30	<i>Go to next sheet</i>		
31			
32			
33			
34			

■ FIGURE 4.5 Example of a datasheet.

taker must record task observations, comments (from the participant and the moderator), and quotes.

Tip:

Having one column for each participant makes it easier for the note taker to fill in the datasheet, and it also helps with analyzing the data, retrieving specific information, or even making comparisons between participants or countries (you can use the sorting option of the spreadsheet). Some statistical software requires data to be entered with participant data in row format. These data can be transposed in the spreadsheet program if required.

A well-organized datasheet that affords note taking on individual tasks, pages, and questions for each participant will facilitate data aggregation and analysis. Including a defined location in the datasheet for each of these will allow the team member responsible for data analysis to easily extract key findings for each page, object, or task. These key findings can then be aggregated into a summary table that includes specific recommendations as well as the priority of the recommendation or finding (see [Figure 4.6](#)).

4.4 ASSEMBLING AND TRAINING THE TEAM

4.4.1 Hire a skilled native moderator

Just as local languages should be preferred when conducting user sessions in other countries, local moderators should be preferred to non-local experts when selecting a project team. However, project leaders should remember that they seek not just local moderators but, rather, local moderators who are skilled in user research.

The best moderators to collaborate with will take the time to gather background information relevant to the research and understand the study objectives as well as review and rehearse the moderation guide. These moderators should also be skilled in asking nonleading follow-up questions to elicit insightful responses and know how to probe on the fly.

It may sometimes be convenient to engage a moderator from another country (e.g., a Swiss-Italian moderator to run an Italian language session in Italy), but this is not often advisable. Although they share the same language, the moderator and participants do not share the same cultural background. Participants are less likely to respond openly with these moderators because they will notice from his or her accent or vocabulary that the moderator is not native to the region.

Issue #	Page/Object	Task	Findings	Recommendations	Priority	Additional comment
1	Home page	First impressions	Responses to the design and layout of the home page were generally positive. Participants enjoyed the graphics, photos, and videos.	None	Good	"I like how there's a bunch of pictures that grab your attention, and how it's pretty easy - if you know where you're going on the website - it's easy to get there." -P4
5	Content	Swimming	Participants were extremely attracted to the pictures and the videos, with the videos having somewhat stronger appeal.	None	Good	The videos and pictures were the main highlight of the website for most participants. Feedback on these items was consistently positive across all pages.
8	RSS Icon	Swimming	Only one participant was at all familiar with RSS feeds.	Consider labeling the RSS feed icon with something that unfamiliar users will understand (e.g. "Subscribe to News")	Medium	
9	Tag cloud	Sports	Participants liked the tag cloud concept. However, they weren't clear that some items in the cloud were categories (not all participants were able to find Swimming under Aquatics).	Consider adding a [+] icon to categories in the cloud.	High	
10	Tag cloud	Sports	In all the tag clouds, participants were not always clear that the filters would affect what was shown in the cloud. No participants expected search results to modify the cloud, and only a few expected the filters to change what was shown.	Add a visual cue (e.g., an arrow pointing from the filters field to the cloud) to indicate that they will directly affect what is shown.	Medium	Participants generally expected filtered results to appear in a list or on a new screen.
11	Share, print, email icons	Sports	Participants generally understood the share, print, and email icons.	None	Good	
12	Content	100m Freestyle	Participants were very interested in the Record Evolution widget.	None	Good	Videos and pictures were also well received on this page.

■ FIGURE 4.6 Example of a detailed view of a datasheet.

Non-native moderators will also be less likely to recognize or interpret regional nuances in body language, cultural references, or the relevance of participants' word choices. If a non-native moderator is used, there is a high risk that the project will suffer from a lack of specific insight into participants' actions and behavior, especially during activities that involve probing and follow-up (e.g., ethnographic studies or contextual interviews).

Hiring native language-speaking moderators, on the other hand, will decrease the risk of misunderstanding. These moderators will be better equipped to "read between the lines" and interpret participants' nonverbal communication. Participants will also be more likely to invite a local moderator into their home for a contextual inquiry than a foreigner.

Local moderators will also have a better understanding of when to use formal or informal language and will be able to adapt when appropriate. They will have a better understanding of participants' habits and gestures, as well as the way questions must be asked and at what point participants can be assisted when they struggle. Even between countries that share the same language, only a few non-natives can claim to be sufficiently familiar with the local culture, slang, and terminology.

Example:

United Kingdom moderators would have a less than optimal experience moderating in the United States and vice versa, despite their shared English language. United States user researchers have also commented that differences in UK accents can sometimes be very strong, and that the use of local UK slang and phrases can make it difficult to understand exactly what a participant is trying to say. The same types of difficulties arise for Spanish moderators and Mexican participants, Portuguese moderators and Brazilian participants, and vice versa.

There are exceptions where non-native moderators are able to conduct user sessions in a local language if they are bilingual and have a deep knowledge of the country's culture. It could be possible for French native speakers to moderate sessions in Belgium, for example, but only for a usability test (and only for a French-speaking market). As soon as the study requires a deeper understanding of needs and desires, hiring a local moderator is recommended.

Example:

Within countries that were once part of the Soviet Union (e.g., Ukraine and Belarus), Russian-speaking moderators can sometimes be used, but there are some peculiarities. Belarus, for example, has two official languages, Belarusian and Russian, but only 2% of the population speaks Belarusian. This means that there are almost no barriers to conducting Russian language sessions in Belarus. On the other hand, Ukraine has only one official language, Ukrainian, and in places such as western Ukraine, where this language is used exclusively, there is no way to conduct Russian language sessions.

As a general rule, non-native speakers will not be able to act and react in the same way as local ones, and they should only moderate sessions if there is no other alternative.

4.4.1.1 Cultural considerations when selecting a moderator

In some countries, special cultural considerations need to be taken into account in addition to language. Of course, this is strongly dependent on the user profile recruited for the study. For example, some cultures require male moderators. Participants in group sessions in India or in Arabic-speaking countries might find it difficult to feel open and comfortable during a user session with a female moderator.

In countries in which the people believe in maintaining a high degree of modesty among females, an unmarried female might not feel comfortable being alone with a male moderator as part of a one-on-one user research or usability session. For these sessions, female moderators might be needed for female participants. This requirement is strongly dependent on the type of session and the size of the test room because there may be additional concerns of physical proximity. Collaborating with local moderators will allow the project manager to determine if it is necessary to have one male and one female moderator.

4.4.1.2 Background and experience of a moderator

If a local moderator has not been recommended to you by a trusted colleague or partner, you should start by searching for someone with a degree in cognitive science, communications, or sociology. Ideally, the moderator should have at least 3–5 years

of experience moderating sessions for international projects. Experience working with project management and colleagues remotely is also desirable.

However, in some countries (e.g., Brazil, Italy, and Russia), very few experts have degrees in cognitive science, especially with experience moderating user experience studies. Usability is a newer subject in these countries and there are few (or no) graduate-level courses in human–computer interaction. For this reason, project leaders should be flexible when recruiting moderators in such countries.

Tip:

In these countries, the safest way to get a moderator is to hire people who have degrees in behavioral science (e.g., psychology) or human–computer interaction and an interest in IT and to teach them moderation skills through both theory and much practice. However, this method of recruiting moderators is very time-consuming and requires much effort. To hire a skilled moderator, it is advisable to ask for curriculum vitae (CVs), resumes, or references from other colleagues, partners, vendors, and customers.

4.4.1.3 Selecting an experienced moderator

For a first-time engagement with a moderator (or a user research agency), a project leader may want to assess any new moderators' professionalism. Extra time – approximately 1 or 2 weeks – has to be reserved for the selection process of new moderators. An assessment might be done directly by inviting the moderators for an interview or by visiting the agency prior to the study. If this is not possible, it is advisable to hold a video conference with the individual moderators or the firm.

Here are some questions that can be asked to evaluate the moderator:

- What would you do when a participant asks for help to complete a task?
- How would you react if you find out during a user session – by asking the background questions – that your test participant does not match your target profile?
- How would you handle participants who are not talkative at all (or are too talkative)?

- What was your most difficult experience with a participant and how did you handle that?
- How would you handle a technical problem?

Tip:

If possible, ask for video highlights from a previous international study with simultaneous interpretation. Also consider organizing pilot sessions with real participants to confirm the moderator's capabilities.

The following are key questions the project leader should assess during a pilot session:

- How comfortable is the moderator with the subject of the session? Does he or she understand the terminology?
- Is the moderator able to create a relaxed environment for the participant?
- How comfortable is the moderator with unexpected situations and how easy can he or she recover?
- How does the moderator ask questions? Open-ended or closed-ended questions?
- When the participant gets off track with his or her comments or anecdotes, how well is the moderator able to redirect?
- Is the moderator able to probe? If he or she misses a probing opportunity the first time, does the moderator return to that topic at a later point?
- Is the moderator able to give different levels of assists?
- If multiple pilot sessions are run by one moderator, is the moderator able to adapt between sessions based on feedback from the project lead?

As soon as a project allows for definitive planning, the project team should contact any user research firms or moderators with whom they have a history and who have delivered good results in the past. It is best to make new project inquiries at least 6–8 weeks in advance because good moderators are always busy. This lead time is also necessary to discuss the study objectives, refine the goals, and finalize study logistics. As a result of such discussions, the team might learn that bringing a prototype device into a particular country will

require additional lead time, or that certain study dates will conflict with local holidays or seasons (e.g., monsoon season). Good moderators will collaborate with project leads to keep them informed about region-specific logistics.

4.4.2 Preparing a moderator for a study

4.4.2.1 Briefing with the moderator

To help the moderator become familiarized with the moderation guide and other material, a briefing should be organized 1 or 2 weeks before the sessions. A screen-sharing tool should be used so the moderator can interact with the test material.

The following material should be discussed in the briefing:

- Research plan
- Research material (e.g., prototype or actual product)
- Moderation guide
- Datasheet
- Report template with examples of real results that may be from a previous study (This is very helpful for the moderator because it indicates the granularity of results expected.)

Sometimes it is not possible to interact with the research material 2 weeks before the sessions (e.g., it is still in the early stages of production). Even if this is the case, it is imperative that the moderator is informed of the overall study goals and underlying reasons for the key questions asked during the study. This will allow the moderator to probe with follow-up questions more effectively, which is absolutely crucial. Briefing the moderator about the high-level study goals will also instill greater confidence in the moderator that he or she is a valued member of the study team. This will, in turn, increase the moderator's willingness to suggest localization-related changes to the moderation guide, which will make the guide more relevant and effective overall.

Tip:

When the sessions are run in the project lead's country first, the video recording from the most representative sessions can be transmitted to the local moderator. This will help the moderator to understand how the team met the research objectives of the study, and he or she can adapt the questions to the local habits and culture accordingly.

The following are key points to prepare the briefing with the moderator:

- Insert screenshots of the product to be evaluated in the detailed moderation guide.
- List the possible navigation paths for each task or scenario.
- Provide detailed objectives behind each task: Why does the moderator have to ask these questions? What kind of answers can be expected from the participant?
- Identify areas of expected struggle and how the different levels of probing may help the participant to recover.

4.4.2.2 Pilot sessions with a local moderator

A pilot session should always be conducted at least 1 day before the actual sessions begin. During the pilot session, the user research team will face most technical problems and will be able to adjust the moderation guide if necessary.

In a pilot session, the moderator goes through the moderator's guide under real conditions with a participant. This is the last opportunity to do a reality check, to fix any kind of problems with the moderator's guide or technical setup, and to check whether the reserved time frame is sufficient. If the project sponsor is able to observe the pilot session (either in person or remotely), this can also serve as a good opportunity to ensure that the appropriate feedback will be gathered during the sessions. If the pilot session is conducted at least 1 day before the actual sessions begin, technical equipment can still be purchased if problems are encountered.

Good user research agencies will always run internal pilots as part of their usual preparation activities, but scheduling a pilot with actual participants will require a brief scheduling and logistics discussion. The request for an actual pilot should be included as part of your advance request to the moderator or user research agency.

Tip:

If there is a lack of time or money, "dummy" participants may be used (e.g., colleagues who were not involved in the preparation of the user sessions).

If no pilot session is conducted, the first session will become the “de facto” pilot. This can make things difficult for the research team because it is often too late to change anything.

The following are key questions to be answered during the pilot session:

- Is the prototype working?
- Is the test system running smoothly?
- Are the audio and video being recorded properly?
- Is the quality of the audio and video acceptable?
- Is the audio for the interpreter excellent?
- Are the questions asked in an understandable way?
- Are all of the session materials prepared (e.g., task cards)?
- Is the length of the session appropriate for the material to be covered?

4.4.2.3 Hiring a professional interpreter

When real-time translation is needed to help a nonlocal project team follow along with sessions conducted in foreign languages, the success of a multicountry study largely depends on the quality of interpreters. Finding a professional interpreter is very important for a global study and should be done early.

Project leads should rely on well-known interpreter recruiting firms, some of which work internationally and have subsidiaries in many countries, or refer to international organizations.² Usually, a vendor will know the skills of its interpreters, so project leads should ask for interpreters with the most relevant experience and technical background possible. For example, it probably would not be helpful to hire an interpreter primarily familiar with mechanical engineering terminology for a study about customer relationship management. Even if the CVs and job histories provided by the vendor are perfect, a project lead should still conduct phone interviews with potential interpreters, especially on a first engagement.

²Such as the Professional Conference Interpreters Worldwide (AIIC in Geneva: Association des Interprètes Internationaux de Conférence; <http://www.aiic.net>).

Tip:

If possible, it is also advisable to run a pilot session to check whether the interpreter is familiar with the technical terms used in the study or not.

Example:

In some cities (e.g., Shanghai), there are only a few interpreters with excellent technical knowledge who can do simultaneous interpretation, and these interpreters are always booked far in advance. When a study is urgent with less than 1 month to plan, the project lead must be prepared to have a few possible interpreters in mind in advance. In the anticipation of such events, project leads should pay attention to the quality of the interpretation and gather the names of good interpreters when attending international events (e.g., conferences or meetings) that are related to user research or IT.

A good interpreter must do the following:

- Research domain-specific terminology in advance.
- Consent to be recorded as part of the session, which is not always a given.
- Refrain from paraphrasing or making judgmental comments. It is important that interpreters stay true to what participants actually say during their sessions rather than put their own words in participants' mouths.
- Pay attention to detail and interpret everything each participant says, even if multiple participants repeat the same things session after session.
- Be interested in technology. If an interpreter does not know what an MP3 player is, for example, it will not be easy to translate a conversation between teenagers about music.
- Be nonobtrusive in their communication with the user research team (especially with observers).

4.4.2.4 Preparing an interpreter for a study

The project lead should plan to send the moderator's guide to the interpreter at least 1 week before sessions start to ensure that the interpreter knows the research objectives and protocol well. For example,

when evaluating multiple versions of a Web site, the interpreter should be provided with links to both foreign and local language versions of the Web site in advance.

There are also some terminology issues specific to user research that the interpreter should be made aware of. When people from different disciplines (e.g., product managers, user researchers, or developers) are involved in the same study, they might have something completely different in mind when they use the same terms, such as “design,” “use cases,” “usability,” or “user experience.” To minimize this possible confusion, it is very important for the project lead to clarify the meaning of all terms with everyone involved in the study.

If the interpreter that has been retained does not have sufficient technical background, the project lead may even consider preparing a glossary for the interpreter explaining all of the technical terms and important words that will be used in the study in the lead’s native language. Although some of them might not be able to be translated directly, it is useful to describe the exact meaning of each technical word. For example, in some languages, such as Russian, there is no direct way to translate the terms “usability” or “user experience,” so an expanded definition may help interpreters find working terms.

4.5 CONDUCTING THE FIELDWORK

4.5.1 Moderation

When organizing a global study (especially on different continents), moderation will differ from country to country; this is mostly due to cultural aspects, but it is also due to the personality of each moderator. Some practitioners will be more directive (as a conductor), whereas others will let the participant be “alone” in front of the product. Consistent moderation is imperative to gathering high-quality data, especially when the study takes place in two or more countries.

It is most important that an experienced moderator who is well prepared act and react exactly in the way that is needed. For example, experienced moderators can encourage shy or fearful participants and prevent other participants from getting very angry or frustrated. Experienced moderators do not ask leading questions; they let participants say what they want to say without leveling judgment or personal opinion. They can ask follow-up questions after participants have finished providing immediate feedback to ensure research objectives are met.

Tip:

One way to counterbalance the potential differences in moderation is to attend sessions in each country and debrief as many times as necessary with each moderator to understand the real meaning behind a participant's reactions.

Some moderators tend to follow scripts closely, whereas some are more flexible and adapt the order of the tasks and questions to the flow of each particular session. As long as the different sessions appropriately address the objectives, it is sometimes best to accept and learn from the different styles in which they are being conducted. However, in cases in which task order must be consistent between countries (e.g., because the task order has been counterbalanced), the project lead should clearly communicate this requirement to all moderators.

It is beneficial to work with the same moderator in a certain country from project to project because it saves the project lead from having to search for a suitable moderator for each new project. The project lead should use past experience to determine who will be the best fit for a particular study.

When the moderator is well known, it might not be necessary to attend all the sessions in the observation room. It may be sufficient to follow the sessions remotely with a streaming solution and then plan a debrief meeting with the moderator after each session or day. This is another good reason to collaborate with the local moderator when planning logistics.

When the project leads (or sponsors) are in the observation room, they may want to interact in a discrete way with the moderator during a session via instant messaging (IM). In this case, the moderator needs an extra laptop loaded with an IM client. The screen of this laptop should not be visible to the participant (the usage of IM is fairly common in North America and Asia).

Some practitioners do not consider it appropriate to interact with the moderator during the session and only debrief the moderator between sessions. Regardless of whether or not the observation room has a direct line of communication with the moderator, it is best practice to plan for a 10-minute debrief after each session to address any additional questions from the project sponsors and iteratively improve the moderation.

Tip:

Schedule the last 10 minutes in each session for questions from the note taker and sponsor (the moderator may excuse himself or herself and go to the observation room to get final questions from the clients).

The following are key points for multicountry moderation sessions:

- Hire local and native moderators.
- Involve the local moderator in the discussions about objectives and user profiles.
- Provide the moderator with the following documents at least 1 week before the first session:
 - Research plan
 - Moderation guide
 - Research material (i.e., stimuli)
 - Datasheet
 - A full video session
 - Template report
- Translate and localize the moderation guide and other research materials to address local needs.
- Provide local moderators with detailed objectives related to each task.
- Conduct remote sessions with the local moderator to support knowledge transfer (e.g., pilot session with screen sharing tool).

4.5.2 Using a technical tool to collect data: Morae

Morae is a helpful tool for collecting data. Not only does this software enable you to record sessions (computer screen with participant's face plus the voice of the moderator and participant) but also it enables the logging of events during a session. While watching the session live you can log specific events and stamp them using a code (e.g., Q for quote/comments), and you can add your own comments to the stamps. Along with the information entered manually, Morae records the time when you logged each event, so you can easily retrieve the extracts afterwards, enabling you to produce highlight videos very efficiently.

4.5.3 Simultaneous translations during the sessions

Simultaneous interpretation is recommended when nonlocal observers are attending the sessions. (The interpreter's voice will be added in the recording also.)

Ideally, the interpreter will have a separate room from which to observe the sessions. In this case, the audio from the interpreter's room, not the interview room, should be heard in the observation room. It is also possible for the interpreter to sit with the observers in the same room. In this case, the observers should not talk to the interpreter because this is very distracting (and the observers' voices would then also be recorded). Observers who are able to follow the session in local language would use a headset to listen to the participant's and moderator's voices, whereas the other observers would listen to the interpreter's voice.

Tip:

Sometimes it is valuable to have the interpreter in the same room as the observers (the interpreter can adapt the translation for the observers and answer any questions during breaks). Alternatively, if space allows, the interpreter can be placed in a separate room, away from the observers, so that the observers do not interrupt the interpreter. Which model to use is a matter of preference and pragmatics.

Ideally, the project lead should observe all sessions. When the project lead can speak the local language, he or she should pay attention to the translated terminology as well to ensure that the interpreter interprets all sessions accurately even when there are many repetitive comments between sessions.

Tip:

It is important for interpreters to have direct access to the volume control of their headphones/speakers. Microphones should be sensitive enough so that the interpreter does not have to raise his or her voice to be recorded at the appropriate volume.

Tip:

It is important to use high-quality interpreter equipment. If the equipment is not sufficient, this could spoil the entire project because it influences not only the interpreter's work but also how well the observers can hear the session.

Some interpreters are emotionally involved in the process, which is good if they can replicate participants' intonations (this helps

observers perceive users' emotions). However, keep in mind that a good interpreter translates in the first person and does not interject his or her own emotions into the translation. Exceptional interpreters will also modulate the tone of their voice to indicate whether the participant or the moderator is speaking.

4.6 ANALYZING DATA AND REPORTING RESULTS

Chapter 5 discusses reporting in detail, but there are a few points to touch on here.

4.6.1 Oral debriefs with local team

An oral debrief every day between the project lead and the moderator (and note taker) is highly recommended. This debrief can be in person or over the phone, and it will usually take approximately 20–30 minutes. The purpose of this activity is to allow the project lead to hear the moderator's firsthand account of the daily trends and avoid any misunderstandings (because to analyze the data and write the final report, the project lead needs to go further than just reading the facts on the datasheet).

Example:

A comparison between recently released mobile phones was carried out at the request of a major mobile phone manufacturer. The results were very different for one specific country, which was unexpected. After oral discussion with the local team, we discovered that one phone was preferred by participants in only this one country. This also happened to be the only country in which users had to pay for that particular phone (a greater value was conferred upon the phone when it was paid for).

4.6.2 Description of key findings

Project leads should require local moderators to send them a description of key findings at the conclusion of fieldwork in the relevant country. The description of a finding should always be accompanied by user comments, as well as the task during which the finding was observed. Quotes can be a very useful addition to the description of key findings. This information will further assist the project lead in identifying consistent trends across countries.

Example:

“The participant said that handset A was more usable than handset B,” but the moderator adds the following comment: “I suspect this finding is the result of this participant ranking handset A in first place during the initial rankings at the beginning of the session.”

An example of a results spreadsheet from a local moderator is shown in [Figure 4.7](#), which also shows additional comments (column G). All the content of the spreadsheet can be filtered (from row 3). This is very useful for the project lead when analyzing the data and building the report because data can be sorted and filtered by task, priority, subject, etc. Reading this table helps the project lead organize the analysis by priority level or the presence of recommendations.

It is almost imperative that local moderators provide screen captures to illustrate findings or recommendations because this will aid greatly to the understanding of location, severity, and priority of the findings by the stakeholders.

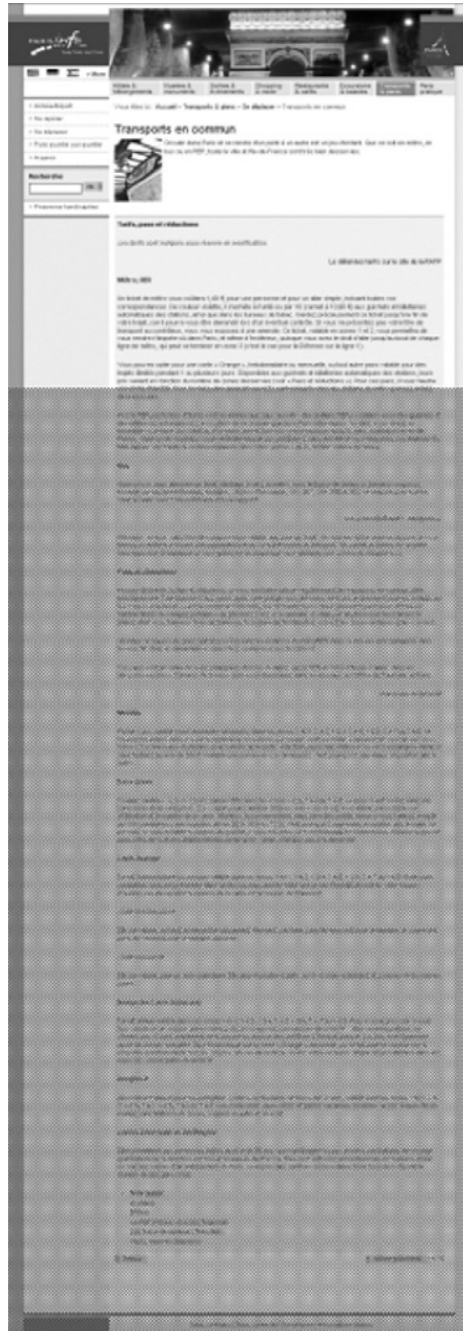
In [Figure 4.8](#), a screen capture shows that participants did not realize how much information was available below the fold. Screen captures such as this should be put in the report template to illustrate a finding (e.g., a large part of the content of the page was not seen by the participants). If the captured screens include content that is not written in the audience’s native language, it is important to use translated key words in your written descriptions of the screens [e.g., the “buy it now” button (“Sofort kaufen”) was frequently overlooked]. Findings placed in the report template should be accompanied by recommendations whenever possible, and these recommendations should be prioritized based on the impact they will have on the overall user experience with the artifact.

A good data report from a local team will include the following:

- Detailed findings for each objective of the study (e.g., scenario or task-level observations, quotes from participants, and moderator comments).
- Screen captures illustrating findings whenever possible.
- Prioritized recommendations for fixing any identified issues. These could be based on participant observations, heuristics and principles, best practices, etc.
- Any additional information that will help the local team communicate findings and recommendations to the project lead.

Project 001 // Client AAA // Mockups testing						
Issue #	Page/Object	Task	Finding	Recommendation	Priority	Additional comment
1	Home page	First Impressions	Responses to the design and layout of the home page were generally positive. Participants enjoyed the graphics, photos, and videos.	None	Sort Ascending Sort Descending	how there's a bunch of pictures that grab your eye, and how it's pretty easy - if you know where to go on the website - it's easy to get there." -P4
5	Content	Swimming	Participants were extremely attracted to the pictures and the videos, with the videos having somewhat stronger appeal.	None	(Show All) (Show Top 10...) (Custom Filter...)	ideos and pictures were the main highlight of the site for most participants. Feedback on these items was generally positive across all pages.
8	RSS icon	Swimming	Only one participant was at all familiar with RSS feeds.	Consider labeling the RSS feed icon with something that unfamiliar users will understand (e.g. "Subscribe to News")	Good High Low Medium	
9	Tag cloud	Sports	Participants liked the tag cloud concept. However, they weren't clear that some items in the cloud were categories (not all participants were able to find "Swimming under Aquatics").	Consider adding a [+] icon to categories in the cloud.		
10	Tag cloud	Sports	In all the tag clouds, participants were not always clear that the filters would affect what was shown in the cloud. No participants expected search results to modify the cloud, and only a few expected the filters to change what was shown.	Add a visual cue (e.g. an arrow pointing from the filters field to the cloud) to indicate that they will directly affect what is shown.	Medium	Participants generally expected filtered results to appear in a list or on a new screen.
11	Share, print, email icons	Sports	Participants generally understood the share, print, and email icons.	None	Good	
12	Content	100m Freestyle	Participants were very interested in the Record Evolution widget.	None	Good	Videos and pictures were also well received on this page.
13	Find medalled athletes	100m Freestyle	Most participants were easily able to find the 100m medallists.	None	Good	
14	Content	Swimming History	Many participants were interested in links to find out more information about the sport.	Add links to external information on the sport history pages.	Medium	A few participants mentioned that the existing information would be insufficient for a school project.
15	Glossary	Swimming History	Participants did not expect the glossary, but thought it was a good resource to have.	None	Good	
16	Breadcrumbs	Swimming History	Participants were easily able to find and use the breadcrumbs to navigate.	None	Good	
17	Content	Photos & Videos	Several participants wanted labels to describe each of the videos.	Consider adding descriptive labels to each item in the grid.	High	"I wish there was a little bit of a title to each of the videos... 'figure skating' or the event. I don't know what I'm watching." -P3
18	Create a Playlist	Photos & Videos	Participants were clear on what this link would allow them to do.	None	Good	
19	Tabs	Photos & Videos	The Emotional Hits and Technical Hits tabs are very confusing, likely because of a bad translation.	We are not sure what content these tabs represent, but the labels should be retranslated to be more clear.	High	Technical Hits was suggestive of physical hitting or rules violations. Emotional Hits was mainly interpreted as highly moving moments (e.g. a national rivalry or heated match), but participants were not at all confident about their guesses.
20	Filters	Photos & Videos	Participants noticed and understood the drop-down and check box filters.	None	Good	

■ FIGURE 4.7 Example of a results spreadsheet from a local moderator.



■ FIGURE 4.8 Example of a screen capture linked to a comment on the results spreadsheet.

4.6.3 Video excerpts

Video excerpts are an excellent way to help sponsors envision the findings and often prove to be quite enlightening. Opinions differ widely among researchers about the length of these clips. Some researchers keep the number of clips to a minimum (5–10) and of short duration (10–30 seconds), whereas others provide 15–20 minutes in 5–10 video clips. For some complex subjects, up to 1 hour of highlights may be fine if they are well organized and searchable. Like the full-session recordings, the video excerpts need to include an audio track in the project sponsor’s native language.

The content of the video excerpts should support the most important, high-priority findings, such as those that

- have a high impact on performance/satisfaction,
- were experienced by many participants, and
- are directly related to the research objectives.

4.6.4 Summary of the local team’s data collection responsibilities

Ensure that sufficient and accurate data are collected throughout the sessions:

- Bear all research objectives in mind and know the tested material well.
- Make sure that everybody collecting metrics (e.g., success rates) has a common understanding of what they are measuring.
- Record all problems, issues, missing information, and positive and negative feedback within context.
- Record participants’ answers when they are asked follow-up questions by the moderator.
- Collect data without interpreting or judging what one hears.
- Use the Excel worksheet provided by the project lead (or create one of your own) to collect/organize information that will be needed after sessions (success/failure, time, likes/dislikes, navigation path, first click, etc.).

The following documents are to be gathered from the local team:

- Excel worksheet with findings, comments, and recommendations.
- Key findings with screen captures and video excerpts.
- The raw data, which may be notes in local language that are handwritten or embedded in an Excel worksheet. These notes can be translated if budget and time allow.

4.7 KEY TAKEAWAYS

When preparing for international fieldwork, the project lead must take the following into consideration:

Planning logistics

- Select the research location that is the most representative of your target population
- Book the facility that best fits the project requirements
- Ensure the appropriate technical setup is available
- Plan the number of test sessions per day

Preparing test materials

- Prepare materials such as the moderation guide and datasheet
- Ensure all testing material is translated and localized for each country

Assembling and training the team

- Hire a skilled native moderator
- Hire an experienced interpreter with a technical background
- Prepare the moderator(s) and interpreter(s) for the study by providing them with sufficient background information about the research objectives and conducting pilot sessions

After fieldwork has started

- Ensure consistent moderation, interpretation, and data collection
- Hold oral debriefs with each local test team upon completion of fieldwork
- Ensure that each local team delivers a completed datasheet, description of key findings, raw data, and video excerpts when appropriate

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Analysis and reporting

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5.1 INTRODUCTION

Exceptional planning and execution of a global user research study do not guarantee successful analysis and reporting of the data. Achieving a coherent analysis across a number of countries can be tricky regardless of how well the study was planned. This chapter outlines how the project team can ensure the research outputs are insightful, coherent, and amount to more than the sum of their parts. Although this is a challenge for all involved, working constructively with like-minded professionals across different cultures is one of the most fulfilling parts of user research.

The following subjects are discussed in this chapter:

- Planning analyses for global projects
- Collaborating and sharing analyses from each locale
- Reporting and presenting results

5.2 PLANNING ANALYSES FOR GLOBAL PROJECTS

This section focuses on planning the analyses for global projects, particularly how to keep the approach to analysis consistent while ensuring that the local voice is fully heard.

5.2.1 Extent to which the local teams should participate in analyses

A critical factor in determining the division of labor for the analysis of a global user research study relates to whether or not members of the lead research team will attend sessions in each of the countries

involved. Essentially, this decision determines the extent to which local teams will contribute to the overall project analysis.

5.2.1.1 Approach if lead research team attends the sessions

If members of the lead research team attend the user sessions, it will be easier to consolidate the analyses and get a coherent picture of the overall findings. They will be able to make judgments about what they have seen without heavily relying on the filter of the local research teams' analyses. Moreover, making judgments across countries will be much easier as a result.

Whether a member of the lead research team is in attendance or not, it is essential to involve the local teams in the analysis. Do not treat them as subcontractors solely engaged to facilitate sessions. The lack of first-hand knowledge of the language, as well as the local cultural cues and references, will make you less able (than local counterparts) to understand the subtleties in users' behavior and their potential importance. For example, during a collaborative design session in Argentina, there was conflict within a small group regarding design options. Although the reason was not apparent to the observer, the local team member understood that design options were not the cause of the problem. Rather, the conflict was being fuelled by the fact that one participant worked for a branch of the government that had effectively slashed the value of all other participants' savings in the preceding months.

It is vital to remember that subtleties exist even between similar cultures, and there can be a degree of underlying truth to some national stereotypes. For example, if moderators present the same research questions to participants in Finland, Italy, the United States, and the United Kingdom, Finnish participants are likely to talk far less than Italians, and American participants may be more talkative and take more pronounced standpoints than participants in Britain. This does not mean that particular demographics respond better than others; it just means that an informed local judgment is necessary to understand the feedback that is obtained during a session, whether via user behavior or verbal and other cues.

5.2.1.2 Approach if lead research team does not attend the sessions

If the project lead will not be in attendance during sessions, the coherence of the analyses may be lost to some extent, which can have a major impact on the quality of the results if the analysis phase is not well managed. One emerging option to handle this is to observe test sessions

remotely via video streaming or Web-conferencing technology. This means that you can remotely observe in real time or (if waking up at 3 a.m. to watch a session does not appeal) watch the sessions on-demand later. However, some Web-streaming services such as Webex can sometimes have difficulty displaying video due to bandwidth issues.

Whether streaming is used or not, there are some practical steps that will help you offset the potential impact of not being present at sessions, which are outlined next.

5.2.2 **Ensure analysis is consistent while accounting for local factors in each country**

The first stage of analysis is to review the results within each country and provide local research findings with an indication of cultural relevance by paying attention to fundamental cultural and contextual differences.

The following example highlights cultural specificity in the visual design of Web pages in China. Unlike in many other countries, Chinese users prefer to see a highly animated home page. As a result, Chinese Web sites tend to be quite vibrant, adopting lots of animated content, scrolling text, or floating banners – design factors that are less popular among Western audiences, whose preferences tend toward more conservative home page designs. In general, Chinese people like warm colors and a vivid background because they believe that warmer colors, such as red, orange, or green, signal happiness and fortune. To elucidate this point, [Figures 5.1](#) and [5.2](#) depict the visual style favored by Chinese people because they contain more vibrant designs, supported by animated text. In contrast, [Figure 5.3](#) may be considered too plain and serious to a Chinese audience because the static images and boxy format may be somewhat unappealing. Western audiences, however, may prefer the visual style of [Figure 5.3](#) to that of [Figures 5.1](#) and [5.2](#).

As a member of the lead research team, you can do a number of things to ensure that the local analysis successfully captures such local issues while ensuring consistency in approach across countries, as the following sections discuss.

5.2.2.1 Run testing the lead country first

It is important for the project lead to inform local researchers of the parameters of interest so that valuable analysis time is not wasted considering all aspects in-depth. This can be accomplished with the initial briefing (see Chapter 3 for further details) but also during an analysis update after the lead research team has completed its user sessions.



■ FIGURE 5.1 Visual style that tends to be favored by Chinese users.



■ FIGURE 5.2 Visual style that tends to be favored by Chinese users.

This, of course, assumes the lead country is scheduled to run its sessions first, which is advisable. Once the analysis for the sessions in the first country has been completed, the project lead will be well placed to guide local teams about how they can analyze their data consistently. This update should highlight areas of focus, pitfalls to be avoided, and also give a sense of any trends or particular points of interest that have emerged (e.g., unexpected results). However, sharing the full analysis between countries is not recommended because it may inadvertently narrow the focus of local teams. If local teams consider their own results



■ FIGURE 5.3 Visual style that may appeal more to Western users than to Chinese users.

only within the context of whether they agree or disagree with the results of analyses from other countries, there is a danger that they will overlook something uniquely local and/or prioritize findings according to comparison with the lead research team's findings.

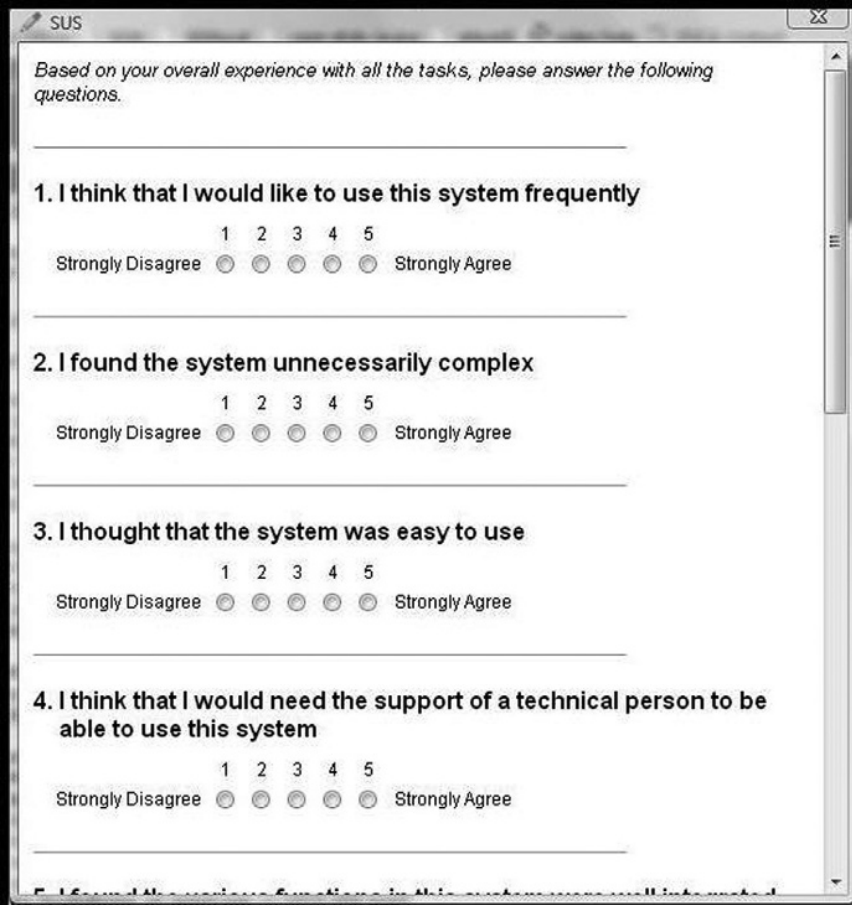
Keeping the approach to analysis focused across teams is particularly important with global projects because they often have a larger number of stakeholders involved. Stakeholders may have differing research needs, which will present you with a challenge in terms of the research design. In these circumstances, analysis can become inconsistent if all research teams are not prioritizing and thinking about the project in the same way. This becomes most problematic for more subjective and less inherently structured techniques, such as ethnographic studies and expert reviews.

Local teams can also lose focus in their analysis as a result of informal discussion with local sponsor representatives attending the research. These individuals may have their own research needs and agendas that are not consistent with the original study plan. This could potentially divert the focus of their local analysis. One of the advantages of the project lead traveling to each country is that these inconsistencies can be spotted and diffused before they affect the analyses.

5.2.2.2 Using online questionnaires

Online questionnaires completed by both participants and the local research team can be a useful aid to the analysis because they allow local researchers to share their session data with you in real time. However, such tools need to be carefully designed so that if they are to be used by the session moderator, they do not increase the “cognitive effort” required and/or distract the participants during their session. An example of an online questionnaire is shown in [Figure 5.4](#).

This approach has been successfully used for several large multinational user research studies with 100 or more interviews per country. Because all data were typed into an online questionnaire in real time,



SUS

Based on your overall experience with all the tasks, please answer the following questions.

1. I think that I would like to use this system frequently

1 2 3 4 5

Strongly Disagree Strongly Agree

2. I found the system unnecessarily complex

1 2 3 4 5

Strongly Disagree Strongly Agree

3. I thought that the system was easy to use

1 2 3 4 5

Strongly Disagree Strongly Agree

4. I think that I would need the support of a technical person to be able to use this system

1 2 3 4 5

Strongly Disagree Strongly Agree

■ FIGURE 5.4 An excerpt from a computer-based online questionnaire.

the lead researchers were able to access the results immediately and gain preliminary findings with ease. Also, by providing an online reporting tool, which is also shared with the sponsor, country-specific and overall trends could be easily followed by all parties.

5.2.2.3 Documenting local findings

All local teams must use the templates provided by the lead research team to report their findings. Not doing so will increase the overall analysis effort and may make it difficult for the lead research team to reconcile results. These templates should be provided to the local research teams as part of the initial project briefing activity. Chapter 4 includes guidance on the design of these templates.

In using the templates during analysis, local teams must review any example findings provided by the lead research team. These will help set expectations about the level of analysis required and the format anticipated. Individuals have their own styles, and these differences are compounded when working across organizations and cultures. Accordingly, even relatively small differences have the potential to cause much rework. For example, you will need to determine whether an active voice (“User A successfully completed the task”) or a passive voice (“the task was successfully completed by User A”) is best to communicate findings. The “active” voice is shorter and tends to be easier to understand.

The language of the analysis will be set by the lead team. However, for research involving artifacts such as mobile phones or Web sites, user interface features (e.g., button assignments) must refer to both the original and the translated versions, if local versions have been created. Without both, it is difficult to identify the feature on any supporting images in the report. Quotations may also be retained because they are often very powerful for conveying particular points with greater salience.

Example pictures must be provided. Annotations of these can also be useful to provide a greater level of focus on an issue (e.g., text boxes, lines to highlight a small area or given field, and other highlights or callouts for sections and larger areas). This is of particular importance when the local test artifact is not available to you (e.g., a mobile handset) or when you do not know the language of the user interface.

When producing metrics, it is better for local teams to produce any visualizations (e.g., Excel charts) to the style specified. If they do not, then the lead research team will be less able to contribute insights and rationale for any trends that emerge.

Finally, all teams must work to the same prioritization, categorization, and metrics scheme. Without this, it will be extremely difficult for you to reconcile results from all of the countries involved.

5.3 COLLABORATING AND SHARING ANALYSES FROM EACH LOCALE

This section focuses on the sharing of local analysis and the collaboration required between lead and local teams to achieve a coherent overall analysis. It covers both the methods of sharing and the points during the project at which it would be opportune for the lead team to communicate with the local teams to share and discuss their findings.

5.3.1 Set expectations about delivery

It is imperative that you agree on the timeline for delivering analyses with local teams before the research starts. For most global projects, practicalities dictate a turnaround of full local analysis within 1 week of the user sessions, although norms for an acceptable turnaround time can vary. For example, in countries where user research is less mature, the main providers of user research services may be either local market researchers or academics. Although many academics successfully combine their work with commercial projects, those in less developed markets with less commercial experience may also be balancing other commitments, and they may not be as acutely aware of the tendency for shorter timelines to exist for commercial studies. In such instances, it is only fair to set expectations up front.

Another factor that can dramatically affect turnaround time for local analysis is the extent to which translation exists as a separate activity. In particular, if a third-party translator is involved, then you may need to factor in additional time for translation.

5.3.2 Methods of sharing analysis

In many instances, using e-mail to send documents and spreadsheets works well, but there are times when it does not. For example, if many images are being added, the file size of documents can quickly become too large, resulting in e-mails failing to arrive due to firewall limits. In such instances, secure sending of large files is possible through applications such as Dropbox (<http://www.getdropbox.com>) and YouSendIt (<http://www.yousendit.com>).

Sharing rather than sending documents can also be useful for other reasons. Change control can quickly become a problem when multiple partners need to contribute to the same analysis document/spreadsheet, for example, because clients require daily updates of session metrics for all countries. This can result in multiple versions, with the carry on effect that as the project lead, you will need to spend more time reconciling differences. Commonly used examples of file sharing services are Basecamp (<http://www.basecamp.com>) and Google docs (<http://docs.google.com>). When making a choice as to which service to use, the most important factors you need to consider are typically cost (some services are free), the level of security needed, and the necessity for wider project management features such as tracking progress against milestones.

If security is a particular concern, then you may need to consider encryption software such as PGP (Pretty Good Privacy) so that data can be exchanged securely via e-mail with only intended recipients being able to access the e-mail's content. PGP is quite reliable, but it can be tricky to use, especially the first time. However, be aware that the major exposure in terms of confidentiality is likely to be with other parties involved in the project. As a result, nondisclosure agreements may be a more fundamental need.

5.3.3 Rapid feedback from local research teams

Feedback from local research teams can exist on more than one level. Interim findings may be required before the full results for a country are completed, for example, after the first day of sessions when a large number of sessions are being conducted.

The benefit of early analysis is that it helps keep the project lead informed and allows for some refinement of procedure if necessary. It also offers the ability to update and reassure the sponsor, who may have a range of interested stakeholders to update. Interim findings are best provided within an informal face-to-face meeting at the end of the day if all the relevant people are present or by phone or e-mail.

5.3.4 Reviewing local analyses

Once the project lead receives the analyses from each of the local research teams, each must be reviewed and consolidated into one overall analysis. For this to happen, the project lead will need to determine the answers to some key questions:

Are there differences between countries?

Is there an obvious explanation for the differences? For example, are there cultural differences in tolerance to the density of the user interface (it is generally accepted that East Asian audiences are more tolerant to dense user interfaces than are European and U.S. audiences)?

Are any findings surprising? Is it possible that differences are due to the way that local sessions were conducted and analyzed?

Do the collected metrics appear to match the other findings reported? If this is not the case, could this be due to the result of inconsistencies in the way the measures were originally collected?

The project lead will need to gain an understanding of why any differences exist, which will involve holding discussions with local teams after both the lead research team and the local researchers have had time to digest the local analysis. Remember, surprises are not bad; they are part of the reason for researching with real users. However, you need to ensure that any observed surprises or differences are not a result of variations in the research methodology.

Particular care should be taken to minimize variation in the methods used to record metrics because these may be prominent in the final deliverable. Metrics and images tend to be more easily understood by a global audience compared to text alone because they are less language specific. As a result, they tend to be surpassed only by the executive summary and key recommendations in terms of visibility in the report. Accordingly, the project lead should take extra care in the review of both metrics and images. It is advisable to request the original datasheets from the local test teams because this will help identify simple sources of inconsistency (e.g., incorrectly adding up totals) without necessitating that the lead research team repeatedly request clarification from the local teams.

5.3.5 Clarifying the analyses

After the analysis from each local test team has been reviewed, the next step is to arrange a follow-up phone discussion between the project lead (and other researchers from the lead team) and representatives from the local research team. Because local teams will have had little exposure to the results from other countries, this will be their first opportunity to compare and contrast international trends.

Before speaking to the local team, it can be helpful to send it an e-mail outlining any areas of interest so these can be considered prior

to the call. This will ensure that calls are more focused, which is particularly helpful if both parties are not fluent in the same language.

A collaborative style tends to work best, although this can vary between cultures. The purpose of the exercise is not to approve or disapprove of the work of a local team but, rather, to move the analysis forward, compare trends to those in other countries, and generally to enrich the quality of high-level findings. Apart from any questions that may arise as a result of reviewing their analysis, this follow-up discussion is also a great chance to talk to the local research team about the background of the research (although this should have been discussed in detail prior to fieldwork, reminding the local team of the study background helps to focus its interpretation of the results).

As previously mentioned, local teams may be able to provide valuable insights into cultural nuances that, although obvious to them, may be imperceptible to you and other members of the lead team. For example, in an evaluation of a Web site, a graphic image that had not been a problem elsewhere caused an adverse reaction in Japan. During discussion with the local team, it was learned that the design was similar to one often used on envelopes for bereavement cards. Thus, understandably, a less positive reaction was observed. A strategy to address issues such as this is of particular importance if low numbers of participants are to be consulted in each country. There is a danger of attributing undue significance to a finding and then labeling it as representative of that country. For example, if two of six Brazilian participants do not complete a task to find contact information on a Web site and the local team cannot point to a wider trend to account for this, it does not follow that on a wider scale Brazilian users will struggle. However, if two of six Brazilian participants find the home page dull and the local team reports that similar Web sites in Brazil have more colorful home pages, then something has been identified that may be more broadly applicable.

5.3.6 Consolidating the analysis

Once the local analyses have been clarified, the lead research team must complete the prioritization of the overall findings and make consequent recommendations. Differing patterns of results between countries are possible, but the final deliverable needs to be written with a clear and single voice explaining both trends and differences across local markets.

When drawing the analysis together, it is important for the lead research team to fight a natural tendency to place undue emphasis

on the findings, prioritization, and recommendations from its own country. To negate this tendency, it is useful to go back and share main findings and recommendations with local teams to ensure that the big picture has not become distorted in any way.

The need for internal coordination within the lead team must also not be overlooked. If several members of the lead team are working on the report simultaneously, then they need to stay in step to ensure that findings are being reported consistently.

It may seem as though much meeting time is required to coordinate global analysis. Although a pragmatic approach is always important, the sharing of ideas and time spent ensuring everybody is working in a coordinated manner is essential – it will be time well spent.

5.3.7 What happens if it all goes wrong

Anyone working in global user research quickly discovers that the maturity level of user research can vary considerably between countries. This becomes more of an issue as large organizations increasingly target emerging markets. It is possible to find a local research team to conduct sessions in countries such as Malaysia and Egypt, with an agency that can provide facilities as well as recruit and run sessions. However, core market research skills notwithstanding, the local user research team may not be well equipped to provide analysis to the level required, despite initial promises. Many in the field bear the scars of global projects in which the analysis conducted by local teams fell short of the desired standard.

A very important first step when seeking to overcome problems is to communicate with every local team involved. Talking to the local team can be a much more helpful and timely way to overcome misunderstandings than relying on a stream of e-mails. If the local team is unable to resolve the problem after talking it through, a useful strategy can be to share with the team the full analysis from one or more other countries. Essentially, this provides a clear sense of the depth and breadth of analysis that is required from the team, and it also highlights where it is out of step with other partners. However, this strategy should be used with caution because providing a local team with the full analysis from other countries may bias its interpretation of the results from its own sessions. If the local team is keen to develop its international business and work on future projects, it should be receptive to this idea.

Regrettably, there may be instances in which the requisite change does not occur, either because local researchers have not applied the

required level of effort or because their capacity for analysis, even once bolstered by examples from other countries, does not meet the necessary standard. Unfortunately, neither is easy to fix, although it is easier to apply reasonable pressure than it is to improve the quality of analysis where the requisite skills are lacking. If the lead team's briefing process was thorough and the local partner agreed to the conditions set forth therein, then the lead team is clearly in a position to apply pressure to the local team to deliver. Remember, the sponsor will pressure the lead team if a strong coherent analysis is not delivered, so the project lead should be prepared to convey a lack of satisfaction to obtain the quality of local analysis required. If the analysis cannot be improved to the requisite level, then, unfortunately, the lead research team may need to start examining the local raw data and session videos, even if time and language may be barriers to this route.

5.4 REPORTING AND PRESENTING RESULTS

This section focuses on the reporting of results once analysis is complete. The audience for deliverables is discussed, as well as the typical deliverables that are produced.

5.4.1 Audience analysis: Who will read the report?

When preparing the deliverables, it is essential to consider the audience and its specific needs. In a study focusing on one country only, there is a good chance that the lead team will have met and planned the study with those who initially requested the research and other interested parties. However, with a global study the project lead needs to think first about the needs of the sponsor but also about the broader range of potential readers, whom they may not have met. By definition, the audience for a global study will be more dispersed geographically and more numerous than that for a typical study. This audience may also come from a very different culture and may not share a common language. If you are unsure how best to proceed, it is useful to talk to local representatives or ask to see other deliverables to help understand the best plan of action.

5.4.1.1 Global and local audiences

Global projects are often initiated by the corporate office or upper-level marketing and user experience teams who champion user research. However, there is also a local audience for the results in the countries to be tested. Large international organizations are not

faceless entities that speak with a single voice, and so the political situation can be tricky at times. The best way of dealing with this during analysis is to be aware of it but not be influenced by it. Above all, it is important to clearly analyze the findings against the testing objectives that have already been established. Reporting findings can require careful handling to inform all parties of the study results in a sensitive manner. [Box 5.1](#) includes a case study of the steps taken by one large organization to handle this.

On the positive side, because local business units in other countries often are without resources to conduct studies themselves, they may welcome the study, viewing it as a rare opportunity to see the output

BOX 5.1 SHARING THE RESULTS FROM A COMPLETED STUDY: A CASE STUDY

LexisNexis is a legal and business information publisher that produces Web-based research products for customers worldwide, among other things. Its local business units are served by a central product development division, which also comprises the user experience group.

A project involving one of the flagship products was to update functionality in a number of European markets at the same time as the new product was launched in the United States. The user experience group funded a user research testing program in each of the local markets and engaged a user research team at Serco Usability Services and its international partners for this work.

In addition to providing localized prototypes and helping with user recruitment, it was the user experience group's responsibility to disseminate the results to stakeholders across the businesses, and this part of the project required as much care and consideration as any other.

With regard to communicating results and reports, the user experience team had to be aware of the delicate balance between local businesses' desire to know the results from their market as soon as possible and waiting until all findings were collated so that the key messages, concerning the product as a whole, could be effectively delivered. It was also necessary to be mindful of the fact that the key stakeholder was the U.S. business unit, which was mainly funding the entire release, and that different business units had not always worked with the same priorities. Due to time differences and busy schedules, it was not possible to communicate the analysis to all local business units at once, or in person, so a series of conference calls had to be scheduled, the order of which was closely scrutinized by the U.S. business unit.

The user research team provided a set of slides pertinent to the results from each local market, which the user experience team used in each of its meetings. Although this provided a solid base for the presentation, it was also essential to fully understand each point and recommendation in order to answer queries, propose alternatives, and discuss priorities with the business going forward. The recommendations covered a shared platform and so the local adaptations of it were impacted by most of these. As a result, changes had to be approved by all the stakeholders, not just the U.S. stakeholders. Some of the more difficult messages required further meetings for elaboration involving senior-level managers of the product development group.

With the results and analysis communicated to every market, the user experience team members then began the task of implementing recommendations into the upcoming product release cycles.

of user research. Also, the prioritization of countries to be involved in a global study may also confer a positive feeling of recognition.

Local interest in results means that some form of country-by-country analysis is likely to be necessary in addition to an overall analysis. However, the deliverable could become more unwieldy, repetitive, and less digestible as a result. When writing the report, rather than structure it by country of testing, it is usually better to provide a subsection of country-level analysis in addition to an initial summary of trends collapsed across all countries. Detailed country-specific findings can be left for the main body of the report. This summary will need to identify trends relative to other countries and provide a narrative regarding why similarities or differences may exist.

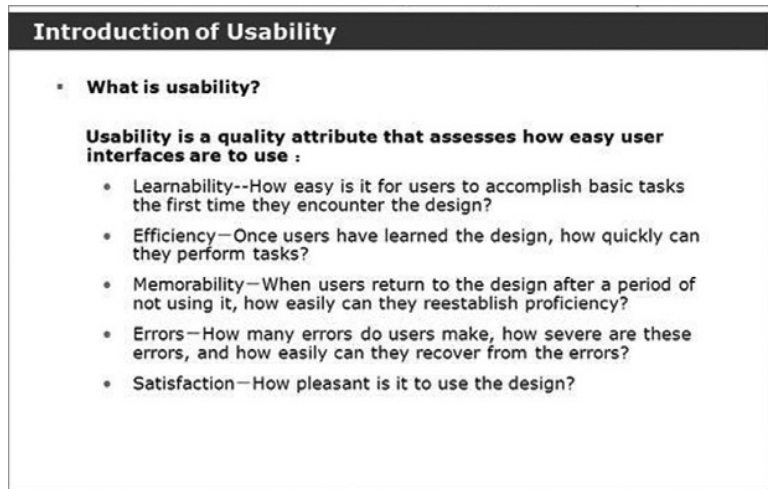
Enthusiasm toward the research can also result in ad hoc requests being made to local teams for additional research points during the study. Accordingly, it is important to remind local researchers that any requests will need to be checked with the project sponsor before inclusion.

On the negative side, it is not unusual to have a degree of tension between the head office and the local business units, and there may be a degree of suspicion about results from a centrally mandated study. Deliverables must explain a robust methodology to overcome this.

Country-level summaries of results also help to prevent local and global business units from building up false perceptions of the overall results. This can happen, in particular, when local observers form opinions of overall results based on watching only a limited number of sessions. The other advantage of including such a summary is that it helps to minimize the possibility of requests for supplementary deliverables late in the day – requests that are not welcome when working toward a deliverable deadline.

5.4.1.2 Level of general user research maturity

The level of user research maturity may vary substantially between countries within the project sponsor's organization. This will influence how much introductory information needs to be included within the report. For example, there is a growing interest in user research within China; however, the market is less mature than elsewhere. Although the desire for knowledge about user research means that maturity is likely to increase, for now, at least, an introduction to key concepts such as usability will be of real value to readers. [Figure 5.5](#) shows an example slide that includes a basic definition of usability, which could be incorporated within the introduction to a results presentation.



■ **FIGURE 5.5** Deliverables may include basic information about usability for less mature markets.

Those familiar with market research may also anticipate larger sample sizes than are typically required for user research studies. They may mistrust studies with smaller sample sizes, which can undermine the acceptance of results. Therefore, when introducing the methodology, including some details about underlying rationale for user research sample sizes will help mitigate this. However, you should make clear which kinds of questions can be answered based on the sample size and whether the results show statistical significance.

5.4.1.3 Understanding how results will be used

Depending on their job profile, the report audience may have different needs in terms of reporting granularity, form, and style. Therefore, it is important to determine who will be using the report and what they need to do with the results. Be prepared to provide different kinds of deliverables to address different needs. This is good practice for any project, but it becomes more important with international ones due to the increased audience diversity. Common readership groups include the following:

- Project board members and senior management will require a concise overview of key results and overall trends by country.
- Business units in each country tested will need to readily understand how their own country performed and why, without having to understand all results from all countries.

- Global product managers will need to know how their product is performing across markets and get a general understanding of the reasons why.
- Development and technical teams will need any individual issues itemized and prioritized, with recommendations, so changes can be made. Positive results must also be recorded so that these teams do not undo the good work already done.

5.4.2 Quick findings summary

The first deliverable to the project sponsor is often a summary of early findings, produced during or immediately after session completion. Speed is critical with this deliverable, and this tends to override the need for formatting or even the use of graphics. E-mail or a basic Word document (using the template provided to local teams) is often used as a result.

When reporting a summary of early findings to a sponsor, always emphasize the preliminary nature of the analysis. The summary report may have a wide audience, and failure to clarify this may mean that the results are unfairly interpreted as being more conclusive than intended.

5.4.3 Full report

5.4.3.1 Report structure

The report format may vary considerably in structure depending on the type of research activity, individual project needs, and the corporate deliverable templates required.

If a model report is required, then the Common Industry Format (CIF) for usability test reports (ISO/IEC, 2006) provides this for delivering the results of usability tests. It is optimized for summative/comparative testing (rather than formative research) but does offer an idea of the areas to think about when compiling a report. The suggested format includes the following elements:

- Title page
- Executive summary
- Introduction (including full product description and the goals of the research)
- Summary of the test participants
- The tasks performed by users

- Summary details of the test facility (including the technical environment)
- The experimental design
- The method or process by which the test was conducted
- The usability measures and data collection methods
- The numerical results (with supporting tables and visualizations)

5.4.3.2 *Speaking with a single voice*

All authors have their own writing style, even within the same organization. These differences are compounded in global studies, in which results are provided from multiple organizations and cultures. Although it is good to have multiple contributors, there must be a single voice for the report. Accordingly, as the final author, the project lead must produce a coherent overview, ensuring that style is consistent and nothing is contradictory. When creating the report, time must be allowed for review and adaptation.

5.4.3.3 *Translating findings*

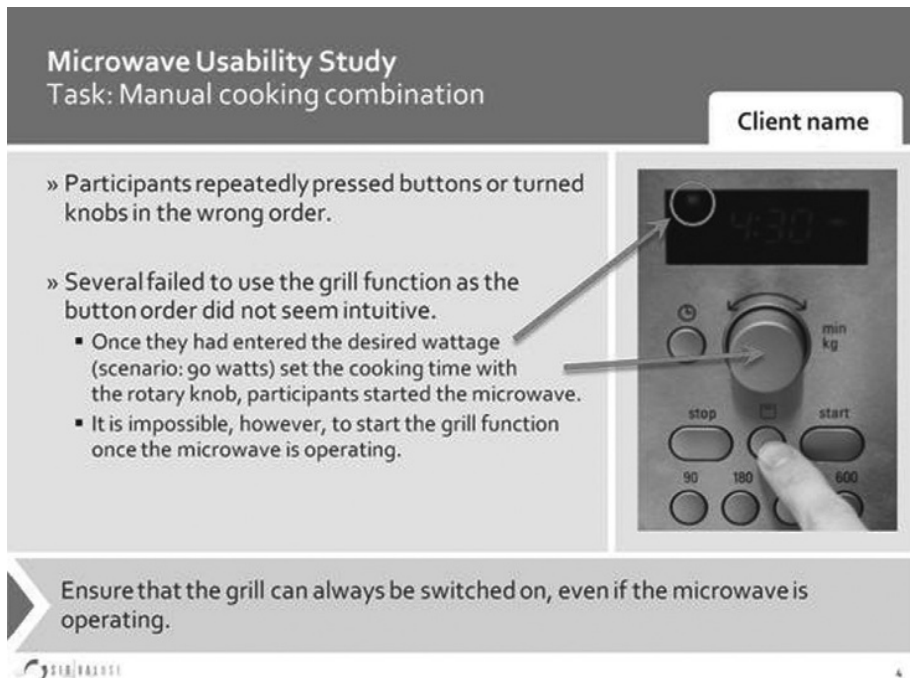
The lead author of the deliverable should be a native speaker of the language spoken by the main audience for the report. If this is not possible, a mastery of the same language is necessary. It allows the author to convey subtleties and caveats, as well as allowing an appropriate strength of language to ensure a detailed reporting of results. This is why professional translation agencies always try to use native speakers.

An exception to this is the fact that reports for global studies are often written in English because it is a common business language. If English is not your native language, then consider having the deliverables proofread by a native English speaker. Also, if a professional translator is used, ensure that it is someone familiar with the research domain. Translation is often an inexact science, and so it can require care. Ideally, aim to have all deliverables read by someone in the local office first before getting a translator involved. Because the user experience vocabulary is slightly different, it may be useful to re-engage the same person to do the proofreading. Using external staff to proofread the documents adds costs that often cannot be passed on to the sponsor. Keep in mind, however, that the report acts as an important reference for the lead research team. Even the best content will appear unprofessional if the report has misspelled words or grammar mistakes or it is written in an inappropriate style.

One area in which the original language must be retained is in referring to labels or other attributes of the artifact under review. Not doing so will make it more difficult for the reader to locate the issue in any example screenshots and also suggest alternative labels to be used. A useful convention to follow is to use the translated term followed by the original in brackets. For example, when referencing the label used for a search button on a French interface, “search [recherche]” would be the appropriate referent to use.

5.4.3.4 Use of a more visual approach

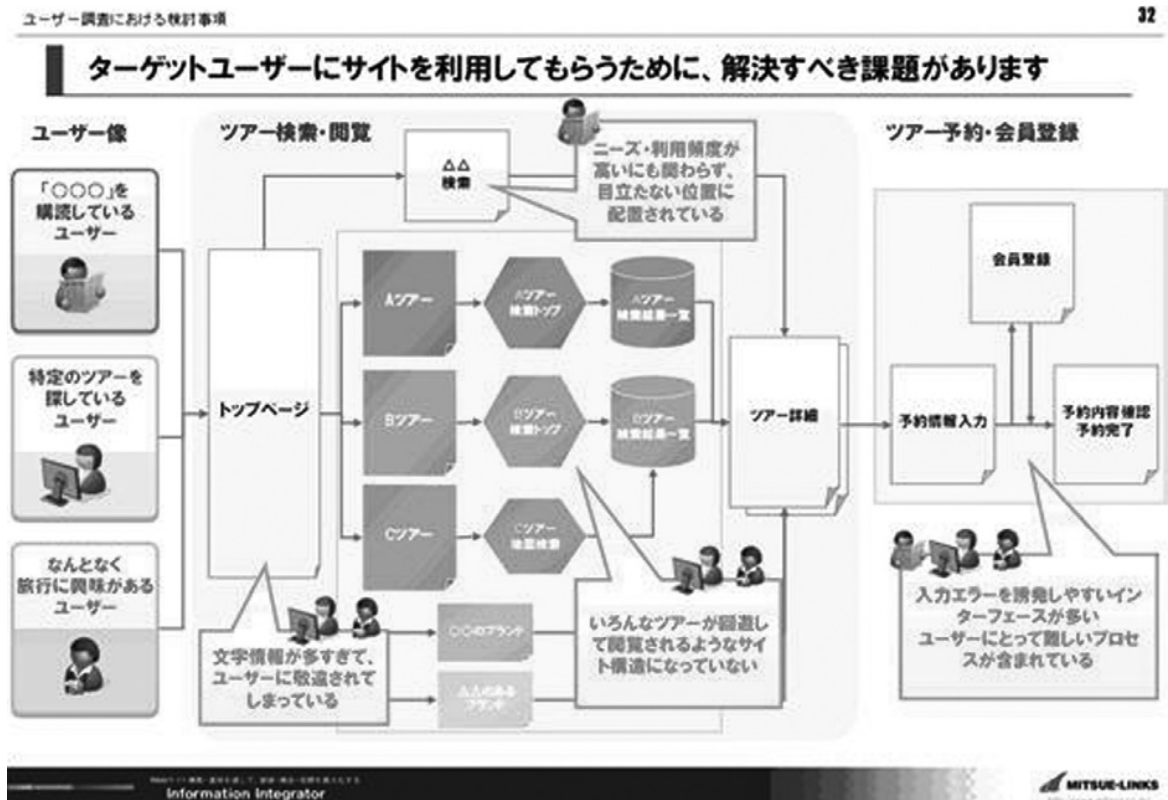
A more visual approach is highly useful for an international audience. Charts, images, and screenshots can greatly aid the reader in highlighting key facets of testing without having to read content details (quotations are also useful for the same reason). Greater use of imagery is also helpful because it relies on recognition rather than understanding of the language. In [Figure 5.6](#), the use of imagery helps the user to quickly understand exactly where problems occurred.



■ **FIGURE 5.6** Pictures and photographs for demonstration help bring one’s point across and make the presentation more interesting.

Images are obviously useful for showing areas of design under consideration and any alternatives. However, they can also convey meaning beyond this and help general understanding. For example, using company logos may be more helpful than using the company name when labeling a chart axis for a comparative review. Also, when preparing visualizations, size can be used as a signifier of relative performance. For example, regardless of their background, readers can easily comprehend that one option performed twice as well as the alternative if that option is twice as large on the page.

A final advantage of a more visual approach is that it supports a more stimulating document for everyone to read regardless of the language they speak. In Figure 5.7, a visual overview of all the test results is shown in a manner that is visually appealing and easier to assimilate than the text-based equivalent.



■ FIGURE 5.7 A visual summary of issues, including target users (left), page flows (center and right), and findings (in balloons), lends itself to quick translation and cross-cultural use.

5.4.3.5 Provide rationale based on local knowledge

Participant examples, comparisons, and references can be very useful for illustration. However, because they are often local in nature, some explanation may be necessary before an international audience fully understands the insight or the depth of a local reaction. For example, when an Australian participant says “Not a happy Jan” in response to a design, some context is useful. This phrase references a popular advertising campaign in Australia in which a businesswoman expresses dismay that her staff has not booked an advertisement with the Australian Yellow Pages. The advertisement became very popular, resulting in the phrase being used to express great displeasure, particularly at the negligence or incompetence of others.


Culturally specific factors can also have a direct impact on the uptake of services, which needs to be fully explained. For example, Chinese users may be more reluctant to enter details such as phone numbers as part of a sign-up process for fear of overcharging. Using local knowledge to explain scenarios such as this helps spur the development of alternative strategies to overcome them. Figure 5.8 shows a presentation slide that includes an example of this.

5.4.3.6 Summarize recommendations

When recommendations are included in a report, summarize them, either at the end of each section in the report or at the end of the

Registration (II)

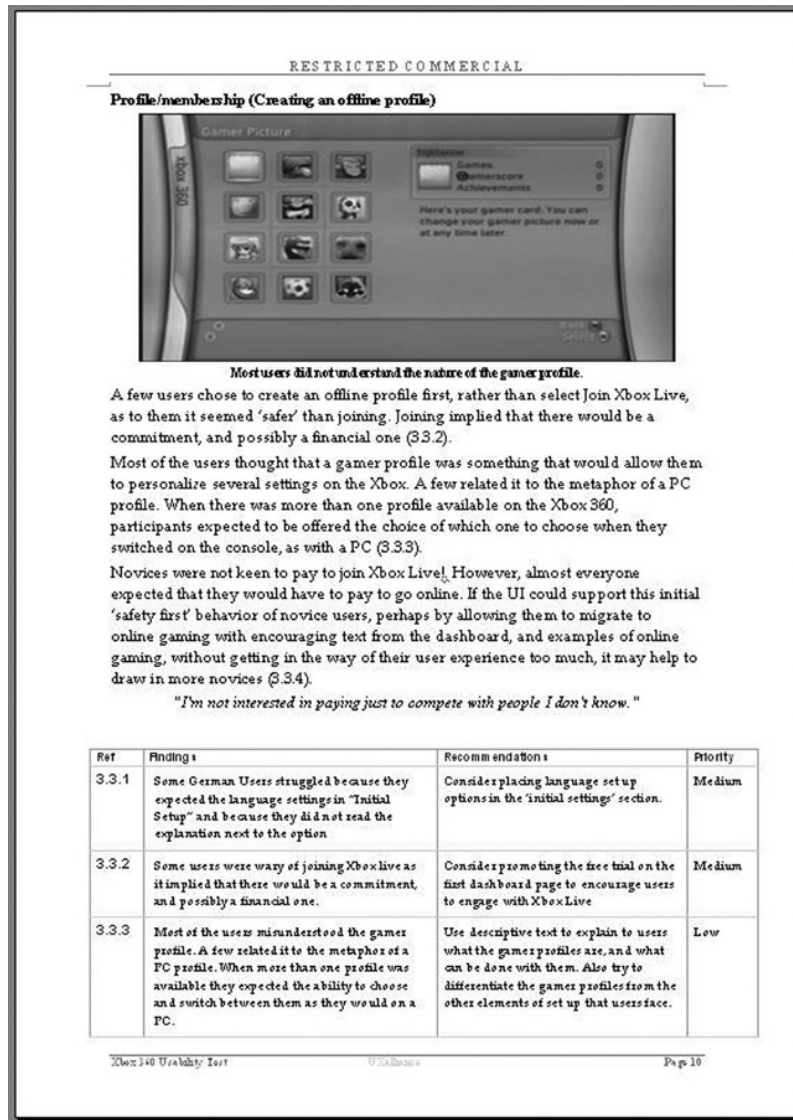
- On the Download Client page of the Sign up process, most participants did not enter their **phone numbers**.
 - They were **reluctant to give out their numbers** for being afraid of spam messages and extra charges; as in China, users easily get overcharged for services subscription.
 - Some did not know what +86 (the country code for China) was since they never have had to use it before.



- **Write clear instructions like "Please enter your phone number".**
- **Indicate that it is a mandatory field.**
- **Provide more information on the privacy policy, so that users will feel safer to give out their phone numbers.**

■ **FIGURE 5.8** It is important to explain the cultural background.

report as a whole (Fig. 5.9). This allows those responsible for implementing changes to draw them out while being able to refer to the main content if further information or clarification is required. Such summaries can also be easier for any non-native speakers to read and understand. Also, ensure that any recommendations are supplemented by priority ratings.



■ FIGURE 5.9 Findings for a given section are summarized at the bottom of the page, allowing key points to be quickly assimilated.

5.4.3.7 Review time

Leave some time for sponsors to review the report and provide feedback as necessary. Some sponsors may have many comments, and they may ask you to bolster the content in given sections and/or add additional areas of content. Be prepared to factor in extra time as part of this review cycle.

5.4.4 Excel issues lists

One useful deliverable that complements the report is a comprehensive list of issues found in the study, presented in an Excel format (Fig. 5.10). Although the report will typically focus on the main results and put them into the overall context, a list of issues can help with making sure that no aspect gets lost, as well as providing recommendations for issues of lower priority. This list of issues can also be a great working tool for the development team because it helps to eliminate issues one by one according to their priority. The list can also include country-specific results that would otherwise have been excluded from the main report. The scheme for prioritization must be the same for all results and be provided to the reader (e.g., on a separate sheet).

5.4.5 Video highlights

Video highlights are popular as a deliverable and can be particularly useful when language is a barrier. They are useful for conveying an impression of the session events and a useful tool for emphasizing key findings, especially if the project sponsor or his or her colleagues could not be present for the field phase. Many sponsors find them very useful within their organizations for assisting with increasing awareness of the importance of user research.

	A	B	C	D	E	F	G	H
1	Usability Issues List							
2								
3								
4	Issue no.	Country	Task name	Issue description	Interpretation	Frequency	Severity	Recommendation
5	2	GER	Find product details	Several participants had difficulties finding the product description.	The description is shown far down at the bottom of the page below the page fold.	Medium	High	Move the product description further upwards so it is partly visible without scrolling. Provide an overview (e.g. as a bullet point list) of the most important product features at the top so users can get a quick overview.

■ **FIGURE 5.10** Issues lists are sometime provided as a supplement to full reports.

When putting video highlights together, it is useful to remember a few basic pointers so that this aspect of the project can run smoothly and not place unnecessary demands on resources.

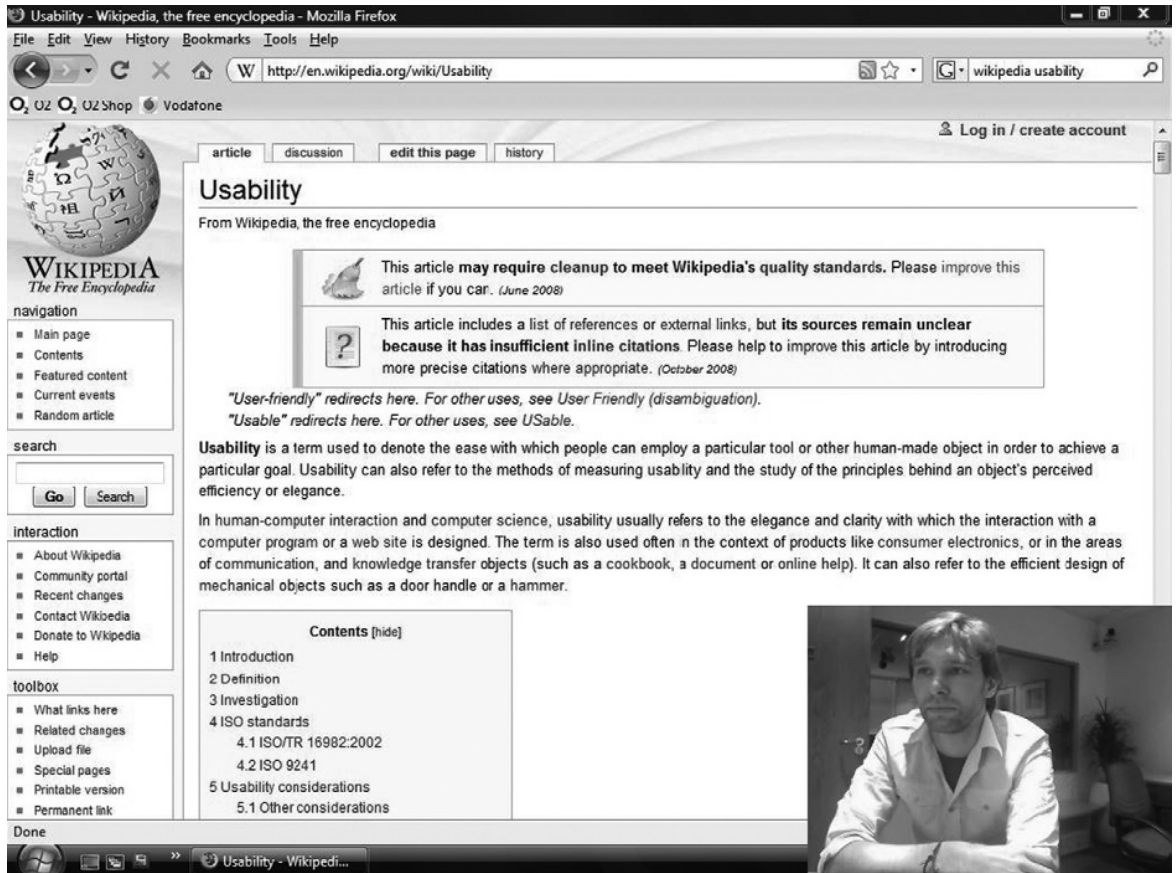
5.4.5.1 Agree on dates

Local teams need to know how the clips will be shared [e.g., File Transfer Protocol (FTP) and DVD] and the agreed dates for doing so. If FTP is to be used, then it is important to remember that time is required for downloading and uploading the video. For example, it can take 2 hours to upload an hour of video and the same amount of time to download it at the other end. If DVDs of video clips are required, then you must ensure that sufficient time has been set aside for production and (if necessary) re-encoding video for the DVD if it is not recorded in the correct format because this can take many hours. Also, allow sufficient time for shipping because not doing so can result in expensive courier fees being incurred.

5.4.5.2 Use common settings

You also need to ensure consistency across local teams by providing guidance on the screen settings to be used for testing and recording. Differences in approach between countries can become very obvious when the final highlights are compiled, which can make the project seem less unified. The advent of digital recording has made this much easier to achieve, and if all local teams use common tools for recording sessions, then producing comparable quality picture-in-picture recordings will not be difficult across countries.

Variations may be necessary with picture-in-picture recordings involving the screen in the main area (e.g., the Web site or device interaction) and the user's head and shoulders in the insert. Depending on privacy or discretion laws, face shots of participants may not be prudent or even allowed (Fig. 5.11). In some countries, such as Japan, due to the privacy laws or a general awareness toward privacy per se, capturing face shots is becoming increasingly difficult. This can be compounded in particular areas. For example, during a study on a diabetes-related topic, participants were recruited who suffered from type 1 diabetes. The sessions were conducted and filmed in the participants' homes to capture their personal environment; however, this was not possible in Japan because suffering from a disease such as this implicates a perceived social stigma. The sessions had to be run in a



■ FIGURE 5.11 The video view used should be specified to local teams to ensure consistency.

research facility, with participants filmed from behind so they would remain anonymous. Such cultural variations are normally understood and respected, as long as they are explained.

5.4.5.3 Deciding which clips to use

Sponsors often prefer a video highlights package that is approximately 15–20 minutes in duration, with each clip lasting no longer than a few minutes (although they are often much shorter). Anything longer tends to be ignored. The final clips need to cover the main project findings, and you should include clips from all the countries represented. If the content is not balanced, then it can raise concerns over country bias within the wider project. Chapter 4 discusses video clips as well.

5.4.5.4 Voiceover or subtitles

If there is variation in testing language, either clips will need to be translated or subtitles will need to be used. If a simultaneous translator is already engaged for observers, recording their voiceover as a separate audio track on the video is relatively straightforward and incurs no extra effort. Subtitles require more work, but they can have advantages. Even when audiences share a common language, such as in the United States and the United Kingdom, comprehending regional dialects and accents may be problematic. The process for adding subtitles is relatively straightforward, and this can be done by using editing options in commonly available and free packages such as Windows Movie Maker.

If a translator was not present during sessions, then local partners could identify potential clips and have a simultaneous translator do the voiceover after the event. This does add an additional cost, although this will not be substantial because it is typical to use no more than 15 minutes of clips for any given country.

5.4.5.5 Video file formats

The format for video clips must be specified at the start of the project to avoid the problem of recipients being unable to play the clips or additional time being incurred to convert clips. The most common formats requested are .avi, and .wmv, and determining which is best to use for a given circumstance will depend on the recording software being produced. For example, if Morae is being used, .wmv will be easiest to produce. Any particular video codecs should also be specified. One final consideration in this area is whether a recording is nondigital, such as via a DVD recorder. In this instance, it is important to know whether the clients will be watching in PAL or NTSC format.

5.4.5.6 Keep a local copy

Both lead and local teams must always keep a local copy of both the unedited, raw video files and any video highlights that have been produced. DVDs can go missing in the mail or be held up in customs, and it should always be an option to re-create them if the original has been lost.

As an alternative, you could consider sharing clips via FTP or a similar service rather than shipping them. This works well for clips but can be problematic when full unedited session recordings need to be shared because the file size for any video file of an hour or longer makes the upload process lengthy.

5.4.6 Presentations

5.4.6.1 Interaction during the presentation

Where a common language is shared, it is possible for presentations to be more interactive and free-form, developing in directions that the sponsor finds useful. However, when this is not the case, you need to plan for less interaction during the session. Sharing presentation materials, such as PowerPoint slides, prior to the meeting can help to mitigate this by allowing audiences to digest information and formulate questions beforehand.

5.4.6.2 Social etiquette

There are several good resources online and in books on business etiquette, so we only briefly discuss this here. Having a basic knowledge of the social etiquette of the audience's culture is likely to be appreciated on the day of the presentation. In practice, a polite, professional approach is most important because sponsors are unlikely to expect a detailed knowledge of their culture. However, understanding some basics is likely to help bolster your relationship with the sponsor. For example, as the exchange of business cards is a highly important ritual for some cultures, make sure that you have a good supply. For Japanese sponsors, business cards help them understand both status and role, and it is important to present and receive cards with both hands, read the details carefully, and treat them with respect. Do not simply put them in a pocket straight away or disregard them.

5.4.6.3 Pacing the presentation

When a native language is not shared, it is vitally important to be clear and concise about the key messages from the research in the time available. Practicing the presentation is useful to master this and to gauge the pace of the presentation; speeding up your delivery to get through the content will make comprehension even more difficult.

5.4.6.4 Using video

Playing video highlights during the presentation can help by allowing audiences to see the findings for themselves rather than relying on you to convey them in another language. Clips can also help to focus attention by making the presentation more interesting.

5.4.6.5 Audience questions

There may be fewer questions from the audience during a presentation when the presenter does not share the audience's native language. When the level of interactivity is lower during the session,

providing the opportunity to question and clarify aspects of your findings via e-mail, after the presentation, can be a useful practice.

5.5 KEY TAKEAWAYS

- Determine the feasibility of a lead team member attending all the local sessions and, where possible, scope this into the project.
- Local analysis can occur as a joint activity between lead and local teams (if a representative of the lead team is in attendance), or local researchers can review their own results before feeding them back to the project lead. Importantly, local analysis must include reference to the cultural relevance of findings, where applicable.
- Create a timeline for the research to ensure that all local research teams are clear concerning dates for fieldwork, analysis (including debriefing meetings or calls), and when deliverables are expected. Do not forget to include the dates when DVD content (video highlights and/or raw session recordings) needs to be received.
- Create analysis guidelines for local teams, including reference to details of any prioritization and/or categorization schemes to be used when reporting findings.
- Be sure to scope a debrief session into the project to clarify the findings of local teams and ensure that any local differences in findings can be clearly understood.
- Provide reporting templates for local partners (with examples where necessary) to help clarify requirements and aid consistency because this will support the integration of local findings within the final deliverables. Similarly, communicate to local teams how session recordings/video highlights will be shared and the required length and format.
- Make sure that local research teams clearly understand what language to use for reporting, and communicate any requirements in terms of preferred writing styles.
- Consider options for document handling (to share analysis and reporting) between remotely located teams, paying attention to considerations such as file size, version control, and security.

- When consolidating findings from local teams, it is important to “speak with a single voice” by producing a coherent and noncontradictory overview with a consistent style. Consider sharing this overall analysis with the local researchers to ensure that it remains valid for all countries and is not biased by the results from the lead country.
- When reporting to the sponsor, it is important to consider the specifics of the audience and their needs, especially when reporting in a language other than the sponsor’s native language. For example, allow adequate time for review cycles. Be aware of cultural social etiquette when giving presentations, and banish complex terminology and culture-specific phrases in favor of more commonly understood words in all deliverables.
- Consider ways to adopt a more visual approach to reporting (including presentations) because this can maximize understanding when reporting in a language other than the native tongue of the audience.

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Global user research methods

Tjeerd de Boer

**Additional Contributors for this chapter are listed with their corresponding sections.*

6.1 INTRODUCTION

This book is primarily concerned with moderated usability tests because this is probably the most popular global user research method. However, there are numerous other methods that can be used for global user research as well. There are interesting aspects to each of these methods, but a complete overview of all methods is beyond the scope of this chapter, so the focus is on those that are more frequently used.

An overview of the global user research methods can be given by mapping the global user research methods on several key dimensions (Rohrer, 2008). For the purposes of this chapter, we have used two of the dimensions that were put forward by Rohrer:

- Behavior versus attitude
- Qualitative versus quantitative

The distinction between behavior and attitude can be translated to what people do versus what people say, which can be very different. Usability research is typically on the behavioral end of the spectrum, but it can still be useful to have information on what people say. For example, online surveys can help you identify how users rate your product or service against competitors.

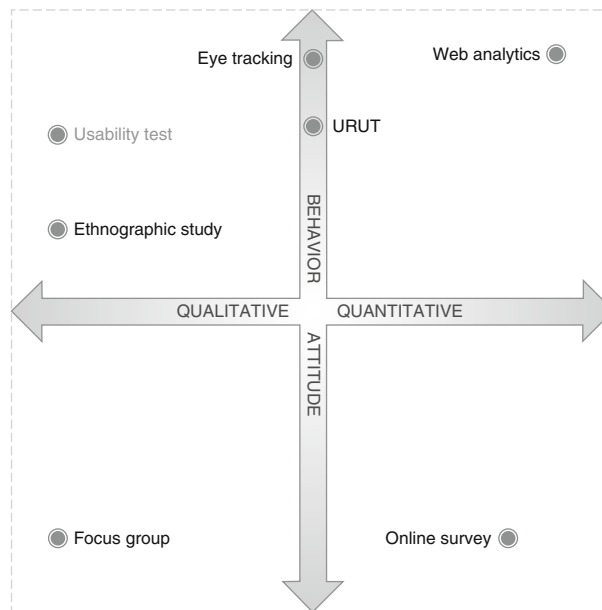
When doing qualitative research, you gather data *directly*. For example, during ethnographic research you directly observe the behavior of people. The analysis of the data is usually not mathematical, but it does give you insight into the reasons for observed behavior or

possible solutions for problems identified. In contrast, quantitative research typically uses a tool for data collection (e.g., Web analytics and online survey). This *indirect* research gives large amounts of numerical data, which allows you to quantify behavior and to perform quantitative analysis on the data.

Figure 6.1 illustrates where the global user research methods appear along these two dimensions. It only shows the research methods that are addressed in this chapter, but other research methods can be placed along these dimensions as well. The usability test is shown as a reference point.

Each method in this chapter is discussed according to the behavior–attitude and qualitative–quantitative dimensions. This gives the following structure for the chapter:

- Ethnographic studies
- Focus groups
- Eye tracking
- Unmoderated remote usability testing
- Web analytics
- Online surveys



■ FIGURE 6.1 Mapping of user research methods on two dimensions.

The chapter concludes with a section on personas. Strictly speaking, personas are not a research method. Personas drive design. However, because personas are often used for global user research, we thought a treatment of personas in a global context would be both interesting and beneficial.

6.2 ETHNOGRAPHIC STUDIES

Written by Mercedes Sanchez

6.2.1 Introduction

Although ethnography has its roots in anthropology, the idea of the ethnographer huddled among the native population on a tiny, far-off island is somewhat dated. In today's business world, ethnography has taken on increasing importance as a research method that produces a detailed picture of how products are actually used by people and shows ways in which they can be improved to better meet consumer needs and wants. Unlike focus groups and other qualitative research methods, ethnography takes place in the natural context of the users, which allows you to directly observe what people actually do and not what they say they do.

The goal of an ethnographic study is to directly observe and collect the stories people tell to help them make sense of the world around them. These stories are then given color and insight based on your detailed field observations. The focus of ethnographic study as it pertains to user experience research is often directed to investigations of how specific products or types of products are used. Ultimately, these investigations aim to identify possible product innovations or discover potential market niches. As such, ethnography is being used increasingly more often by companies to inform design and brand decisions and to design products that fill the gaps between those needs a product currently serves and those that users want served, preferably ahead of the competition.

Ethnographic research is well suited for finding issues that other research methods cannot because it is not as focused as most other research methods (e.g., surveys, usability testing, and focus groups). This can be particularly useful when conducting global user research because you often do not know what information you are looking for. The following example about a leading Brazilian home appliance manufacturer illustrates this point. In recent years, this company had set a goal of exporting refrigerators to India. It was through observation of real local Indian consumers that the company learned that refrigerators for the Indian market must have a lock and key because

of a peculiar local situation: Monkeys enter the houses, open the refrigerators, and escape taking some food with them. Although this issue might be straightforward for people living in some areas of India, this insight was definitely new for the Brazilian company. This issue could probably not have been identified by conducting an online survey or a usability test.

Ethnographic research can also be used to explain differences between countries. The same Brazilian company had been exporting stoves to many countries, and its Brazilian models were the only ones that had covers on them. In an effort to reduce production costs, the company had to decide whether or not to eliminate the covers on all Brazilian stove models. However, after an ethnographic study of real Brazilian consumers, researchers advised the company's production team not to do away with the covers because they are very much used and appreciated by Brazilian housewives. These housewives are very mindful about their homes and especially their kitchens. They enjoy having flowers and an embroidered cloth on the stove cover as a clear display of carefulness, which also gives them a sense of "mission accomplished" after cooking a meal and cleaning.

6.2.2 Overview of the technique

There are a number of ways to practice ethnography, and the most successful studies often consist of some combination. The bedrock of ethnography is the combination of informal and formal observation. Informal observations introduce the least amount of bias from the researcher and are obtained mainly by the ethnographer going into the field without presenting himself or herself as a researcher to simply observe the surroundings. Informal observations contain little to no interaction between the researcher and those who are being observed because the ethnographer strives to blend into the background.

Usually, however, somewhat more formal observations are used to gather ethnographic data. Formal observations often include shadowing informants as they go through the normality of everyday life or, in the context of a specific project, behave as they normally would when interacting with a product. In more formal types of observations, informants know they are being watched by a professional researcher, but the researcher relies on the informant to dictate the direction of the interaction and generally only interrupts the flow of events to ask clarifying questions. By following the informant's lead, the

researcher introduces less bias in an ethnographic study compared to, for example, a usability test.

Ethnographers also rely on interviews with informants, though these interviews tend to be relatively informal and either unstructured or semi-structured. Importantly, ethnographic interviews rely on storytelling by the informant and the ethnographer should attempt to stay out of the conversation as much as possible.

Ethnographic interviews take place in the field, typically occur after an event has taken place so as not to disrupt the flow of the event, are in great depth, and are fairly conversational. Ethnographers will generally go into the field with a list of topics to discuss with informants, but the conversation's impetus should come from the informants. Although ethnographic studies yield the best results when they are longitudinal, this is not always possible with user experience research projects due to time and budget constraints. This does not mean, however, that ethnography cannot be used to great effect on short-term projects. It simply becomes necessary to increase efficiency. To do so, short-term projects often focus on a specific type of activity, such as running errands, shopping online at home, or observing specific types of work behaviors. Prior to the study, participants are notified of the general goals and are scheduled according to when they might naturally be performing the actions to be observed. Focusing participants on specific tasks means the ethnographer will have a better chance of capturing the types of behaviors and stories necessary to make good recommendations.

6.2.3 **Fieldwork**

Observing people is not as simple as it may seem. There are myriad nuances that inform human behavior, and these often rely on culturally specific habits. It is important for you to enter the field with knowledge of the product being studied and the type of informant being observed. Each stage of the study, from screener to analysis, has to have been considered to ensure that relevant data are collected. Most important, you must go into the field with open eyes and an open mind.

The most important component, and often the most difficult to achieve, to gathering rich data from your fieldwork is building a meaningful rapport with your informant. For longitudinal studies, a deep rapport can develop over time. However, time is often the one thing that user experience researchers do not have. As a result,

the initial screening process is critical to recruiting informants who are excited to bring you into their daily lives and eager to share their routines. However, you must realize that by screening for the most eager informants, the opinions of those who are less vocal are lost in the analysis.

Another important rapport-building practice is to make sure the participant is aware of your project and the project's goals before going into the field. It is important that you are open with the informant about what fieldwork will entail, included activities to be covered and how they will be captured, and to get feedback from the informant before meeting with him or her. You should attempt to have conversations with the informant before going into the field so that both the informant and you are more comfortable upon first meeting each other. If possible, you should ride along with the informant to the site of the fieldwork in order to begin building a picture of their habits and behavior.

The most important thing you can do to build rapport with informants is to remind them of the knowledge they possess and that you are there to learn from them. It is intimidating for informants to have researchers come into their lives to observe them. They may be even more intimidated when the ethnographer is holding a camera. To put informants at ease, remind them of their own expertise and that their comments and insights will help you in gathering valuable information. When doing ethnographic research, the informant really is the teacher.

An ethnographic study generally involves more than observing, and researchers should make use of other sources of information. If possible, researchers should plan to do at least one initial meeting, either individually or in groups, and one individual interview with each participant at the end of the study to follow up on any questions or issues that were not discussed during fieldwork. It is usually a good idea to discuss observations or insights with informants to gather more feedback from them.

When collecting data, it is also important to do more than just take notes. For example, ethnographers often observe informants after weeks of writing a journal or keeping a photo or video diary. These artifacts can then be studied by ethnographers before entering the field so that they have some knowledge of the informants. Also, these artifacts are good talking points in the field during lulls in the

conversation. Because you are in the informant's natural environment, it is possible to ask questions directly about elements in that environment. If possible, you should take a video camera into the field to record interactions because handwriting notes inevitably leads to missed data. In the end, these types of materials will be very valuable for analyzing and presenting results.

6.2.4 **Planning a global ethnographic research project**

When conducting global ethnographic research, the basics outlined previously apply. However, when working internationally, it is important to work with local partners. Even if you speak the same language as your informants, important cultural clues can be easily missed due to different cultural backgrounds. Because you are working with partners, it is vital to have a detailed description of the type of informants to present to them. This will help ensure the quality of informants, which will ultimately lead to richer data. Working with a local firm also helps to ensure that specific questions relating to the local research environment are not overlooked. For example, in Brazil it would be easy to obtain permission from participants to enter their homes to study an issue. In other countries, such as The Netherlands, this would not be so easy. Although it is sometimes possible to attend the fieldwork with the local ethnographer, having an additional observer who speaks a foreign language will do little to make the participant feel more at ease. Instead, rely on the insight and knowledge of your partner firm.

A company may decide to do a global study and send its own ethnographer to attend the fieldwork with the local ethnographer. In this situation, a greater chance of success is assured if there is no attempt made to simultaneously translate the interaction between the local ethnographer and the informant. Doing so can distract or intimidate the informant. Even without simultaneous translation, the combined work can be productive because the local ethnographer will observe some behaviors that the foreign ethnographer (you) could not perceive, and the foreign ethnographer may catch cultural insights the local ethnographer takes for granted. Even when you do not speak the local language, you can observe the visual details, the nonverbal clues, and get an interesting picture of the informant's behavior. It is important that you discuss these observations with the local researcher afterwards because nonverbal clues can differ between cultures.

6.2.5 Analysis

Analysis and presentation of ethnographic data are challenging, but the results are usually well worth the effort. Although it is easy to simply present data in descriptive reports, ethnography's real power lies in its ability to go beyond simple descriptions and to find patterns of behavior. Ethnographic reports should highlight gaps both between the way companies believe their technology is used and the way in which it is actually used and between the way technology works and the way informants actually want or need it to work. Based on these observations, the report can make suggestions on how to fill those gaps. Ethnographic results can be presented in a number of ways, including posters, videos, photo collages, storyboards, user profiles, and personas. These means of data presentation are well suited for ethnographic research because they do what good informants are supposed to do – tell meaningful stories about real situations.

6.2.6 Conclusion

Ethnographic research is well suited for identifying issues that other research methods cannot. By entering the field with an open mind and open research protocols, you can gain insights you had never before considered. Ethnographic research is particularly useful when conducting global research because you often do not know what kind of issues could be found in countries with which you are unfamiliar.

When conducting ethnographic research outside your own country, it is recommended to use local partners in the study. This not only solves language issues but also ensures that subtle cultural clues will be noticed.

6.3 FOCUS GROUPS

Written by Mercedes Sanchez

6.3.1 Introduction

Focus groups, which basically consist of groups of people brought together to discuss opinions, issues, and concerns about something, are among the most well-known qualitative research methods and have been in use for many years. Although most frequently linked to market research and advertising, focus groups can in fact be a powerful tool to discover user needs, goals, feelings, attitudes, preferences, initial reactions, and desires from specific target audiences. Focus groups can be held before, during, or after the product or site development, but

they are usually conducted at the beginning of a project cycle. In these situations, focus groups are very suitable to help identify and prioritize requirements so that key customer wants get addressed first.

Focus groups are a good technique to obtain user opinions and to discover what they want, but they are a poor method to discover usability problems. This is because group discussions are focused on what the users say, instead of what users do and how they interact with a system or a product. It is therefore recommended that focus groups be used in combination with research methods that focus on the behavior of the users (e.g., usability test, ethnographic research, and Web analytics).

Focus groups can also be used when doing global user research because it is sometimes not sufficient to test an interface for usability problems. You may need a deeper understanding of the local users to compliment the data obtained from the testing (e.g., needs, goals, and feelings). This is when the focus group is very useful because it is much more efficient to have a focus group discuss the problems in a single session than to organize field trips to the locations of the users.

An alternative to conducting focus groups is to organize online group discussions. This can be more practical when the users are located in different countries, but it has a number of disadvantages. Online discussions are discussed later.

6.3.2 Overview of the technique

In a typical focus group, 5–10 participants discuss their thoughts, preferences, and concerns about a product or an interface. Each group typically lasts 2 hours and is conducted by a moderator, preferably local, experienced in keeping discussions on track, and with good knowledge of the subject in question. Normally, four to six groups are necessary to get representative results and to begin to see convergence in the qualitative findings.

6.3.3 Considerations for conducting global focus groups

Defining research objectives

When defining research objectives, keep your list short. Avoid including too many objectives or subjects just because it is an opportunity to “talk with your customers.”

Objectives must be clear and focused on what you want to discover. This is particularly important in global studies because there may be different objectives for each country. The larger the list of objectives, the smaller the chances you can accomplish what you need.

Planning research

In a typical local research project, four to six groups are necessary to get representative results. When dealing with global user experience studies, one must plan at least three homogeneous groups per country to get representative results in each country.

Recruitment

The most important issue regarding recruitment for focus groups is to define the user profile of each group. The user profile (or profiles) must be representative of the target audience.

Except in special cases (e.g., when you want to investigate gender or age conflicts), groups are usually composed of homogeneous participants in order to maximize disclosure.

In different countries, local culture must be taken into consideration when defining the profile of groups. Thus, when establishing selection criteria for global groups, consider aspects such as the following:

Gender: Will men and women feel comfortable discussing the subject in a mixed-gender group? For example, this could be an issue in India and in Arabic countries.

Age: How intimidating would it be for a young person to be included in a group of older participants or vice versa? For example, this could be an issue in Japan and China.

You also have to cover the basic procedures of recruitment for global research, as discussed in Chapter 3.

Moderation

Provide a moderation guide with explicit objectives and goals for each round of the discussion, point out questions that cannot be overlooked, and discuss the desired time to be spent on each round. Discussions must be conducted by local and experienced moderators with the ability to “speak the same language” of the participants in order to elicit spontaneous reactions and ideas from the group.

If the object of the discussion is a Web site, a mobile phone, or a system, be sure that the moderator is familiar with the subject. Moderators

used in market research may not have sufficient knowledge to conduct discussion on technological issues or user-centered design.

Consider issues about gender and age when defining or contracting the local moderator. For instance, in some countries men are not used to accepting orientation or questions from women, so the moderator of a group composed mostly of men should not be a woman in this case. In other countries, young people do not talk before older people do, so a young moderator should not conduct a group of older participants.

Chapter 4 provides useful information about moderation of global studies.

Translation and recording of sessions

The screener and moderation guide must be translated, and the translations must be checked. In countries with different languages from yours, you may need to have a simultaneous translator for sessions even if you are not attending the discussions, in case you need the audio recordings in your language. If you do not need the audio recordings in your language, you can substitute the (costly) services of simultaneous translation for a skilled note taker (less costly than a translator) fluent in both languages.

Usually, discussion sessions are recorded in video and audio and then transcribed, which is expensive and takes quite a long time. When attending sessions in many countries, this can compromise your deadline for results. An alternative is to have a member of your team take copious notes during sessions or use a local qualified note taker who can write in your language.

Analysis

When doing many sessions in different countries, you may obtain a huge amount of information, so it is prudent to create a unique template for reporting the discussion results by all countries involved. With the results of all countries in your hands in the same format, the analysis is easier and takes less time to perform.

6.3.4 Focus groups and usability testing

Group discussions are focused on what users say, and usability testing is focused on what users do – how they interact with a system or a product. Focus groups are therefore a good technique to use for obtaining users' opinions and to discover what they want, but they

are a poor method of discovering usability problems. If your list of research objectives has items such as “discover how users enjoy the new feature” and “discover if users can use the new feature easily,” you will have to combine focus groups, to gather reactions, and usability testing, to observe how users actually deal with the new feature.

You must consider when focus groups will be the most effective during a project. In general, focus groups are done prior to usability testing, but they can also be used together, for example, during a redesign phase. After discovering what works and what does not work on an interface by observing individual users, a group discussion can provide insights to innovation and a deeper understanding of the needs and desires of consumers from different countries. For more complex systems, this may be the best approach because it can be easier for users to give feedback on specific items after having tried the system.

6.3.5 Alternatives to focus groups

An alternative way to have group discussions with the users is to organize online discussions. This can be more practical when the users are in different countries because you do not have to travel to all these locations.

Online group discussions can be done by posting questions to a newsgroup, online forum, or an e-mail discussion list. A disadvantage of this approach is that these online discussions are publicly accessible, so they cannot be used for confidential information. Another problem is that users active in newsgroups, forums, and e-mail discussion lists might not be a good representation of your users.

A solution to these problems is to organize group discussions in an online panel. An online panel is different from newsgroups, forums, and e-mail discussion lists because it is not public. People can only participate in the discussion if they are given access to the secure environment. The participants can be recruited to be representative of your users, so there is no bias toward very experienced Internet users.

A major disadvantage of all forms of online discussion is that you can only see the explicit feedback of the participants (e.g., usually written comments). Using focus groups, you can observe the nonverbal behavior as well. Using video conferencing software might eliminate this disadvantage, although the quality of inexpensive video conferencing software is usually not adequate. This situation will probably

change in the near future as inexpensive high-quality software and the necessary broadband Internet connections become widely available in most areas of the world.

6.3.6 Conclusion

Focus groups can be used when doing global user research because it is sometimes not sufficient to test an interface for usability problems only. You may also need a deeper understanding of the local users to compliment the data obtained from the testing (e.g., needs, goals, and feelings). This is when the focus group is very useful because it is much more efficient to have a focus group discuss the problems in a single session than to organize field trips to the locations of the users. An alternative to conducting focus groups is to organize online group discussions or online panels.

6.4 EYE TRACKING

Written by Aga Bojko

6.4.1 Introduction

The popularity of eye tracking as a user research tool continues to increase. Once thought of as a nice-to-have, eye tracking is slowly turning into a must-have, typically employed in combination with other methods or, less often, as the only data collection method in a study. Eye tracking in user research is used to capture the eye positions of a person looking at a visual stimulus, such as a Web site, an image, a video, a product, or even physical surroundings. Based on these eye positions, we can infer where the attention was directed and which information was being processed. By examining the spatial and temporal relationships between the eye positions, we can also understand *how* the information was being processed (e.g., whether a section of text was skimmed or thoroughly read, or in what order the display elements were noticed).

In [Figure 6.2](#), the participant (right) is sitting in front of the Tobii 1750 remote eye tracking system integrated into a computer monitor. The session moderator (left) is sitting in front of the control station that enables her to view the participant's eye movements and control the eye tracking software. The blue dot on the moderator's screen indicates the point of gaze of the participant.



■ FIGURE 6.2 Eye tracking session in progress.

Eye movement data are especially valuable for answering questions for which conventional measures of user experience are not sensitive or accurate enough. One of the main reasons to track eye movements is to understand the user experience that takes place during and between behavioral events that are observable without the help of any tools. These events include mouse movements and clicks, physical object manipulations, and body movements. Although researchers can try to describe users' cognitive processes affecting the user experience based on the information verbally offered by the users, eye movements provide data that are much more detailed and objective than user self-report. Eye tracking can help us understand user expectations, interest, confusion, and decision-making processes, which provide insight into the effectiveness of a design.

Equipment, skills, and knowledge pose many challenges in eye tracking studies. These challenges are magnified in studies conducted across multiple geographic locations. First, eye tracking requires specialized equipment that most research labs do not yet have. However, even if a lab has eye tracking equipment, it may be different from the equipment that is needed for the research. For example,

an eye tracker built into a computer monitor is not appropriate for tracking user interaction with the surroundings (e.g., when shopping, driving, or playing sports). Instead, a wearable eye tracker should be used, and if it is unavailable, the study simply cannot be conducted.

The second main challenge in eye tracking studies involves the researchers, who need to have the appropriate skills to operate the eye tracker and collect data, as well as the knowledge to plan an eye tracking study (e.g., select the correct procedure and measures) and analyze and interpret the results. There are several commercial eye trackers on the market that are fairly easy to use. However, the fact that someone can “track participants” and “generate heat maps” does not mean that he or she has any understanding of the nature of eye movements. In this section, we offer advice on how to overcome the equipment- and skill-related challenges in global-scale research.

6.4.2 Equipment-related challenges

The lead team may either decide to bring its own eye tracking equipment to the other study locations or use equipment provided by the local teams. Both solutions have a number of advantages and disadvantages, and they require careful preparation to ensure a successful study.

When lead team brings own eye tracking equipment

When taking its own equipment to another country, the lead team should be aware that some of the equipment may not successfully transfer through customs. It may also become damaged or even lost on the way. Although one can conduct a usability test and collect valid data without an actual usability lab, an eye tracking study cannot take place without eye tracking equipment. Sometimes, all that the lead team can do is plan to arrive early and hope for the best. Setting the right expectations with the study sponsors and the team will minimize surprises and ensure that everyone is aware of the risks involved in traveling with the equipment.

Nevertheless, it is always advisable to have a backup plan in case the equipment does not arrive with the lead team. If the local team does not have the proper equipment, one option is to find a local company that has a similar eye tracker to the one used in the study. Sometimes equipment can be rented at the last minute if the lead team or the local team communicates with the company ahead of time and explains the plan. The rental may not be the exact hardware model or software version that is needed, or it may be expensive. However,

this can mean a difference between being able to collect data or not, which is especially significant for studies with eye tracking as their main or only component. Setting plan B into motion will likely require time for transport of the backup eye tracker, setup (which could differ from what the lead team is used to), and possibly some self-training, so the researchers should plan accordingly.

Assuming that the lead team's equipment made it to the destination unharmed, it is now important to remember that the hardware may have a power supply incompatible with the power supply used in the test countries. For example, in Europe and mainland Asia, the supply voltage ranges from 210 to 240 V and can damage equipment set for North American or Japanese voltage of 100–120 V. If the equipment has a voltage switch, the switch should be flipped to the correct setting before plugging in the system. If there is no such switch, a voltage converter is needed. A simple adapter plug will not solve this problem.

If the study requires participants to interact with a Web site, software application, or images on a computer, and the lead team is bringing its own test computer (which may be wise if the computer is also running the eye tracking software), the operating system (OS) and keyboard could be different from the OS and keyboard used at the destination. Asking participants to type on a differently configured keyboard or use an OS in another language (even one with which they are familiar) may produce artifacts in the results, depending on the study focus and methodology. Although these artifacts may be of little significance in a qualitative usability study, their impact on an eye tracking study will be far greater.

For example, imagine that every time a participant tries to type a "Y," a "Z" appears instead, or several letters of the alphabet are entirely missing from the keyboard. As a result, he or she will spend much more time looking at the keys than usual. Every time users look down and then back up at the screen, they need to visually reorient themselves, which requires additional eye movements and produces different scan patterns. If the lead team suspects that using a different keyboard and OS may affect the results of the study, a local keyboard should be used instead and an OS in the local language should be installed.

Sometimes, the lead team may decide to bring the eye tracker only and rely on the local researchers to provide additional hardware (e.g., PC to run the eye tracker). This is a risky option because no

one can check whether everything works together until the eye tracker arrives at the test location prior to the study. Therefore, the lead team should be extremely specific regarding the parameters of the required hardware to ensure that it is compatible with the eye tracker.

When local eye tracking equipment is used

If the eye tracking equipment is available on-site, using it to conduct the study should be strongly considered. However, the lead team must diligently check and confirm that the correct equipment is indeed available. To be able to combine the eye movement data across several test locations so they can be analyzed together, all data may need to be collected using similar (or sometimes even identical) hardware and software, including the software version and settings. The lead team should not make any assumptions but, rather, clearly communicate its requirements to the local teams and make sure these requirements can be met.

If local equipment is used for the study, the lead team needs to decide how it will take the data off of the local equipment. Eye tracking data files can be massive in size – far too big to fit on a DVD or be easily uploaded or downloaded. The local research teams can be provided with portable hard drives that can be shipped to the lead team after data collection is complete. Shipping of the data can have an impact on the schedule, especially if they are shipped across borders. The project timeline and team expectations have to be properly set.

6.4.3 Skill- and knowledge-related challenges

Many companies, even those that have eye tracking labs, might not have adequate knowledge or training necessary to set up and conduct a particular study. The lead team should provide the local teams with very clear instructions. The schedule should also allow for time to train the local team not only how to run the study but also how to do basic equipment troubleshooting.

In addition, the lead team should provide a detailed description of the procedure so that data are collected in a consistent way across locations. The description should include information such as when to start and stop the eye tracker, whether or not to use a think-aloud protocol while eye tracking, and whether or not the moderator should assist the participant if he or she is struggling with the tasks. If left to the local moderators, these decisions can have a detrimental impact on the eye movement data.

Also, any inconsistencies will produce unnecessary variability in the results, thus making them difficult to analyze and interpret.

6.4.4 Conclusion

As the popularity of eye tracking rises, the challenges associated with conducting global eye tracking studies will decrease – the appropriate equipment will become more available and the skills and knowledge will become more widespread among user research professionals. However, nothing can replace careful planning and attention to detail, which will always be necessary to make eye tracking research, especially on a global scale, successful.

6.5 UNMODERATED REMOTE USABILITY TESTING

Written by Jayson M. Webb and Alfonso de la Nuez

6.5.1 Introduction

Today's Web business is far more advanced and sophisticated than it was during the dot-com boom years in the late 1990s and early 2000s. As such, Web managers and marketers have demanded new and more powerful tools to manage their customers' interactive online experiences. Unmoderated remote usability testing (URUT) is an approach born precisely of that demand, and it addresses the following issues that online user researchers might have:

- "I'd like to obtain statistically significant data to quantify usability and user experience. Traditional usability testing in a lab has value in some situations, but the sample is small and it only allows for usability problem identification, not quantification."
- "I'd like users to participate in their natural context, at home, using their own PCs."
- "I have a global audience and would like to test in several countries, but I don't have the budget or the time to conduct a traditional moderated study in a lab."
- "One of the challenges for us now is to be able to do benchmarking. We'd like to compare different competing sites and see who is performing best, offering the best usability and user experience."
- "Web analytics tools give us lots of data about what happened on our site at an aggregate level, but we still don't know why it happened or how it relates to different user goals. We want to know users' real goals and why they do what they do."

URUT allows companies to test Web sites with a large number of geographically distributed participants in their natural context. URUT technology automatically presents tasks to participants and tracks their interaction with a site, including navigation path, page scrolling, and click location. The data collected measure the important usability dimensions of effectiveness, efficiency, and subjective satisfaction (Bevan, 2008; National Institute of Standards and Technology, 2007).

URUT has the following characteristics:

- It is a research solution that uses technology to allow researchers to manage online (remote) usability studies.
- A special kind of software asks users to complete tasks and asks specific questions related to the task (e.g., survey) and the usability of the site. The software supports counterbalancing and randomization of task presentation orders and question orders.
- The same software collects session data as users interact with the site (e.g., Web analytics).
- It allows testing over a large user base, geographically dispersed, so it is ideal for both nationwide and global testing.
- No moderation is required.
- Users can participate at any time of day and in their natural context, using their own PCs.
- Because of the large number of participants, URUT is ideal for quantitative evaluation of Web sites, especially comparisons of sites and benchmarking. In addition to the quantitative data, a large amount of qualitative data can also be collected.
- The rich data provide statistically powerful results on which to base business decisions.
- With the help of online tools, researchers can analyze the data and create a report.

Because users do not need to physically attend the sessions at a lab facility or testing room and there is no moderation needed, cost-efficiency is clearly one of the main advantages of URUTs, but it is not the only one. For researchers and Web marketers, the ability to quantify usability is very valuable. Also, many of today's researchers and online channel managers agree that having users in the lab environment is not always the best solution to obtain quantitative data that generalize to real-world usage. Traditional moderated usability testing is still an indispensable tool and should be part of the

portfolio of user research approaches. However, especially for global testing, URUTs offer research capabilities that were unthinkable a few years ago.

6.5.2 URUT contrasted with other approaches

It is important to understand what URUT is and what it is not in order to use it correctly for user research.

- URUT is not moderated remote usability testing: Many people understand the concept of “remote usability testing” as an alternative to more traditional user testing by adding a Web camera and communication software between the moderator and the end user. Also called “moderated remote usability testing,” these types of studies are similar to traditional testing. The essential difference between traditional usability testing and moderated remote usability testing is the geographic issues resolved and the associated cost reduction. However, it is quite different from URUT, and people should be fully aware of this. Basically, what makes URUT a completely different method is the lack of a session moderator. In moderated remote testing, there is still a need to moderate, so the technique is typically used to test small samples and therefore does not serve to quantify usability.

Moderated remote usability testing can be difficult when doing global testing because one needs a local moderator from each country to carry out the studies, which increases expense. Of course, it is possible to use one moderator for all countries, but this can cause problems with language (e.g., non-native speaker) and the understanding of local issues (see Chapter 7). Using URUT, however, you just need a review of the protocol or pilot testing in the local country before launch, which is a more cost-efficient approach.

- URUT is not an online survey: Online surveys can ask users about goals and perceived success ([iPerceptions, 2008](#)) but do not measure actual behavior and actual success. Also, online surveys do not present tasks or follow an entire session and ask questions based on behavior. URUTs, on the other hand, use highly sophisticated software to ask users to complete certain tasks (task-based testing) or accomplish goals (true intent testing and free search testing) and track users, and they can present questions before, during, and after the task or goal has

been accomplished. There is a major difference between filling out a survey at a random point in an interaction with a site and filling out a survey after having interacted with the site in a known way. By using a predefined event to trigger a survey, the survey questions can be more specific and directed. The external validity of the results is thus increased because the researchers know with a higher degree of certainty that participants are responding based on their experience with a specific aspect of the site rather than generalizing across their overall experience.

- URUT is not just another Web analytics tool: Web analytics tools can provide extremely detailed data with respect to user behavior on the Web site. For example, they can measure the number of visits, the location from which users arrived at the site, how much time is spent per visit, and where users abandon a flow. Although it is very important to obtain real-time data regarding what is actually happening on the site, it is also very important to know why it happens. URUT accomplishes this by capturing users' intentions or goals, whether each goal was actually achieved (effectiveness ratios), how much time and effort was dedicated to each goal (efficiency ratios), why users abandoned a specific task, and, finally, how satisfactory the online experience was. By comparing the user behavior data and survey data with the tasks and goals of the users, URUT can be much more than just another Web analytics tool.

6.5.3 URUT in detail

A firm grasp of the practical details of conducting URUT is essential for planning your global user research and prioritizing the tasks for your URUT project. Here, we share our experiences with the effectiveness and cost savings realized by using URUT for global testing and point out some of the problems you might encounter.

Participants and locations

Although a major benefit of URUT is that large numbers of geographically distributed participants can be tested in a cost-efficient way, you still need to understand the local context and constraints in each country before you begin. If you have never done any type of testing in your chosen countries, proceed with caution. If you use a vendor,

make sure the vendor has relevant global testing experience. URUT does not free you from many of the concerns that affect other types of global testing. These issues include translation of testing materials and participant responses, cultural differences in expectations about giving feedback, and expectations regarding written privacy policies (Courage & Baxter, 2005; Siegel & Dray, 2005). For example, we have found that German test participants expect a detailed written privacy policy as part of the main flow of screens at the beginning of a test. In contrast, U.S. participants would rather have a link to a separate privacy policy. Violating the expectations of either user group means participants will drop out from the study. URUT methodology must be adapted to different participant expectations in different countries, just like any other usability testing method.

The good news is that it is possible to find vendors who have done extensive URUT and other user testing in a host of countries (UXalliance, 2008) and can help you evaluate the important cost-benefit criteria for conducting global URUT.

Context of use is a defining element of usability (Bevan, 2008; National Institute of Standards and Technology, 2007). When considering the use of URUT, the researcher should determine whether or not participation can occur in the users' natural environment. URUT data can often generalize to real-world usage scenarios because participants are in their natural environment. Most participants can use their home PC and browser and can participate at any time during the day that is convenient to them. If the natural context of use is the participant's office, there could be some issues with firewalls or workplace policies. Make sure to check with your vendor about these issues if corporate workplaces are your target context.

Another practical issue when you consider URUT is that participants can be anywhere throughout the world, but they need Internet access with sufficient bandwidth to support your testing goals. For example, if you want to measure task completion time in a usability study via URUT, then you should be aware that the Web site or prototype you are testing can add some load time (and load time variability) to the pages you are testing. If you are performing a test in which timing is less important and/or stimulus complexity is low, such as a simple "where would you click to find X" test using static page prototypes, then potential network delays are usually not an issue. The URUT tool might add load time as well, for example, when the URUT server supporting your test is in a different country than the test

participants. However, most of the time the URUT tool will add no noticeable delays. Nevertheless, it is important that the load times are checked in advance. For one project, preliminary testing revealed page load times of 30 seconds when the prototype site was very heavy in flash and graphics and the URUT tool Web server was in a different country than the intended test participants. Testing ensures that the combination of URUT tool, participant bandwidth, prototype or site complexity, and testing goals is in harmony. Ask your vendor to provide data on network delays for each country you are testing in and, where you can, try to experience the delays yourself so you get a sense of what they are like qualitatively. A number describing network delays such as “5 seconds” may feel different than it sounds.

Large samples

Detecting statistically significant differences between groups or conditions is not usually possible with the small samples of a standard usability test (e.g., 10–20 participants). The large samples of participants used in URUT (e.g., more than 200 participants) provide you with enough statistical power to detect even small effects. For example, a 5-second difference in average task completion times (14.3 vs. 19.0 seconds) in a group of 200 participants will probably be statistically significant in URUT (depending on the standard deviations). However, with 12 participants in a standard usability test, it is unlikely that this size difference would be statistically significant. A full discussion of statistical power is beyond the scope of this chapter. Several good overviews can be found online, and [Cohen \(1988\)](#) is considered a good starting point. In short, statistical power is the probability that you will detect a difference in some measure between groups or conditions when that difference does, in fact, exist.

We have used 200 participants as an example here. If the differences that are meaningful to your project are larger than those in our example, then fewer participants could be used. If assessing statistical power for different measures is beyond the capability of the project team, make sure that internal or external consultants can help you determine the correct sample size to use based on the research goals.

The large samples of participants used in URUT give you not only statistical power but also a rich source of qualitative data because participants can provide typed responses to open-ended questions, just as they do in a survey. The qualitative responses can be grouped thematically to get a relative idea of how many participants express positive or negative opinions in certain areas, such as “pricing” or “search.”

It is always a good idea to have done moderated testing of some kind (e.g., usability testing and focus groups) to discover issues that are important to the research audience and inform the design of open-ended questions for URUT. Likewise, issues uncovered during online testing can be explored further in moderated sessions.

6.5.4 URUT in practice

All elements of a usability test script are embodied in the URUT tool. This includes instructions to participants; task wordings and order; randomization or counterbalancing schemes; rules for terminating a task; rules for accepting or rejecting participants based on an initial questionnaire; task feedback (e.g., “correct” or “incorrect” solution); and pre-session, post-task, and post-session questionnaires.

In this section, we discuss recruitment, pilot testing, different forms of testing, and the results and data. The following are the different forms of unmoderated usability testing:

- Task-based usability testing of a Web site or prototype, in which a test script is predefined before users are invited to participate
- True intent usability testing, which lets participants follow their own goals with a particular site or across many sites over an extended period of time
- Free search usability testing, in which users start from a blank page and we give them a specific goal to accomplish

Each of these forms of unmoderated usability testing is discussed in detail later.

All tools support task-based and free search usability testing, but many URUT tools also support true intent testing. A list of tools that support both moderated and unmoderated remote usability testing can be found at <http://remoteusability.com/?p=17#content>. Each vendor would be able to tell you how or if it supports task-based, free search, true intent, or other types of testing. Major vendors include LEOtrace, UserZoom, ClickTale, Keynote WebEffective, m-pathy, RelevantView, Chalkmark, VuLabs, SMT, ClickHeat, and Userfocus.

Recruitment

The URUT tool is typically agnostic to the method of recruiting participants. Anything you can do to point people at a URL is all that is required. Thus, you can invite people to participate via a visible layer on your existing site, just like many surveys do. If participants

click “yes” to participate, then they are directed to the tool, and the test begins. (The number of participants who opt-in varies widely.) Cookies can be used to prevent users from taking the survey multiple times.

The first step in recruitment is typically a screening questionnaire. If potential participants do not pass the screening, either because they do not match the desired profile or because the profile they match is “full,” then they exit the study. They also exit the study if they do not accept the privacy agreement or for technical reasons, such as having the wrong browser. Quotas for different types of participants can be set studywide (e.g., does not matter what country the participant is from) or per country, and some URUT tools help you manage and/or monitor these quotas.

Pilot test in each country

Some issues may loom larger for global testing via URUT than via traditional methods, such as the need to carefully pilot the test in each country to make sure that participants understand what is expected of them and that the test flows smoothly. Unlike face-to-face testing, there are no opportunities to make changes on the fly if participants seem confused about the response requirements. Therefore, pilot testing is even more important than when using traditional methods. How do you evaluate how well participants in different countries understand the flow and expectations of the testing? One answer is to hold a moderated session with some pilot participants in each country, either physically or via an online moderated session, and check for understanding of all elements of the test. You would ask questions such as the following:

- What do you think this task is asking you to do?
- Tell me about what you would type into this text box?
- What does each of these rating scale questions mean to you? Explain in your own words.
- What would a high rating mean? What would a low rating mean?

If you or your vendor(s) has done this type of testing before, pilot testing at this level of detail may not be necessary because the requirements for different countries may be well understood, especially if the questions and other stimuli have been used before. Anytime new questionnaire items and task wordings are used, it is best to validate those.

An alternative style of pilot test is to use the exact same URUT method over an internal sample of users prior to launching invitations to the

target users. A set of 10 invitations can be generated for those internal users (client's team members in different locations, project managers, researchers, and potentially even friends) to try to test the test protocol remotely before launch. In global research, it is very useful to test wording, language, and other cultural issues, again with the advantages of participating remotely. Afterward, editing the protocol is quite easy, so the entire pilot study can be done within a fairly brief period of time, even if one needs to test in various countries. There are risks to including only internal users in a pilot test. For example, there may be terminology that is only understood within a company and not by external end users.

Task-based usability testing

Before tasks are presented, participants read instructions about how the session will flow and how to give feedback. Different profiles, including different countries, can be given different tasks. If desired, tasks can also be presented conditionally, based on some performance criteria such as success on a previous task. Questionnaires can also be presented conditionally. Other types of rules can be used to control the flow of the study. In one test, to keep the test from taking too much time and to keep participants from getting frustrated, tasks were stopped if participants made more than five navigation clicks. A task can also be stopped if the participant “does the right thing,” which could be clicking the desired button, reaching the desired page, or completing a field with the proper format. The tool can then automatically tally a 1 or 0 in the success column so that you can calculate some measure of “effectiveness” for quantitative usability. Do not use more rules for presenting questionnaires and controlling the flow of the test than you need, however. Later, we discuss how this adds to the cost of the test via increased programming and testing time.

Figures 6.3 shows an URUT tool presenting a task in a frame at the bottom of a browser. The participant can indicate the end of the task by pressing one of the buttons (Success or Abandon). Buttons can be combined with rules to terminate a task. Branding is often an optional element of the task bar.

True intent usability testing

Sometimes it is better to observe what users actually do on a site and ask them about their goals rather than provide them with predefined tasks as you would for a standard usability test. This is called true



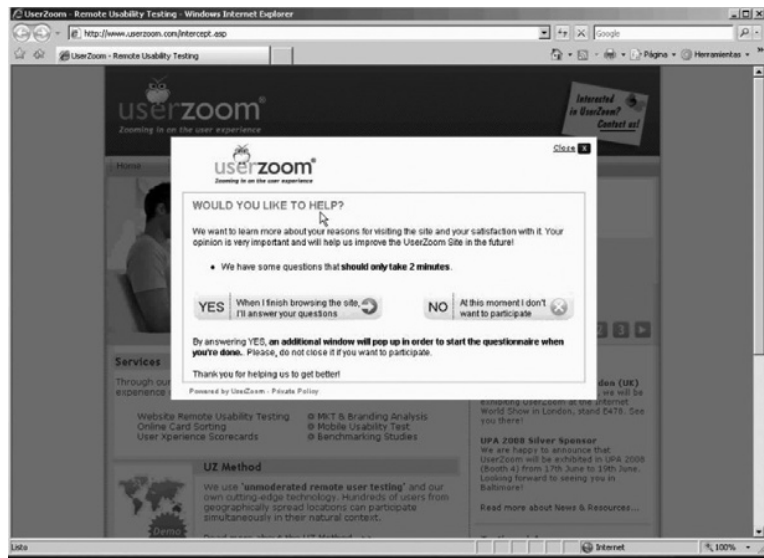
■ **FIGURE 6.3** A live Web site being tested via an URUT tool.

intent testing. The same URUT tool that supports usability testing can typically be used for true intent testing. True intent testing helps you answer questions such as the following (see also [iPerceptions, 2008](#)):

- What are the goals of a user who comes to a certain Web site?
- For each user goal, what are the success and satisfaction rates?
- What features and paths are being used for each goal?
- Why do participants do what they do?

Once the participants are recruited, they complete a demographic survey, are asked what they came to the site to do (i.e., what is their goal), accept a privacy agreement, and read instructions on how to give feedback. This is similar to the procedure for task-based testing.

However, rather than being presented predefined tasks, they are asked to do whatever it is they came to the site to do that day ([Fig. 6.4](#)). Rather than task descriptions being presented at the bottom of the browser (see [Fig. 6.3](#)), a “feedback” button is provided so participants can provide spontaneous feedback as they use the site and a “finished” button



■ FIGURE 6.4 A true intent study starts by asking a visitor to participate.

to indicate when they are done giving feedback. Their session can end when they press the button or when they exit the site, or some other trigger can be used, such as amount of time on the site, page visited, or number of clicks. At the end of the session, they fill out a questionnaire asking how successful they felt based on their stated goal and their likes and dislikes about the site. Participants also provide ratings on several questions.

True intent testing does not require you to translate task descriptions for each country. You still need to translate the initial and final questionnaires and task instructions. However, if you or your vendor has already done this once, then each time you collect data, you only need to translate verbatim responses. Thus, this type of global testing can be quite economical when used repeatedly – for example, to do quarterly evaluation of Web site “status” in each country. True intent testing poses different expectations about giving feedback, especially verbatim spontaneous feedback while the user surfs, so pilot testing should be done at least once in each country to ensure that participants understand what is expected.

Note that effectiveness and efficiency may not be what you want to measure in a true intent study, but subjective satisfaction always applies. Subjective satisfaction and perceived success compared to

stated goal and path taken will be important quantitative measures. The spontaneous feedback during surfing and verbatim likes and dislikes will be the important qualitative data.

Free search usability testing

A free (or open) search usability test consists of asking users to complete a specific goal starting from a blank browser page. In other words, instead of having users start from a specific Web page and evaluate its usability, users start from scratch. In this case, the research objective is to analyze online behavior (and not so much a Web site's usability).

Imagine that you own a car accessories Web site, aimed mostly at sports car owners. For example, one of your specialties is high-quality car cleaning products for delicate paints. Wouldn't it be interesting to know how sports car owners search for these types of products online? Would you be interested in knowing what terms users entered in order to find them? How about the sites visited? Did they choose a particular brand or Web site, or did they use a search engine? Most important, why do they search the way they search? Are they looking for specific information? If so, what kind of information?

Through URUT, you would be able to perform a free search study and obtain the answers to these questions. In the free Web search study, you could ask 300 sports car owners to start from a blank browser page and look for car cleaning products for delicate paints. The instructions of the participant might be as follows:

You own a red Corvette (or similar) and you'd like to keep it looking great every other weekend by hand-washing it yourself. You know it takes a special kind of cleaning product to help you wash the car without scratching it, so it looks and shines like new. Based on this scenario, try to find a product that would satisfy your current needs. You will start from a blank page and you may freely go wherever you want.

The test results would help you to understand customers' behavior in a way that will help you better position your site on the Web. You will also obtain marketing and branding data that will help you in your search engine marketing strategy. You will know if competitors are being recognized as well. Finally, you will better understand your customers' mental models and what terms they use so you can make sure your site will fit in with those.

Results and data

One of the main reasons why URUTs are being implemented quite successfully in a growing number of firms conducting usability testing and user experience research is the quality of the data collected. It is, most of all, actionable and relevant data. Here is a list of results gathered:

- Effectiveness and efficiency ratios – rate of users who completed a task successfully, plus the time and number of clicks required to complete the task (Fig. 6.5).
- Satisfaction – how satisfactory was the experience.
- Answers to the specific questions – there are initial, introductory questionnaires, task-specific questionnaires, and final, overall satisfaction questionnaires. Through these, various types of questions can be asked, such as multiple-choice questions, Likert scale ratings, and open-ended questions (for user verbatim) (Fig. 6.6).
- Behavioral results – “click-streams” show the navigation path users followed to complete a specific task. “Click maps” show the aggregate sum of where all users clicked (Figs. 6.7 and 6.8).

In addition to these results, it is very important to note that URUT tools usually offer many scripting and filtering or segmentation capabilities that allow researchers to fully customize their studies and perform advanced data analysis. For example, a researcher may want to analyze what actually happened to users over a certain age group and from a specific country who failed task number 2, what path they



■ FIGURE 6.5 Effectiveness and efficiency ratios.

Final Questionnaire

■ 1. Please, answer the following questions concerning the web site, taking into account that 1= Completely disagree and 7= Completely agree.

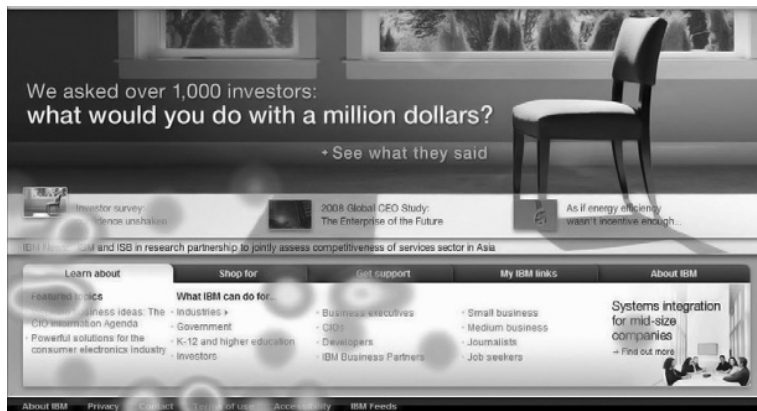
	Answer distribution							N	Mean*
	1	2	3	4	5	6	7		
The Web site clearly explains what it is about.	1% (2)	2% (5)	6% (17)	10% (31)	24% (72)	30% (90)	28% (83)	300	5,6
The Web site is attractive.	1% (2)	1% (2)	2% (7)	6% (19)	20% (59)	38% (113)	33% (98)	300	5,9
I can clearly see the products and services the Web site is offering.	1% (4)	1% (4)	4% (11)	7% (21)	17% (50)	34% (103)	36% (107)	300	5,8
The Web site seems easy to navigate.	1% (3)	1% (3)	2% (5)	3% (9)	19% (58)	33% (100)	41% (122)	300	6
Important information is featured more than secondary information.	0% (1)	1% (3)	4% (11)	8% (23)	27% (80)	29% (87)	32% (95)	300	5,7
The different sections of the Web site are easy to view.	0% (1)	2% (5)	2% (5)	6% (19)	19% (58)	34% (103)	36% (109)	300	5,9
The Web site gives me the feeling that it is reliable and trustworthy.	1% (3)	1% (4)	3% (9)	9% (26)	19% (58)	36% (108)	31% (92)	300	5,7

* (1- Completely agree / 7- Completely disagree)

■ FIGURE 6.6 Likert scale ratings.



■ FIGURE 6.7 Click streams.



■ FIGURE 6.8 Click maps.

took, and only the ones who spent more than 2 minutes on the task or even the ones who did not see a specific page. All this can be done by using the filtering capabilities of URUTs.

6.5.5 Technical considerations

Technology constraints on data collected

In general, anything that can be accessed via a URL can be studied with the URUT tools. However, technology constraints may limit the information you get, depending on the tool you choose. In some cases, navigation cannot be tracked if URLs do not change – for example, if a Web application makes database calls to refresh parts of a screen (e.g., dynamic Web technology such as AJAX). To track interaction with video elements, special programming may be required, which can affect study cost. For Web applications that do not have an externally visible IP address (i.e., they are behind a firewall), the URUT tool might not work at all. It is best to check these technology issues when selecting the correct tool for your study.

Browsers and operating systems

The URUT tool can check the compatibility of operating system and browser and selectively screen participants based on their configuration. Most URUT tools support the Windows operating system and the Internet Explorer browser. Some tools also support Mozilla browsers. Compatibility with other browsers or operating systems is something you can test but should not be assumed.

Software download and installation

For most URUT studies, there is no software download or installation required of participants. Participant interactions are routed through a proxy server that records them and forwards them to the site's server. The proxy server approach works if the URLs to be evaluated are known in advance.

However, if you want to study behavior across several Web sites that are not known in advance (e.g., in true intent studies), participants will need a browser plug-in. The effort for participants to download and install a browser plug-in is fairly small and follows the same process as for any browser plug-in. The requirement to download a plug-in can have a negative effect on the participation rate for the study. The instructions that you provide to participants for downloading and installing the plug-in will have an effect on their willingness to participate.

The browser plug-in approach is also used for longitudinal studies (e.g., studies in which the same participants are observed repeatedly over a period of time). For example, we studied 800 participants over a period of 4 weeks. They were recruited based on the fact that they shop online. They installed the browser plug-in for either IE or Mozilla, and we recorded the Web sites they visited. In addition, surveys were presented when participants exited any one of 120 sites on our “interesting sites” list. The plug-in also controlled how many total surveys participants received for the entire study, per week and per day. As you might imagine, 4 weeks of navigation and survey data from 800 people is a very large and rich data set. There were more than 3 million data records. This amount of data cannot be opened in Microsoft Excel. We wrote custom scripts (in Perl, although other languages such as Ruby would do just as well) to summarize data and correlate behavior and opinions. A usability test that occurs in one day will not generate that much data and will most likely be analyzable directly in Microsoft Excel. However, scrolling and navigation data lend themselves to visualization not provided in Excel.

A longitudinal true intent study can be used to capture best practice in a product category and answer questions such as the following:

- What are the characteristics of sites that attract positive ratings and comments?
- What sites are visited together, in what order, to support which goals?
- How do the previous issues vary by product category (e.g., electronics and books)?

6.5.6 Cost and benefit in global URUT

The URUT approach to user research allows you to test large numbers of participants, which provides statistically powerful data from a global audience participating in their natural context and often using their own goals. Quantitative benchmarking between sites or between countries is therefore possible. Qualitative issues can be both discovered and quantified. Traditional usability testing allows you to interact with participants and probe on qualitative issues in a way that cannot be done with URUT. URUT provides quantitative measurement that cannot be matched by traditional testing. A sequence of traditional testing followed by URUT would be ideal. The traditional testing would allow a deeper exploration of qualitative issues in each country and would inform the URUT, which would bring quantitative

power to the testing. However, in practice, one method will likely be chosen over the other based on the relative costs and benefits in the context of the study goals.

There are three unique costs associated with URUT that do not apply to traditional testing. First is the cost associated with the requirement to perform quality testing and regression testing on the URUT software. The testing effort increases exponentially with the number of rules that are programmed, such as counterbalancing, task termination rules, and situational questionnaire presentation. Based on our experience, you should keep the test as simple as possible. Adding many “nice-to-have” rules can increase the software testing effort and cost beyond the value provided by the additional complexity of the test. The other two costs that are unique to URUT are associated with the additional upfront planning required of an automated test and the need to program the automation. Thus, three additional costs for URUT testing are related to planning, programming, and testing the automation.

These additional costs are typically more than offset by cost savings. First, travel costs are eliminated with URUT. Additional staffing costs per country are also eliminated. The programming of rules and questionnaires (not the content) applies to all countries, so the incremental cost per country is very small. Cost savings for URUT really kick in when you repeat testing with the same or substantially similar setup. In the case of true intent testing at a regular interval (e.g., quarterly), there are no or low incremental costs associated with planning, programming, and testing. A before/after usability test also has savings from reuse of elements.

Translation costs, for both test materials and verbatim data, are similar for traditional testing and URUT.

6.5.7 Case study: Global testing of Monster.com

Monster.com is a well-known Web site on which home users can search for jobs and professional users can post job openings (Fig. 6.9). It is a true global brand and .com, with local Web sites in 50 countries (Monster.com, 2009). As such, it required local user experience and usability research as part of its global strategy.



■ FIGURE 6.9 Monster.com.

Situation and challenge

In 2007, Monster.com's interface was about to be redesigned and the firm's user experience team was searching for a way to perform global testing in various markets. The challenge was a relatively low budget and short time frame.

To get an accurate and objective assessment of the user experience internationally, Monster conducted user testing with more than 1000 users using a URUT solution in its four main European markets (United Kingdom + Ireland, France, The Netherlands, and Germany).

Solution

Monster.com successfully implemented the test using UserZoom's URUT solution. The study included 250 users per market (1000 total), five tasks to be completed, plus the questionnaires. Recruited users were segmented by geographic location, age, sex, home users who searched for a job, and professional users who searched for candidates.

Results

The report generated included the following:

- Effectiveness, efficiency, and satisfaction ratios
- Click streams and click maps
- User verbatim and suggestions to improve
- Overall user experience rating and opinion of the site about various issues, such as graphic design, quality of the information, and legibility – all done post-task
- Advanced analysis of the data gathered, including data segmentation by specific variables, cross-tabulates, and comparison between markets

The tests revealed an abundance of navigation and labeling problems that needed to be fixed, especially in the two most important parts of the site: job search and the site's CV builder.

6.6 WEB ANALYTICS

Written by Adam Cox and Tjeerd de Boer

6.6.1 Introduction

Most user research professionals have heard about Web analytics, even if they are not regular users. In this section, we discuss the use of Web analytics as a method for global user research. A logical starting point, therefore, is to determine what Web analytics is. Web

analytics is officially defined as “the measurement, collection, analysis, and reporting of Internet data for the purposes of understanding and optimizing Web usage” (Web Analytics Association, 2008). However, what does this actually mean?

Measurement – Basically, all visitor activities on a Web site can be measured (e.g., mouse clicks, data input, referrals, page views, and number of visits). In addition, it is possible to determine how the Web site was accessed (e.g., search engine, search terms, referrals, and bookmark), the technical characteristics of the device that was used to access the Web site (e.g., browser, operating system, and screen resolution), and the location of the user (e.g., country, city, and region within a country).

Collection – This refers to the act of gathering and parsing Internet data into a format readable by humans. This is performed by Web analytics software. There are many different Web analytics software solutions (e.g., WebTrends, Google Analytics, and Omniture), but there are only a few different collection methods (e.g., server-log based or tag based are the most common).

Analysis – Internet data need to be interpreted by a human. The numbers alone do not give any meaningful insights. Analysis is normally carried out by a Web analyst, but the basics might be able to be done by a marketing or user research professional.

Reporting – A Web analytics report can range from a basic monthly statistics report that reflects the performance of a Web site to more complex and detailed reports that are used to answer specific questions. In any case, the assumption is that the report will be used to communicate findings and possibly to suggest improvements.

Understanding and optimizing – Both user research professionals and Web analytics professionals want to understand how people are using interactive technology so that they can improve the products and services.

Web usage – Unlike the broader scope of usability testing, Web analytics is not about all interactive products such as parking meters or DVD players. It is about Web applications or sites that can be accessed with different devices (desktop computer, mobile device, etc.).

Web analytics is sometimes perceived as a technical issue. Indeed, it takes some technical knowledge to implement Web analytics software and start the measurement and data collection. However,

this technical work can often be done by people without a high degree of technical knowledge (internal technical staff, software vendors, consultants, etc.). Once the software is installed and functional, Web analytics is primarily concerned with nontechnical issues. For example, one needs to determine the appropriate research questions (e.g., who is visiting the Web site) and select the Web data that can answer these questions (country, operating system, return visitor, etc.). In addition, data need to be analyzed and reported. The analysis, therefore, should be done by people with an understanding of the target audience, the product, and the business goals. Considering these characteristics, it is easy to see that user research professionals fit this profile. Of course, some basic knowledge is necessary to succeed, although the recent availability of easy-to-use and inexpensive (sometimes even free) Web analytics software has removed many of the boundaries to participation. In other words, any research professional is able to do basic Web analytics activities. The more complex activities (A/B testing, multivariate testing, behavioral targeting, real-time customization, integration with CRM systems, etc.) should probably still be done by full-time Web analytics professionals. Therefore, this section addresses only basic Web analytics activities that are relevant to user research professionals. Information about more complex Web analytics, solution providers, and useful resources can be found on the Web site of the Web Analytics Association (<http://www.webanalyticsassociation.org>).

Why, then, should a user research professional be concerned with Web analytics? Because Web analytics takes a truly global approach to answering research questions; it transcends boundaries and is therefore truly global. Web analytics can be used to monitor user behavior throughout the world, even if the Web site of interest is local.

In the remainder of this section, we discuss the combination of Web analytics with global usability testing and illustrate how to execute this practically.

6.6.2 Why combine Web analytics and global usability testing?

Introduction

Combining user research methods is a valuable practice. Whether it is the combination of eye tracking and usability testing or Web analytics with an expert review, the benefits are obvious. The combination of

Web analytics with global usability testing is a particularly powerful approach because although the methods are very different, they complement each other well. Combining Web analytics and usability testing allows the user research professional to utilize the benefits of each method, creating a much more valuable report. This is even more important when doing global user research because the variety of visitors and behavior is often overwhelming.

In the following paragraphs, we highlight the main benefits of combining Web analytics and global user research. We do this by comparing Web analytics with usability testing and showing how they complement each other. Other user research methods can be combined with Web analytics as well (e.g., online survey and expert review). However, because the methods of Web analytics and usability testing are so different, their combination can be very successful.

Scope

Usability testing has few limitations in terms of what can be evaluated. For example, paper (prototypes), interactive display booths, or MP3 players can all be evaluated during a usability test. In contrast, there are more constraints associated with Web analytics. The interactive product must be a Web site, it must be “live,” and it must generate a significant amount of traffic. In addition, to be able to monitor the Web site, Web analytics software must also be implemented and set up properly. It is quite common, for example, for Web analytics software to be installed but not properly configured or used to optimize a Web site. Implementation of Web analytics software can be complex and should never be underestimated.

Measurement

Web analytics is, to a large degree, a measured method of evaluation. This means that it is reliable and objective. The reliability of Web analytics data is also determined by the quantity of site visitors. Some Web sites attract thousands of visitors, perhaps tens of thousands, every day. With large numbers, it becomes very unlikely that measurement errors can influence the final results. Web analytics also uses relatively standard definitions for different measurements. Unique visitors, return visitors, and bounce rates, for example, are established terminology and can be used in a standard, quantitative way, which makes it easy to compare. In contrast, usability testing is much more subjective – observations are done by humans – and therefore considerably more labor-intensive.

Compared to global usability testing, Web analytics offers another benefit in that it can be more efficient. With Web analytics, you can evaluate Web sites with users throughout the world efficiently. This is very time-consuming and expensive when carried out with traditional usability tests. Compared to other user research methods, Web analytics can be relatively inexpensive and automatic (given the assumption that it is installed and set up properly). However, this does not mean that Web analytics is always inexpensive. When more complex Web analytics activities are carried out (e.g., path analysis, A/B testing, and behavioral targeting), the costs will increase significantly because full-time Web analytics professionals are often necessary.

Validity

In general, Web analytics has higher validity compared to usability testing. This is because Web analytics monitors the following:

- Actual use (what users do versus what they say)
- All tasks (which can be more realistic and reflects users' motivation)
- All sessions (longitudinal aspect and continuous monitoring)
- All users and all behavior

However, Web analytics is limited to monitoring Web behavior only. Usability testing, on the other hand, can evaluate a user's emotion and behavior when using products and services other than Web sites.

Insights and results

Usability testing can give excellent insights into the *why*. These insights come from direct observation and interaction between the moderator and the test participants (e.g., emotions, feedback, and motivations for behavior). A usability test can facilitate a greater understanding of the context of the target audience, especially when a test is conducted on location. In addition, sometimes a single test participant can give you more results than a complete Web analytics report.

On the other hand, Web analytics can yield insights that are not normally gained by usability testing. For example, Web analytics can give insight on where users land on the Web site when they have used a search engine to find your site. In addition, Web analytics makes benchmarking and comparisons much easier because the Web site can be continuously monitored and evaluated between iterations and over time.

6.6.3 Combining usability testing and Web analytics

The combined approach of both methods is usually better than a global usability test alone. This section discusses the practical side of combining the global usability test and Web analytics. Ideally, Web analytics activities should be conducted before the usability test starts. A Web analytics report, for example, can be used as an indication of problem areas that need to be included in the usability test. In general, we distinguish five phases of the global usability test:

1. Planning and preparation
2. Conducting the sessions
3. Analysis
4. Reporting
5. Using the results

Web analytics can be relevant during all phases *except* when conducting the test sessions (phase 2). The following discussion focuses on using information from a basic Web analytics report in the different phases of a global usability test.

Planning and preparation

Test goals

It is likely that Web analytics activities have uncovered a number of problem areas. Some of these problems will be well understood and can now be left out of the usability test. However, other problems may be less clear, and usability testing can be used to get a better understanding of why the problems exist. In addition, the usability test should focus on finding problems that are difficult to identify by using Web analytics. The Web analytics report might show that 40% of the visitors leave the Web site within 1 minute. If this is considered a problem, then the usability test could be used to find out why people are leaving the Web site.

Participants

Web analytics allows the user research professional to discern profiles for the visitors of the Web site in question. This can be used to determine the appropriate recruitment profile for the participants. The following are examples of data that can be used to inform the creation of participant profiles:

- Investigating users' geographic location – whether they are local, national, or international visitors. This is especially important when considering the global aspect of usability

testing because it could provide conclusive evidence about which countries are the most important.

- The time of day and days of the week can help to determine the context of visitors – that is, home user versus business user.
- Type of Internet connection, screen resolution, browser, and operating systems are all standard metrics that can bring more context to understanding user groups, especially when compared to the general Internet population.

Web analytics can also identify different segments of users by examining trends and patterns of behavior. For example, visitors from one referral might be more likely to purchase a product on your Web site than visitors from another referral, or visitors from a certain geographic location may be more likely to be interested in certain content.

Finally, Web analytics can be used to determine the gap between the target audience of the Web site and the actual visitors. If there is a large gap, this can lead to interesting research questions for the usability test.

Selecting test tasks

Web analytics can be used to define tasks that are given to the participants during the test sessions. For example, it can give an indication why users are visiting the Web site and (sometimes) why they are leaving. This is done by the following:

- Looking at search terms and key words that visitors used to reach your Web site in order to gain insight into what they were looking for and their intentions.
- Investigating on-site search functionality to provide an indication of what visitors might not be able to find using other methods of navigation.
- Investigating referrals to understand where some of your users are coming from and if they match your target audience.
- Looking at the *bounce rate*, which is one of the most important indicators of a Web site's success. It effectively represents the percentage of visitors who land on a Web page and leave without viewing any other pages. Depending on the nature of the Web site, an acceptable bounce rate is often between 30% and 40%. Anything higher, especially for a home page, raises serious questions. If the bounce rate is very high, the Web site can be tested during a usability test to determine why visitors are exiting the site so quickly.

- Understanding which pages generate the most visits is important for determining where they are coming from (e.g., entry and exit pages). For example, you might discover that most of the visitors do not land on your home page, but through a key word search on Google they land on a product page. This would help prepare for usability testing because you have an idea of where to start the test. Similarly, exit pages provide useful insight. For example, an exit page could be as common as a “thank-you” page at the end of a checkout process or something less predictable, such as a content page. Either of these two types of pages can be isolated for further optimization or, indeed, provide a focus for usability testing.

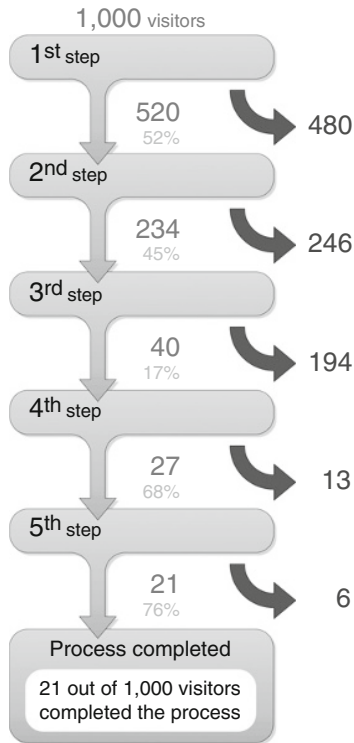
Web analytics can also show what visitors are doing on a Web site, which can be compared to what would be considered normal or desired behavior. This is done by path and funnel analysis. Path analysis is a technique to look at some of the most common user journeys through a Web site. Insights can be gained as to what users are actually doing on the Web site compared to what they should be doing. A similar technique, called funnel analysis (Fig. 6.10), is used to investigate a predetermined user flow (often a checkout process with many steps) to find the main problem areas and identify the conversion rate (2.1% in Fig. 6.10). Both techniques can be difficult to investigate but can be very useful when preparing for a usability test because they will provide focus.

The insight into why visitors are coming to the Web site, why and where they are leaving, and what happens between those two events can make it easier to select the proper tasks for the usability test.

Research objectives and environment

Web analytics can show what parts of the Web site were used most often, how visitors got there, or what functionality gave the most problems. The research objectives of the usability test can therefore be limited to these aspects and scenarios.

In terms of the test environment, Web analytics can give substantial information on the context of the visitor (e.g., access from home or from work, single session versus multiple sessions, operating system, browser, Internet connection, and screen resolution). In most cases, the test environment should reflect this context and should therefore be simulated in the test lab.



■ FIGURE 6.10 Example of funnel analysis.

green visitors advancing to next step
 red visitors “abandoning” process
 grey percentage of visitors advancing to next step

Analysis

When combining Web analytics and usability testing, it is possible to compare the findings for verification. If the findings offer similar conclusions, the Web data can make the analysis of the usability test easier. For example, the Web data can be used to determine the severity of a problem (e.g., do visitors leave the Web site after experiencing a specific problem?).

If, on the other hand, the findings do not point in the same direction, this can be interesting as well. Usability testing could conclude that participants claim to behave in a certain way, whereas the Web data could prove otherwise. An example of this is when participants declare their interest in a site and that they will use it frequently, but the Web data show that the percentage and absolute number of return visitors are actually low.

The analysis of the usability test results frequently leads to new questions. Referring back to Web analytics can often answer these questions. For example, suppose a usability test was carried out with 10 participants and only 1 was unable to complete a checkout procedure. Is it therefore appropriate to conclude that this is a minor problem? In this case, examining the Web data again will provide you an indication of the frequency of this problem. Of course, the same principle applies to global usability tests: If the analysis shows an outlier (whether this is a participant or a country), you can use Web analytics to get more information on the severity of this behavior.

Reporting

Web analytics and usability testing results should usually be combined into one report because this is more insightful and efficient than two separate reports. This report shows the findings of both methods and how they support each other. This combined report yields more certainty on the issues identified because it is based on two very different and complementary sources. For example, the results of a usability test with “only 12 participants” can be backed up with the Web data of thousands of visitors.

It is not just the increased certainty that makes the combined report more powerful; the numbers provided by the Web analytics seem to be especially attractive to members of higher management, as they are used to working with numbers. If you want to convince these decision makers with your results, you should speak their language, which means you should include numbers.

Using the results

Once possible solutions have been implemented, how do you know that the changes to the Web site will indeed be a solution? Although you can conduct a second usability test, this can be quite time-consuming and expensive. It might be easier to examine the changes in the Web data following the supposed improvements to the Web site. With appropriate benchmarks, Web analytics can give an indication of whether these changes made on the basis of usability testing improved the Web site’s performance.

In addition to measuring the impact of changes to a Web site, Web analytics should also be used to continuously monitor the performance. The continuous and real-time feedback that is provided can change an organization’s mind-set to one of continuous optimization. Also, if there are questions that Web analytics cannot answer, you can always

conduct another usability test. So it seems that the fields of Web analytics and usability testing have started to join efforts.

6.6.4 Trends

Web analytics, as a field, continues to evolve. Since its technical beginning of server log files analysis, all aspects of measurement, collection, reporting, and analysis of data have improved. The software has become increasingly powerful and easier to use, which makes it more interesting to the user research community. Interestingly, Web analytics professionals are also showing an increased interest in user research methods, especially usability testing.

Another trend is the appearance of numerous tools that can be placed between usability testing and Web analytics. See, for example, the section on unmoderated remote usability testing. ClickTale is software that records all mouse movements, clicks, and keystrokes of visitor's sessions, which can then be played back as video clips or summarized as heat maps. Unlike other well-known screen action capture tools that require installation on a computer, such as Camtasia or Lotus Screen Cam, ClickTale can be implemented on the Web site by adding tags to the source code. This goes a long way in terms of not just understanding what users are doing but also why they are doing it. Of course, watching mouse movements, clicks, and keystrokes does not tell you exactly why the user is exhibiting a certain behavior, but sometimes this is very obvious (e.g., the user fills out a form). Even when this is not obvious, you can still make assumptions and check these using other research methods (e.g., usability testing). No doubt, more and better user research tools will be developed in the future, but the existing tools are very useful already.

A final trend is that the acceptance and adoption of Web analytics within organizations is increasing. There are even organizations that could be called "data driven," such as Amazon, Google, and Netflix. These companies actually compete on analytics and are market leaders for a reason. They rely on analytics to make decisions. Their analytics are based on more than just Web data; they are closely integrated into their business and sales systems. In an increasingly competitive business environment, accurate and predictive analytics are required. However, these companies also need the insights that can only be provided by user research. Therefore, the future looks bright for both user research and Web analytics, and especially so for the combination of the two.

6.6.5 Conclusion

The combination of Web analytics and usability testing is a very valuable approach to evaluation. It is likely that you have some form of Web analytics available on your Web site, so it makes absolute sense to take advantage of it by combining Web analytics with another form of evaluation. If you are doing global usability testing, then these combined methods are especially beneficial. It can be used in the preparation of usability testing, validation of results, and in support of the process of continuous optimization. In other words, if you are not doing Web analytics yet, you should be starting now. If you are doing Web analytics already, then you should be combining it with global usability tests and other user research methods.

6.7 ONLINE SURVEYS

Written by Inga Luedemann and Torsten Müller

6.7.1 Introduction

During global user research projects, it can be very complex and time-consuming to coordinate face-to-face interviews in all targeted countries. You need local teams that manage recruiting, conduct interviews, and perhaps analyze the data and write the reports. Using surveys can be helpful in these situations, and they are often used for this reason. Surveys can be administered by mail or phone, but for global research this is usually carried out via the Internet (i.e., online surveys). These online surveys are the topic of this section.

A large variety of tools are available for creating, administering, and analyzing online surveys. Almost all tools support standard question types (e.g., open-ended and multiple-choice) and standard interaction techniques (e.g., radio buttons, check boxes, and drop-down lists). The main differences can be found in the more advanced features (e.g., randomization of questions or responses, skip logic, and data export). A list of popular online surveys can be found at <http://www.measuringux.com/onlinesurveys>.

6.7.2 Use of online surveys

Online surveys can be useful in almost all development phases of a new online product or service. Early in the development process, online surveys can be used to get feedback about desired features and functions or what is confusing about an existing application. During iterative design and prototyping, online surveys can give you

feedback about design alternatives. In these cases, a link to an online survey is sent to the participants. These participants are selected in a similar way as for usability tests (i.e., recruitment based on a profile).

After the launch of the online Web site, you can ask the actual visitors to give feedback using the online survey. The main advantage of this recruitment is that you can be sure that these participants are actual visitors of your Web site, with real needs and goals (“Why are you coming to the Web site?” “Did you find what you were looking for?”). The main disadvantage is that the participants might not be representative for the entire group of visitors. This is, for example, because people with a strong positive or negative opinion can be overrepresented in the group of participants. In addition, users who visit the site for the first time are often underrepresented. Finally, the group of visitors might not be the same as the target audience, making it impossible to ask why people are *not* coming to the site.

There are several ways to initiate the online survey to visitors of a site. Usually, the survey is presented when visitors arrive on the site or are leaving it (“Please give us a few minutes to answer these questions.”). A combination of these two ways is also possible: Visitors are invited when they see the first page of your site and the survey is presented when they exit the site. Finally, an online survey can also be initiated during the sessions. This approach is relatively new and gives you very interesting possibilities because the survey can now be triggered by your Web analytics tool. Specific groups of visitors (e.g., returning visitors) or visitors displaying specific behavior (e.g., customers who did not complete a purchase) can be asked to participate. Most Web analytics tools do not support this integration with online surveys yet, but this will probably change in the near future.

6.7.3 Global online surveys

Online surveys have a number of characteristics that make them well suited for global research:

- Global online surveys are usually conducted by a single agency and therefore can be run very efficiently in terms of time – and hence costs – because there is less effort needed for coordination. The role of local agencies is usually limited to the localization and translation of the survey questions.
- You reach a large group of people in a very short time (which is again cost-saving), and you also have access to different kinds of people very easily.

- Participants are not influenced by an interviewer or a lab environment because they can answer all questions and tasks at home or at work or wherever they feel comfortable.
- If the survey is adequately designed and implemented, the data entry should be fairly easy. Programmed filters and restrictions should prevent participants from making mistakes, which has a positive effect on the quality of the data.
- Finally, the data are available directly after the field phase and can be analyzed immediately.

These are the main reasons why online surveys are useful for global user research. It is important to note that surveys are typically used as a supplementary method. In other words, they are used alongside other user research methods and not as the only research method – for example, as a preliminary survey, as a validation of specific qualitative research questions, or simply as an efficient data entry method to support face-to-face interviews.

Global online surveys show some clear benefits, but they also have a few disadvantages:

- An online survey is a very restricted way of getting results because it must be simple and relatively brief.
- In general, with online surveys it is less obvious that the person completing the survey is really part of your targeted participants. Therefore, you need to make sure to address the correct audience.
- It is difficult to be sure what the true motivation is for participants to participate and how motivated they are to answer honestly. Unlike face-to-face interviews, it is impossible to follow through on a given answer.
- During completion of the survey, participants may abandon the survey for all sorts of reasons. It is difficult to determine the reasons behind abandonment and impossible to motivate participants to continue.
- Global online surveys need to be translated and sometimes adjusted for specific local use. This can be an expensive and time-consuming process if not managed adequately.

Despite the challenges, conducting a global online survey need not be overly complicated. From a technical standpoint, you simply need a multilingual survey hosted on a Web server that is accessible from all relevant countries. However, there are a few guidelines and issues to bear in mind to ensure the success of your survey. These are addressed in the following sections.

6.7.4 Short and simple surveys

One of the main challenges in designing online surveys is to get a high response rate and genuine answers. Therefore, you need to make sure that the survey can be completed quickly and easily by the participant. It also helps when the participant believes that he is taking part in a survey that has meaning to him and for which his responses may actually make a difference.

The design of an online survey should be managed just like any other user experience project. It should be made easy for the participant to complete her task. Therefore, the survey should be short and easy to understand.

Rather than asking too many questions of your participants, consider asking different questions of different participants. In this case, you would have to randomly assign one of the survey versions to each participant.

6.7.5 Scales

Another challenge in designing global online surveys is the use of scales. Scales that work well in some countries might be interpreted differently in other countries. This is especially true for scales that use school grades. School grades are a good option to use in single-country studies because participants will be familiar with them from their own schooling and therefore should not have difficulty interpreting the letters of the scale. However, most countries have unique grading systems, so an English participant will use the German grading scale differently than a German participant. Thus, avoid scales consisting of school grades in global projects. Moreover, try to support the numbers or letters you use for scales with visual elements, reducing bias on results arising from translation issues.

6.7.6 Review

The quality of the survey is essential for getting the correct results. Therefore, surveys should always be reviewed prior to administration. This is even more important for global surveys. Because the survey has to be translated into different languages, it is crucial to get agreement and sign-off on the survey before it will be translated. The costs of translation are generally high, and it becomes difficult and costly to make changes once the survey has been sent to the translation agency. The best way to approach this is to have some initial reviews before programming the questionnaire in one language. Once the programmed questionnaire has been approved by all stakeholders, it can be translated into different languages.

6.7.7 Professional survey software

When developing an online survey, especially a large global survey, it is recommended to use professional survey software. In general, this allows you to program a general questionnaire structure (question type, number of answering alternatives, scales, filters, etc.) and use separate text files as source documents for each language version of the survey. Thus, changes regarding the structure of the questionnaire have to be applied just once, which significantly reduces the effort and the probability of mistakes. Moreover, data for all countries will be delivered within one data set, saving you hours of matching data from several countries or writing separate tabulation syntax for each country.

6.7.8 Manage contractors

When conducting a global online survey, it is likely that you will be working with international contractors. If possible, use just one translation agency for all the languages into which you need the survey to be translated. The same holds true if you are seeking a provider for survey panels. This will reduce your communication efforts toward translators because you have just one contact for all translations, which in turn will save you much time and money because you do not have to provide comments and explanations for each language. The agency should use professional translators and have experience within the area of market research. Domain-specific experience will allow the translators to be more accurate and efficient in their translation of the survey because they will already be familiar with the appropriate terminology.

6.7.9 Conclusions

Online surveys for global user research are best used as a complementary research method to other methods. These can be a relatively cheap and efficient way to gain additional insight into your global user base. Online surveys can be used during almost all phases of a development process, including after a Web site has been launched. When used for an existing site, online surveys can be presented when visitors enter the site, when they leave, or at some point during the sessions. Web analytics tools can be used to ask specific questions to specific groups of visitors rather than asking the same general questions to all visitors.

A few guidelines need to be kept in mind when conducting global online surveys: The survey should be kept short and easy, the

questionnaire scales should be culturally appropriate in each country, and the questionnaires should go through a thorough review process. Also keep in mind that as with any global project, the increased number of both internal team members and external contractors can have a major impact on the amount of time required for project management.

6.8 PERSONAS

Written by Lene Nielsen

The personas method has become widely used in many countries; for example, in Denmark many public Web sites are redesigned using the method, and in Japan the company Daishinsha has used the method for more than 60 projects since 2001. Personas are generally created for the different types of user groups within one country. Creating cross-cultural personas is not an easy task because the differences within a global user group are usually larger than those in just one country. This makes it challenging to create personas that are representative of the entire group.

This section reflects on the problems you may encounter when managing and executing a global project that uses personas. The process of creating personas is usually divided into different steps (Nielsen, 2007). An example of such a division is shown in Figure 6.11. We specifically address data collection, persona writing, scenario descriptions, and the acceptance of personas by involved partners.

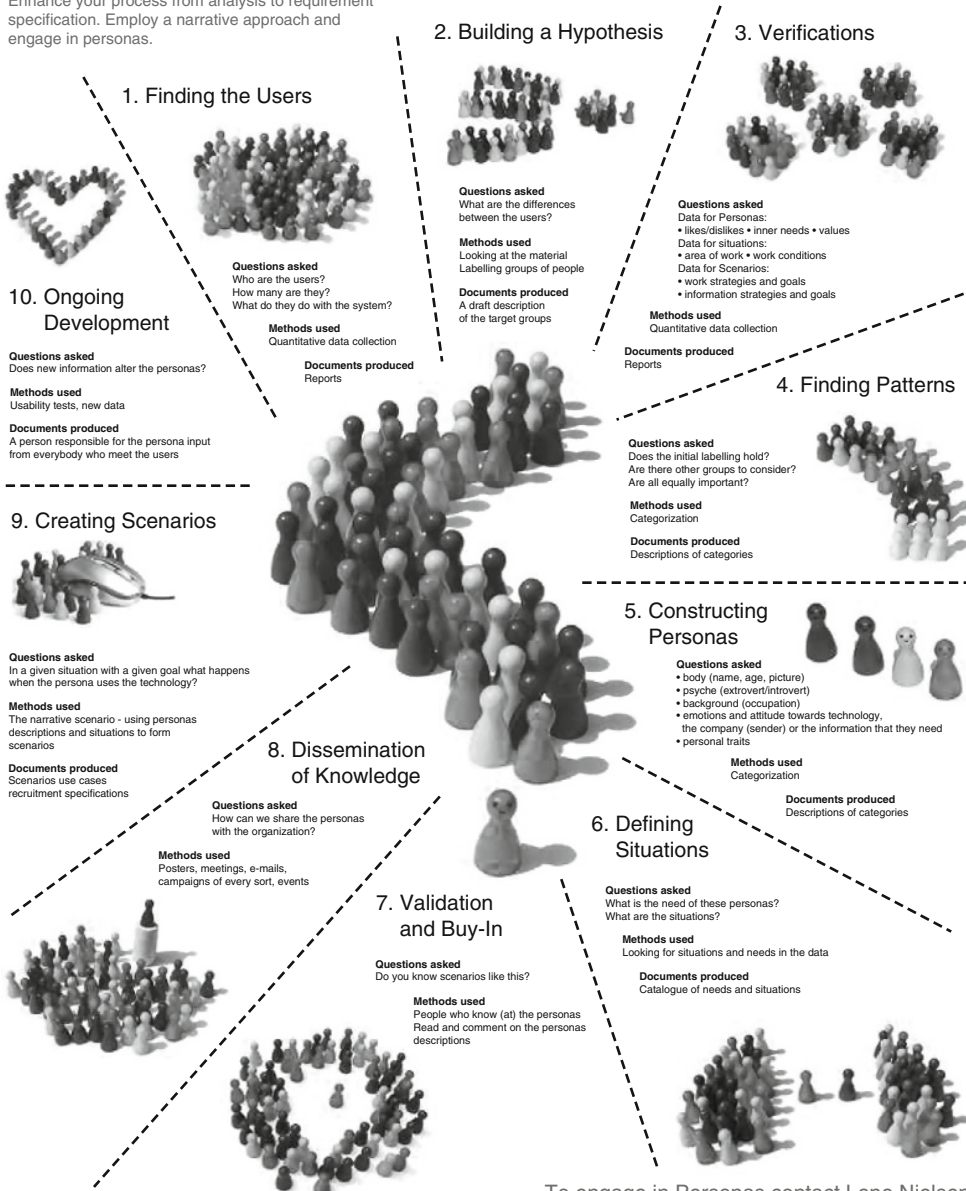
6.8.1 What is a persona?

A persona is a fictitious user constructed from different types of field data. Personas can originate from a combination of surveys, user interviews, observations, or any other user research method mentioned in this book. Personas are different from segmentation because data are collected with the focus on the problem area that the given project embraces. Personas are not just posters on a wall but, rather, are symbolic of key user groups and should be used to inform the ongoing design of a Web site or interface. For example, a designer can use a persona to imagine and visualize the end users' design preferences and needs. The personas must raise engagement in the reader in order to get the reader to be able to imagine the persona in a future use situation (Nielsen, 2004). The activities of the personas are typically explored in stories – scenarios – that describe future possibilities in an easily accessible way and in a format that is easy to change.

10 steps to Personas

Based on the method “Engaging Personas and Narrative Scenarios” (2004) by Ph.D. Lene Nielsen

Enhance your process from analysis to requirement specification. Employ a narrative approach and engage in personas.



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To engage in Personas contact Lene Nielsen, ln@snitker.com

■ FIGURE 6.11 Approach for creating personas in 10 steps (Nielsen, 2007).

Most often, the outline of the persona is a written description accompanied by a photo of the imagined user. The writing can have the form of a description, with a bulleted list that highlights certain criteria possessed by the user (e.g., age, sex, occupation, life situation, tools, resources, needs, and goals). It can also be posters portraying the persona in typical situations with fictive sentences describing the persona.

The reasons for using personas are many:

- The method maintains user focus and helps to focus on specific users.
- Personas are a way to make design assumptions explicit, to create informed design choices, and to investigate design ideas.
- Personas communicate data in an engaging way, can improve communication with stakeholders and designers, and encourage consensus.
- The method contributes to marketing and strategy.

The description is not just any kind of document; it is aimed at a known reader (the project team member), who has different needs than the persona that is portrayed. The personas are constructed to get the reader to identify with the personas and through this understanding to make informed decisions. The construction of the personas and the reading of the descriptions can always create misunderstandings, but this is even more likely when a project is cross-cultural.

6.8.2 The personas method in a cultural context

In our encounters with people we do not know – fictitious or in real life, belonging to our own nationality or another – we do not at first see the person as possessing a unique constellation of characteristics. Instead, we add the person to a previously formed category built on knowledge of meetings with others (Schutz, 1976). Later on, when an in-depth knowledge of the person is formed, the category is broken and the stereotype transforms into a personal character.

The personas method draws on this ability by creating personal characters that transcend the stereotypes. This makes it possible to understand people of different cultures and to imagine their life. In the following sections, we go through the personas process with the purpose of highlighting difficult aspects in dealing with cross-cultural personas projects.

6.8.3 Collect data

The initial step in the personas process is to gather data with respect to users' needs, goals, and attitudes toward the problem area. The outcome of this data collection phase is to understand how users differ in order to determine the final number of personas needed.

When planning a global project, the researcher must consider the differences within the local markets and decide on the number of countries from which to collect data. For example, a global bank wants to address its different customers. What is the starting point when deciding how many countries to get data from? How can we know which users are important to interview in each country? There are several ways of finding a starting point:

- Log file analysis might point to different and similar behavior among countries.
- Scientific reports are available on the Internet and can be used as a foundation for decision making. You can call researchers from the problem area, with the intention of getting a brief overview of research.
- You can use marketing segmentation studies available from the bank.
- Theories on differences between cultures can also be used to get an overview of differences (Hofstede, 1980).

Large global companies often have much information about their users (reports from marketing, call centers, etc.). Therefore, focusing on the problem area is even more important. Without focus, the amount of data can be overwhelming. The data can to some extent substitute real-life meetings with users, which is very practical for cross-cultural studies.

When analyzing the data in cross-cultural projects, it is vital to leave behind existing ideas of cultural differences. Analysis of data may show new patterns of people exhibiting similar attitudes across nations. Consider, for example, a global bank that wants to address its different customers. Examining trust in banks might show unexpected similarities across nations. For example, trust might be similar in Denmark and China, whereas it could be very different in Iceland.

The segmentation of users must be defined before researchers can begin to actually create a persona. In cross-cultural projects, this definition process might include discussing the observed differences between users with local partners to get their interpretation of the findings.

6.8.4 Write personas

When writing personas, it is not possible, nor is it necessary, to present all information about each persona. The reader may have to infer some missing information from expectations, knowledge of the depicted persona, and his or her own cultural background (Bordwell, 1997). Readers from different countries possibly have different expectations, knowledge, and backgrounds.

6.8.5 Create scenarios

It is in the scenarios that ideas of how the product is used arise, and it is the scenarios that test ideas of interaction from the personas' standpoint. Therefore, we argue that personas have to be combined with scenarios; otherwise, they lose much of their potential value.

A scenario is similar to a story; it has a main character (the persona), a setting (somewhere the action takes place), a goal (what the persona wants to achieve), actions that lead to the goal (interactions with the product), and obstacles that hinder the way to the goal. A scenario begins with a situation. For cross-cultural projects, there may be situations unique to a single country and therefore these situations should be considered in the scenarios.

Scenarios can be tricky for cross-cultural projects. Here, we deal with designing a future situation and imagining an unknown future. If a Westerner has to make a scenario for an Indian housewife, it might be difficult to know what her daily tasks are. Imagining how a product would fit into her daily life would be difficult, no matter how well it is described by the persona description, reports, photos, or even videos. Here it is essential to invite locals to participate in the scenario process to match the reality to the imagined future.

6.8.6 Ensure distribution and acceptance

To ensure personas are a part of a user-centered development process, the personas need to be distributed to all stakeholders within the project. Also, it is not only the personas that need to be distributed but also the data on which they are based – the foundation document (Pruitt & Adlin, 2006). This might be even more important for cross-cultural projects than for single-nation projects because it is vital that the stakeholders can get an easy overview of field data to understand the persona descriptions and to be able to track the arguments behind the descriptions.

An effective way of ensuring acceptance of the personas is to involve the project team members (and other stakeholders) in the persona development. Involving team members secures buy-in, understanding of the method, and dissemination of knowledge. Most often, it is by participating that many appreciate the strength of this method and understand how to use the personas as a tool to improve designs. This is also the case in cross-cultural projects. Therefore it is very important to find out who the project stakeholders are that should be involved. In cross-cultural projects, the list of stakeholders might be longer than that in local projects.

6.8.7 Summary

Cross-cultural projects put pressure on both the reader and the writer of the personas. If you are writing the personas, you have to understand the data and, as noted previously, use your own cultural background in the process of understanding. In the writing process, this can lead to misunderstandings and misconceptions.

The reader of the personas faces the same problems of having to use his or her own cultural background when reading the descriptions and trying to understand the personas.

To reduce misunderstanding, the best approach is to be sensitive about the cultural differences between your readers and to ensure that the descriptions are verified by locals. Their comments and insights might prevent misunderstandings and incoherent information.

Expressed differently, the traditional media model of “sender – message – receiver” is transformed in cross-cultural personas projects to a “sender – message – local moderation – receiver” model.

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User research throughout the world

Thomas Visby Snitker and Jared Jeffers

**Additional contributors for this chapter are listed with their corresponding sections.*

7.1 INTRODUCTION

This chapter offers insights from user experience specialists from 21 different countries. The aim is to illustrate some of the cultural issues in each country that can be important to understand when conducting user experience research. For countries not covered here, we suggest consulting the companion Web site to this book www.GlobalUserResearch.com or the Usability Professionals' Association's listings of consultants at www.upassoc.org.

User research is highly sensitive to the local setting, which includes a wealth of factors such as values, social rules, weather, food, local travel, holidays, and electrical systems, as well as other everyday patterns of local interaction. Knowledge of all of these practices is very important in order to conduct a successful user research project, but this book discusses only local information that is specific to user research. For up-to-date information about other cultural practices, refer to local travel literature.

The results of user research are also highly sensitive to the methodology used in local studies, which is described by each contributor to this chapter. They give recommendations on how to conduct a standard usability study in their countries, as well as information regarding what to expect and what might be surprising about their country for foreign researchers and clients.

Contributors often found it difficult to describe how things usually are in their countries. A constant refrain throughout this process was, "Perhaps I'm too familiar with my own situation." It is difficult to say what is

special about your own country (regarding user research or not) unless you have something well defined to compare it to. Global user research as such does not offer any benchmarks for comparison, and contributors felt uncomfortable talking about their own culture in relative terms.

Through this process, we learned that usability testing methods differ little from country to country. After all, this is a group of professionals who are familiar with international usability testing and who are likely to share many concepts and procedures. This is due in large part to their formal education and commercial practices.

Instead, a Chinese usability specialist who studied in Denmark finds that differences lie in the finer details:

I do not think there is much difference, because the usability specialists are normally trained by the “standard way” of doing tests. In China, we learned the way to do the tests from Western countries, so there are few differences. For me, if I do tests in Denmark, the most surprising thing is that it is even harder to find participants on the weekend. In China, it may be easier to find participants on the weekend and not the workdays because usually companies have strict rules about workday hours here.

One difference found between countries is the strength of the regulations surrounding usability research. In France and Germany, for example, strict laws about privacy and disclosure govern usability research and affect procedures. On the other hand, in many countries there are no specific regulations regarding this kind of testing. Here is a telling quote from Singapore:

Singapore does not have any specific law or any regulation on user research. So long as the research does not address or create extremist political, racial, religious, or societal ideologies, research studies can be conducted with little interference from the authorities.

This contributor also notes that although standard usability testing procedures can be used across cultures, researchers must still prepare for unexpected results and practices. He said of Singapore, “The only thing to note will be cultural shock. Usually, Asians will not be as vocal as Westerners and also our general way of doing things may be different too.”

Although general testing methodologies are similar, contributors comment that certain cultural adjustments should be made when testing in different countries in order to bring out the most from participants.

For example, the contributor from Finland notes that because of their introverted shyness, it is generally a good idea to engage Finnish participants in 10 minutes of coffee and conversation before the session begins to put them at ease. In countries with a population more used to openly expressing themselves, such a lengthy introduction is not necessary.

In other instances, the type of protocol used during test sessions might need to be changed slightly to accommodate cultural habits. In many countries, researchers find that a “think aloud” protocol works best to elicit information from participants. However, the Japanese contributor notes that Japanese participants become so focused on the task at hand that thinking out loud becomes a distraction. Instead, researchers often get richer information from participants through post-task discussions.

Because testing methodology is fairly consistent across cultures, the following contributions indicate that probably the most influential factor that can affect a country’s reception of tested concepts, interfaces, and products is its unique culture. The cultural norms that dictate a participant’s everyday interactions are not abandoned when entering into a user research study. To get the most out of a participant, researchers must take into account these everyday behaviors and habits when performing global user research.

There are a number of places one can go to learn more about the general logistics of testing at potential sites throughout the world. For example, to learn more about the timing of local holidays, which should be avoided when recruiting, try <http://www.timeanddate.com>. The site contains information by country about when the typical, non-working days are each week (i.e., weekends), local holidays and customs are observed. For help finding translation services, the Web site for the International Federation of Translators (<http://www.fit-ift.org>) can direct you to local members. To find out about local electrical currents, try the World Electric Guide (<http://www.kropla.com/electric2.htm>). There are also a number of sites (e.g., <http://www.xe.com> and <http://www.oanda.com>) that provide both current and historical currency conversion rates to help with budget planning.

7.2 AUSTRALIA

Written by The Hiser Group

There are several things to keep in mind when performing usability research in Australia. First, participants are willing to participate but may require some reminders to ensure their presence on the day of testing.

The no-show rate without reminders can reach approximately 5%. In addition, it is fairly easy to find participants with at least basic proficiency with information technology, even within a wide range of ages. Recruiting agencies are comprehensive in their coverage of industry sectors, but they require at least a week for basic demographics and longer for complex requirements. In Australia, recruiting via agency is far more common than having usability consultants recruit participants themselves. Regarding user behavior, there is generally no real cultural shyness, and participants readily and honestly share opinions.

There are several general points that may be important to foreign researchers. The holiday cycle is different from that in the Northern Hemisphere; for example, Christmas break is also the long summer break. Thus, researchers may encounter difficulties with recruitment and finding available staff in late December and January. Strong privacy requirements enacted in Australian law require informed consent for use of written material and audio and video recordings. Nondisclosure agreements are common practice and readily accepted by participants as part of presession paperwork.

Of more material concerns, Australia's Goods and Service Tax (10%) should be taken into account in project costs. The major surprise to foreigners is likely to be the price of the test participant fee compared to that in other countries such as China. In Beijing, \$15–\$30 USD for 1 or 2 hours is acceptable, whereas in Australia approximately \$80 AUD (\$50 USD) is necessary.

In addition, a consideration should be made for the relatively small population of Australia (approximately 20 million people), which increases the difficulty in recruiting highly specialized user profiles. Another difference is the relative value placed on quantitative recruiting by foreign consultants, whereas a more flexible qualitative approach is taken toward recruitment in Australia.

Partially as a result of this, benchmarking and quantitative testing are less common in Australia than diagnostic testing. A 1- or 2-day contingency in the length of testing is a wise decision because of the way recruitment is conducted and because of possible cancellations or no-shows. Testing goals and measures should be clearly communicated to consultancies and facilities because the choice of firms capable of conducting the tests can be limited by a lack of necessary equipment.

Distance between urban areas is a considerable factor, and holding tests in multiple cities requires allocations for travel time. Even intra-city travel time can be considered a burden for researchers. The final factor is diversity. Although Australia has a single currency, national language, and federal government, it is exceedingly multicultural and varies widely on a socioeconomic cross-section of its residents. Therefore, researchers should not assume that residents from different cities are all alike. Melbourne and Sydney are larger cities, and their residents often appear to be much busier and time poor than residents of other cities. Brisbane, Adelaide, Perth, and Darwin are much smaller in population and have a more relaxed and casual way of life. In northern cities such as Darwin, the weather is more tropical with a distinct wet season and dry season, which can also impact the availability of participants.

7.3 BRAZIL

Written by Mercedes Sanchez

Brazil has several salient features that may factor into general testing procedure. First, Brazil is the largest country in Latin America. It has Latin America's largest economy and the largest population – more than 190 million inhabitants. Brazilians enjoy the Internet and spend 23 hours online per month on average, which is on par with or exceeds that of the average French, American, Australian, or Japanese resident.

São Paulo, Brazil's largest city, has well-equipped and modern testing facilities as well as professionals with experience in planning, preparing, recruiting, and reporting for user research studies. It also has good hotels and precise translators. More pragmatically, booking a hotel near the testing site is advisable because traffic is very congested in São Paulo. As in any other large city throughout the world, first-time visitors to São Paulo must be aware of their belongings and avoid places where they have no reference points. During summer (i.e., December, January, and February), heavy rain is common, so using facilities near subway stations can minimize transportation problems for participants. Testing in other Brazilian state capitals can be risky because of the added difficulties of finding adequate facilities and recruiting more specific profiles or due to security concerns.

An important point is that interfaces tested in Brazil should be presented in the native language. When preparing a standard usability study in Brazil, keep in mind that a phrase written in Portuguese takes

up more space than it does in English, and that Brazilian and European dialects of Portuguese are not interchangeable, so interfaces must be in the Brazilian dialect. Although it is possible to find participants able to read and understand English, Brazilians are not generally used to speaking English, so it may be possible to evaluate an interface in English but the discussions must take place in Brazilian Portuguese.

The holidays in Brazil, where Christmas is the beginning of summer vacation, are different from those of the Northern Hemisphere. In January, many people get away from the large cities and recruitment can be challenging during this month. During Carnival (usually in February but sometimes in March), local businesses are closed. It is the most popular celebration in Brazil, and there is almost no chance of scheduling any study during this period.

Perhaps the most important logistical concern involves the daily routine in São Paulo and its effect on the punctuality of participants. Many people work late into the evening, so scheduling can be difficult during the day. It is sometimes possible to schedule participants at 8 or 9 p.m., and testing sessions can end late in the evening as a result. A 15-minute delay in arrival is considered normal, so scheduling participants 30 minutes before the real time of testing is a prudent approach.

One curious fact for foreigners to know culturally is that kisses and hugs are spontaneous and frequent, even between people who are meeting for the first time. Greeting a moderator with a kiss or hug is considered normal. The major surprise is how talkative the people are. This can be both good and bad in that participants are forthcoming and honest in their opinions but moderators must work to ensure that participants stay focused on the task at all times.

7.4 CHINA

Written by Qingxin Shi and Yiner Ya

Compared with Europe and America, usability testing in China is still in its development phase. Foreign companies in China frequently do usability testing with a variety of products. However, local Chinese companies have just started to learn about user experience and usability research. There are a handful of usability consulting firms – two or three foreign owned and several local companies. The companies are relatively small because of the limited market demand and the lack of usability specialists. Only in recent years have Chinese colleges started to offer courses in usability testing.

Although Chinese companies have just recently started to learn about user research and testing, they are eager to know more. As a result, usability consulting companies tend to do a great deal of training during the process of project bidding and throughout the different phases of testing.

China is a large country. The percentage of Internet and cell phone use with city dwellers is very high, as in other metropolitan areas of the world. However, many people in rural areas do not have access to a stable supply of electricity. Currently, usability research and tests are mainly conducted in large cities, such as Beijing, Shanghai, Shenzhen, and Guangzhou.

In China, people from different provinces speak different dialects, and the difference from dialect to dialect is great. For example, native Beijing people would not be able to understand the Shanghai dialect. People from Canton province and Hong Kong speak Cantonese, which cannot be understood by Mandarin speakers. There is also a vast difference in people's educational level. Without education, people from the south will not know the Pinyin system, which is the standard Romanization of Chinese characters and serves as the basis for typing Chinese. Therefore, they will have difficulties inputting Chinese into their cell phones and computers.

Recruitment in China is comparatively easy. Recruitment firms have large databases of people from which they can recruit, and the no-show rate is very low. Thus, recruiting a variety of people in the cities should not present any problems. Note that due to major traffic congestion in large cities, recruitment firms will deliberately schedule participants 15–20 minutes earlier in order to keep the original time.

Both weekend testing and weekday testing are accepted by Chinese people. However, there are a number of public holidays that should be avoided because many people use these opportunities to travel. Chinese Spring Festival in February, the May holiday, and the October national holiday are three time periods during which it is difficult to recruit participants.

Contrary to the stereotype that Chinese people are introverted and reluctant to express opinion, the participants in large cities, especially young people, are becoming more independent and assertive. They enjoy expressing their ideas and want to stand out. One interesting cultural difference is that during ratings, Chinese people tend to give

higher scores even if they did not do a task very easily. This may be because they are afraid of “losing face.” “Face,” the appearance of being good, is very important to Chinese people, especially males. Keep in mind that ratings sometimes are not very accurate.

During testing, we found that Chinese users prefer user interfaces with a variety of colors (inviting and exciting), flash animation (symbol of high technology), and much information (give users many choices). Booking simultaneous interpreters is relatively easy in large cities, especially English interpreters. However, there is a busy conference season during October of every year, so it is important to book interpreters early in the fall for October studies.

7.5 DENMARK

Written by Troels Fibæk Bertel and Steen Filskov Andersen

The population of Denmark (5.4 million) is quite homogeneous compared to other countries, with approximately 90% being Danish-speaking Lutheran Danes. In addition, there is not much difference between the residents of urban and nonurban areas, although local dialects are still very pronounced, which may make it worth using a local moderator when performing user research in southern, northern, or western Jutland and on the island of Bornholm. Usability labs can be found in the major cities such as Copenhagen, Aarhus, Odense, and Aalborg.

A general but indispensable point about testing in Denmark is that a qualitative approach to usability testing is generally employed – maybe more so in Denmark than in, for example, Germany or the United States. Also, whereas in some other countries the moderator is separated from the respondent (e.g., sitting in the observation room), the Danes often find it less awkward when the moderator sits next to the respondent.

Expect respondents to be on time, generally open-minded in relation to research, and fairly comfortable with thinking aloud. The informal social conventions in Denmark make for honest respondents who are not afraid of speaking their mind about products – even though they are aware of the fact that the client may be watching and listening next door. Thinking aloud comes very naturally to most respondents. The moderator will often participate more in the dialog and pose probing questions to further elaborate the respondents’ statements than when using the standard think-aloud protocol.

The test setup and procedure can be very informal and still provide the results needed for the project. The test parity – making sure that results are not skewed by individual respondents – is ensured by being equally informal with all respondents.

Most Danes speak English and German, and they understand Norwegian and Swedish. In high school, French, Russian, and Spanish are taught. Therefore, it is fairly easy to recruit native Danes who are comfortable with test material being presented in these languages.

A major surprise to some is how mild the winters are in Denmark. Given the country's location at 55 degree north latitude, it would seem that Denmark should have freezing cold winters like those of neighboring Scandinavian countries Norway and Sweden. In fact, it is usually even colder to the south, in mainland Europe, during most of winter. The seas and prevailing westerly winds keep it mild, cloudy, and damp in Denmark. Because there are only a few days of snow each winter, user research is rarely affected by the weather.

Also be aware of local holidays and festivals in Denmark. In the spring, there are many of these, including Easter, Great Prayer Day (fourth Friday after Easter), Whitsun (i.e., Pentecost, the seventh Sunday after Easter Sunday), and Constitution Day (June 5). Traditionally, the entire country shuts down for 3 or 4 weeks in July, and although this has been less strict in recent years, it is still widespread enough that only a few usability projects run during July.

7.6 FINLAND

Written by Janne Lohvansuu and Jaakko Villa

Finland is a country in which usability testing has been taken seriously in a commercial context for quite some time. One of the main reasons is that Nokia has a major impact on all aspects of research and development in Finland. One of Nokia's competitive advantages and its strategic priorities has always been the good usability of its products.

Finland is a relatively easy country in which to conduct usability tests of high-technology products, due to high Internet and mobile penetrations, and people tend to willingly participate in market research and related activities. Generally, Finns are very optimistic when presented with innovations and new ideas.

The population is quite small, and it might be difficult to find suitable target users for all the different segments needed. There is not

much competition between recruitment agencies for usability testing, which raises the costs. If the recruitment agency is not responsible for all communication with the recruits, it may be a good idea to send an informal SMS message to recruits a few hours before testing to verify that the invited people are attending. Finns tend to be on time and precise, but if something happens, it might be difficult to find replacement candidates on short notice.

Almost all usability testing is done in Helsinki, the capital area. There are other cities as well, but generally Finns behave the same throughout the country, decreasing the need to travel to gain better understanding. However, if necessary, it is very easy to travel throughout Finland by plane or by train, and usability tests can be arranged in almost any large city.

Regarding testing, Finns are introverts compared to, for example, Swedes or Norwegians. They do not speak openly about their feelings toward something or toward new ideas. However, if the discussion opens up, participants will give their very honest and pure opinions about the test subject.

An easy way to lower the barrier is to use a less formal pre-session introduction with light conversation and coffee. As a general guideline, prepare for 10 extra minutes of “icebreaking,” which is light conversation time before the actual testing begins. It is also useful to create a comfortable testing environment that is less laboratory- or office-like. This can be achieved by use of sofas, plants, etc. Basic issues such as stressing anonymity and natural behavior during the testing reduce stress for users. When facilitated well, focus groups are a good means of collecting honest insight about consumer experiences.

The summer is short in Finland and Finns tend to make the most of it, so it may be difficult to perform usability tests from June to August. July is the official summer vacation month, so almost everything is closed during that time, and when combined with the holiday period in August in other areas of Europe, there may be up to 2 months of inefficiency during the summer.

Depending on the demographics of the users selected, Finns as a rule are not used to speaking English. Therefore, it may be easier to have more open discussions in the local language and present the main findings in English. If budget constraints are not too limiting, it might also be a good idea to use a translator to open up the discussion between the moderator and the test person.

7.7 FRANCE

Written by Jean-Philippe Bourdarie

Usability testing is not very common in France because it is quite unusual to critique the design decisions of an engineer in a country in which engineering is among the most prestigious and respected careers. Instead, a product is usually evaluated in France by how many features it has, its technical capacity, and emblematic technical references.

A foreign practitioner visiting France would not generally be surprised by anything, other than some common cultural behaviors and that there is an element of truth to many of France's cultural clichés. For example, French people, especially taxi drivers, always seem to be in a bad mood, and it is not uncommon to encounter a work strike while traveling in France. There are also several habits or routines that dictate the French workday that might come as a surprise to visitors. French people tend to have a long lunch break (approximately 90 minutes) in the middle of the day, and some practitioners do not work more than 7 hours a day (the official daily working time in France). These should be taken into account when testing in France because running more than four 90-minute sessions in a day would be difficult.

It is also important to keep in mind that Paris represents only 20% of the population and is very different from the rest of the country for specific reasons. Due to the high density of population, there is much traffic. Therefore, travel times are difficult to estimate and should be taken into account when preparing a schedule for test sessions. There are few differences between the North and South of France, but to get a true representation of technology adoption throughout the country, sessions in a small town in the countryside (approximately 2 or 3 hours away) should be conducted in addition to those in Paris because this city is quite unique, even within France.

Another important point concerns the French population composition. Due to several historical events, approximately 5 million immigrants (approximately 8% of the total population) live in France. These people mainly come from North Africa (Algeria, Morocco, and Tunisia) and Sub-Saharan Africa and are mainly concentrated around large cities such as Paris, Marseille, Lyon, Lille, and Toulouse. Their cultural background is a mix between French traditional culture and their mother culture.

The entire month of August should be avoided for sessions taking place in France because more than 50% of the population is on

vacation at that time. Another problematic time of the year is the month of May, with two banking holidays very close to each other (Labor Day on May 1 and Victory Day on May 8) and Catholic “Ascension Day” on the third Thursday of the month. When sessions have to be run in May, only 50% of time should be considered as available for testing.

It is important to keep in mind that French people have real concerns regarding their privacy rights. Therefore, it is advisable to divide the consent form into two parts. The “confidentiality” part can be signed before the sessions, but the privacy part must be signed after the sessions; otherwise, the participants will be much less spontaneous during the sessions. When testing consumer participants (as opposed to business users), researchers should accept this limitation.

There are two technical points to keep in mind when testing with computers in France: The keyboard format is AZERTY (not QWERTY), and power sockets have a specific format.

7.8 GERMANY

Written by Sven Körber, Frank Hohenschuh, Birte Körber, and Rainer Gibbert

Usability testing has become a very common approach in Germany during the past few years. Other user-centered design methods, however, are not so widespread, but there are increasingly more companies that take the users’ requirements into account earlier and more comprehensively. There are a few large usability consulting companies in Germany and several smaller ones that offer usability services.

Usability research and tests are mostly conducted in large cities such as Berlin, Hamburg, Frankfurt, Munich, and Cologne, but testing in other cities or more rural areas is also possible. In this case, recruiting may take more time, and conducting tests might be more expensive (e.g., due to higher traveling costs).

In Germany, several dialects are spoken, which might make it difficult for foreign observers and simultaneous translators to understand participants. Many people in Germany understand and speak English, and most people will be able to answer questions in English if you approach them on the street. In addition, many young Germans are able to speak another language besides English (e.g., French or Spanish), but they may be embarrassed to speak out with a native speaker present if they are not fluent. Although many people in Germany

understand and speak English, there are some regional differences. Whereas most people from the western part of Germany learned English in school (especially during the past 20–30 years), people from the Saarland, a state in the southwest of Germany next to France, learned French rather than English. Furthermore, people from the former German Democratic Republic used to learn Russian in school before the German Unity in 1989. Therefore, people from the eastern part of Germany who are older than approximately 35 years might not be able to speak or understand any English at all.

In general, it is possible to recruit all kinds of profiles. In Germany, people generally work 5 days a week, often from 9 a.m. to 5 p.m. with a short lunch break. As a rule of thumb, evening sessions should be scheduled for working participants, whereas it is no problem to schedule students, housewives, or retired or unemployed people during the day. Groups such as executive businesspeople or medical doctors will only be available in the late afternoons or evenings. When you plan to recruit businesspeople for contextual inquiries in the workplace, keep in mind that sometimes the workers' councils have to be involved.

Testing on the weekend is not very common because people in Germany value their free time. Nevertheless, testing on weekends is possible, but recruiting will be more difficult and more expensive, and there might be more no-shows. There are several public holidays in Germany. Some of the holidays are only regional, and there are more public holidays in the south (especially in Bavaria) than in the north. In the summertime from June to September, all 16 German states have 6 weeks of school holidays, each beginning and ending on slightly different days. During this time, it might be more difficult to recruit participants because many people, especially those with children, go on family vacations.

Contrary to the stereotype, not all German participants arrive on time for sessions. It is considered acceptable to be up to 15 minutes late, but arriving later than that is considered impolite. The average drop-out rate is approximately 10%, sometimes more, depending on the profile and the time of year. For example, we experience more no-shows during the summer, when the weather is good and people like to spend time outside. We recommend always recruiting an additional 10–15% of users to make up for no-shows.

In usability tests, German participants tend to be slightly more critical than the average European. To an observer from a culture that

communicates in a more indirect way, it may seem like Germans are blunt. Keep in mind that they do not mean to be impolite. It is their way to express themselves in a straightforward and honest manner. If a problem arises, they want to know about it immediately in order to find a solution.

They also tend to prefer neutral user interfaces over crowded or “flashy” ones (the most regularly expressed statements in our usability tests are “clearly laid out” for good products and “unclear” for bad ones). Generally, they relate to their personal services and devices in a less playful and more utility-driven way. German participants also emphasize data privacy and security concerns.

To organize a usability study in Germany, researchers should be aware that booking simultaneous translation for the sessions is possible but quite expensive. Although finding translators for English is no problem, finding those for other languages could take some time. Translators tend to be busy, so remember to book them with a few weeks’ lead time.

Testing material should ideally be presented in German. English is also possible (especially if your target group is rather young and tech savvy), but it might influence the participants’ performance and feedback and, consequently, the results. When localizing a user interface for Germany, take into account that German words, like Portuguese, French, and Italian, are much less compact than English. When translating from English to German, individual, short terms in an interface can expand by as much as 280%. For longer phrases of 70 characters and more, the average expansion is 150% (IBM, 1994).

Germans are usually open and interested in learning about you and may ask direct questions. Topics to be avoided in casual conversations include political views, religious beliefs, and intimate relationships.

7.9 INDIA

Written by Raj Sharma

Usability testing has become increasingly popular in India during the past few years, with many companies testing Web sites and devices such as mobile phones, desktops, laptops, and medical equipment. Compared to most Western countries, usability testing in India is still in its nascence, with academic institutions providing most practitioners. Because very few moderators are trained in the techniques

applicable to usability research, extended briefing sessions and pilot interviews are recommended.

India is a very heterogeneous country with a varied mix of culture, attitudes, and beliefs. Therefore, special attention must be paid to the test plan that the client desires, crafting it carefully to meet the objectives of the study. It is important that the Indian agency clearly understands the project leader's expectations for a study in order to identify the kind of respondents and resources that will make the project a success. The sample sizes in India generally tend to be larger than those in other countries because of India's heterogeneity in terms of caste, tribes, religion, and geographic area. When we take all the strata into consideration while preparing the sampling plan, it tends to increase the sample size. The general cost of usability testing is approximately the same as that in developed countries, whereas participant fees are slightly less.

It is imperative to have translations for the testing to be successful. Clients may not realize that most participants speak the local language but are not able to read it. They can usually read English, but they pronounce as it would be pronounced in the local language so the spoken language becomes Hinglish (Hindi + English), Kinglish (Kannada + English), Binglish (Bengali + English), Tinglish (Tamil + English), and so on. Therefore, a simultaneous translator or a "repeater" should be provided for international usability professionals even if the test sessions are conducted in English, primarily to compensate for sometimes heavy accents and to explain any local nuances. Agencies can also ensure that visitors' dietary requirements are taken care of with detailed suggestions and recommendations about what to eat depending on the season.

Until a few years ago, there were no standard usability labs in India, and most clients had to make do with three-star hotels and closed-circuit television observation. This is a process in which different cameras are installed to see what is happening in a particular place (e.g., a room in the hotel used for testing) on a continuous basis. Viewing had to be done within a certain distance and could only happen on a restricted number of monitors. In the past, this could only be accommodated by three-star hotels, and those who wanted to view the session remotely could not do so. However, this has changed in recent years, and there are now several agencies that have a wide network of usability labs throughout India. India also now has video streaming, so clients can view the sessions from

anywhere in the world. Video streaming specifically for market research and usability studies is provided by a company called Focus-Vision, which now operates in India. It is the highest quality standard for video streaming, and clients such as Microsoft, Procter & Gamble, and IBM only do studies using this service.

7.10 ITALY

Written by Luca Petroni

The practice of user research, specifically usability tests, is not yet widespread in Italy. Even online systems, “business critical” and high-integration systems (e.g., home banking, e-commerce systems, and estimators), are sometimes launched without any usability tests being carried out for clients.

Although in recent years there has been more talk of usability and of the importance of customers/users in general, little attention is paid to methods to simplify and make technology more intuitive. A strong skepticism persists, particularly toward qualitative methodologies, which managers believe are insufficient to justify redesigns because they are not based on statistically significant samples.

One of the results, but also partly the cause, of a design culture that is little attuned to usability is an inadequate professional service offering. Marketing research and public opinion poll institutes increasingly provide “hard discount” offers, but because they have more of a market survey background, such polls are often performed without specialized personnel and using methodologies that are not grounded in usability. For these reasons, they are considered to be less reliable in relation to usability studies conducted by practitioners trained in the behavioral sciences.

Although some large companies are beginning to consider the issue of user-centered design as a process that should support product innovation, there are very few internal usability departments within companies. Instead, there is an overall tendency to only carry out studies as part of a more general implementation process that is still highly influenced by technological aspects.

Various intercultural factors should be taken into consideration when planning and performing usability tests in Italy. The first unquestionably relates to the extreme variability of local subcultures. In other words, the region or type of urban context (e.g., large city or provincial

center) produces a surprising difference in attitudes on aspects that can influence test results to varying degrees. For example, from a linguistic perspective, local variations can have a sometimes significant impact on the evaluation of technologies that base interaction on linguistic elements (such as IVR and sometimes even the labeling of a Web site).

Attitudes toward technology are also heavily influenced by the social and infrastructural context. Indeed, in Italy the notion of digital divide is strongly felt, largely due to the delay in extending broadband Internet access to a considerable portion of the population. However, this attitude is spread inconsistently over the various channels. For example, complete inexperience of the Web is often unexpectedly combined with advanced skills in using mobile telephones. In short, geographic and sociodemographic variables can have a significant effect on test results, and one must have an in-depth knowledge of the Italian context to obtain a good sample of participants.

A second aspect to take into consideration is the attitudes of Italian participants toward logistical–administrative matters associated with usability tests. Although participation show rates are actually higher than in other countries, the percentage of no-shows can sometimes reach astonishing rates, again with different percentages depending on geographic variables. In some cases, it is almost impossible to organize parallel or group evaluations, particularly with specific professional categories (e.g., highly paid professionals) that are less sensitive to incentives. When respondents are chosen from lists of people who have registered to participate in studies, there is a decidedly higher tendency than in other countries to provide false information, both in terms of the research code of ethics (e.g., participation in other previous studies in the same sector) and in terms of their own sociodemographic and behavioral characteristics. Consequently, the use of random sampling or customer lists provided by the client offers a sound guarantee, even if the rate of last minute no-shows tends to be higher.

A third factor is a general tendency of test participants to “shoulder the blame.” Due to the delay in adopting computer technology by a large share of the population, in many cases – particularly among targets representing the “average” population – there is a tendency to “justify” their difficulties in using test stimuli and to attribute it to their lack of skills. This makes it difficult to carry out participatory design studies and in any case requires the involvement of an expert

in Italian culture to run the studies by interpreting between the client and the participant.

The final aspect that must be highlighted is a general inability on behalf of participants to interact with researchers who are not familiar with the Italian mother tongue or Italian culture. As well as being able to interact in Italian, it is very important for researchers to be able to understand aspects of local culture and lifestyle in order to interact correctly with the users and to correctly interpret their comments.

In addition to the previously mentioned intercultural issues, which must be discussed with the client to draw up a test protocol that meets the client's needs, the client should also be briefed on a tendency for lateness of participants as well as last minute no-shows, in addition to the fact that sessions will produce the best result when performed in Italian. It might also be beneficial to have someone present to serve as a "cultural mediator" who can correctly interpret session results based on factors that are specific to Italian culture.

7.11 JAPAN

Written by Masaaki Kurosu and Usability Section, Mitsue-Links Co., Ltd.

Usability testing is the most popular usability evaluation method conducted in Japan, followed by the heuristic evaluation. The usability test is conducted not only as a summative evaluation technique but also as a formative evaluation technique that is frequently combined with paper prototyping. Sometimes, it is conducted in the very early phases to determine problems of a current product so that the new design will be a better one.

It used to be said that Japanese were shy and awkward during usability testing. Today, you will find many people quite relaxed and talking naturally during sessions. Of course, the amount of verbal response differs depending on the personality. Serious people and speculative people usually give fewer verbal responses. In addition, there is a cultural bias for men not to say "I don't know" or "I don't understand" because answers such as these may make them seem less intelligent in the eyes of others. If you believe you are not getting enough comments from the participants, it is best to ask questions during or after the session about what you would like to clarify.

It is often a surprise how serious participants are about working on the tasks and answering the questions: They are punctual, and no-shows are

quite rare. This seriousness sometimes causes unnatural behavior during the testing. We see some participants who are too influenced by the task goals or too obliged to complete the tasks, or who blame themselves when they are at a loss. A careful test design, such as one that gives more natural scenarios or open-ended tasks, as well as a friendly pretest orientation to ease their sense of obligation will help avoid this. It is also important to emphasize that the “test” is not for the participant but, rather, for the product or the system.

Because most participants are quite focused on working on the tasks, a retrospective approach is usually more effective than a think-aloud approach. Of course, the thinking-aloud approach will give you a certain amount of information, but the retrospective method will give you additional clues to interpret the behavior during the testing. Also, to make the most of the interviews, it is recommended to ask enough post-test questions rather than to expect participants to give comments freely. The Japanese are usually not very proactive in giving opinions to unfamiliar people.

If you are going to test a localized product, it is recommended to fully translate the interface into the Japanese language. Although Japanese people begin studying English in junior high school, and there are many foreign people from different countries coming to Japan, the Japanese are still not familiar with foreign languages, including English. Therefore, most participants will expect to see a user interface or test stimuli in the local Japanese language.

The Japanese usually have long holidays for approximately 1 week from the year-end to the New Year season, during “Golden Week” from the end of April to the beginning of May, and during “Obon,” a ritual holiday period in the middle of August. It is recommended to avoid these periods because the recruiting of participants could be difficult.

The school year begins in April and ends in March, and most students have long holidays from mid-July to the end of September, from mid-December to the first week of January, and from the beginning of February to the end of March. These are good periods to conduct testing with students. However, it is recommended to book their schedule in advance because they may be planning to go back to their hometowns during the holidays.

Evening and weekend sessions are common in Japan because office workers are usually unable to attend daytime sessions during weekdays.

Compared to the United States or European countries, recruiting costs are relatively higher, starting from \$300 (plus \$80 to \$150 remunerations) per person to recruit general consumers from an online panel. When targeting so-called “special panels” such as doctors, lawyers, and patients, recruiting becomes quite difficult and the cost will be much more expensive (more than \$500 to \$1500 in total). It is strongly recommended to estimate enough budget and recruiting time for these “special” user types. However, when you recruit students, especially through a personal network, the total cost can be quite low.

The cost for simultaneous translation is also quite expensive in Japan. A full-day session usually requires two simultaneous translators and can cost approximately \$2000. Good translators are generally very busy, and it is recommended to schedule them long before the day of testing. It may also be a good idea to get the collaboration of Japanese usability professionals, who will inform you about the cultural issues of Japan that you should know while conducting the usability test. It costs approximately \$800 to \$1000 per day.

The Japanese in general tend to be quite conscious about privacy, and with the enforcement of privacy laws, client companies in Japan are becoming increasingly more concerned about it. Participants are sensitive about having their faces captured on video. However, this is not a major problem because Japanese participants tend to be less expressive in their facial expressions during testing.

If you stay in middle or high-rated hotels (\$150 to \$250 per day) in the large cities such as Tokyo and Osaka, fast Internet access (either free or paid) is available in your room or at the business center. Inexpensive hotel chains, such as Tokyo Inn or APA Hotel, cost less than \$100 per day, but the rooms are small.

The public transportation in large cities such as Tokyo or Osaka is very well developed, and using trains/metros is recommended to get around. Except during peak hours (7:30–9:30 a.m.), they are quite punctual. However, for first-time visitors to Japan, the train network may be very confusing. You may have to walk quite a distance when you switch trains, or you may have some confusion when purchasing tickets. It is necessary to allow enough time so that you arrive at the testing site on time. In local cities such as Sendai or Okayama, it is recommended to use taxis.

You can consult HCD-Net (<http://www.hcdnet.org/en>) for various kinds of support for your survey. HCD-Net is the major organization of usability professionals in Japan.

7.12 KOREA

Written by Juyeon Song

South Korea is a global technology powerhouse. The home Internet prevalence rate is 94.7%, and 98% of the country's young generation between the late teens and 30s use the Internet. Mobile devices such as cell phones, personal media players, navigation devices, and MP3 players are in widespread use. Korean users are inquisitive about new technologies and products, and their acceptance speed is remarkable. Each time a new product is released, it quickly comes into fashion, and a number of users then share information about their experience with each other. Therefore, although the Korean market is not as large as that of China or India, it has great merits as a testing location to gather valuable insights from Korean users.

Most usability studies are conducted in Seoul. If you want to conduct research in other cities in Korea, you need to plan for additional costs or less well-equipped facilities. When in Korea, it is recommended that you take in everything you can. On the streets in Seoul, there are thousands of shops where you can experience every kind of technology product. Korean global companies such as Samsung provide many places where people can enjoy their products without buying them, and you can observe how people use their mobile devices in the subway, bus, cafe, and even on the street. When visiting Seoul, one of our clients would always bring his camera and observe Koreans interacting with technology. He could record user behavior, usage problems, and fresh ideas not only in the lab but also on the streets.

There are also important logistical considerations when planning research in Korea. It is necessary to allow sufficient time for deliveries of prototypes or video recordings because they can be delayed for customs clearance. When prototypes for the test are sent to Korea, they should not be assigned high value because they are considered a sample for research. If the value is priced higher than \$100, Korean customs lays a tax on it.

When planning a usability study in Korea, public holidays should be taken into account so that the test period does not conflict with them. Around Seol-nal (New Year's, the first day of the first Lunar month, plus the day before and after) and Chuseok (Harvest Moon Festival, the 14th to 16th days of the eighth Lunar month), many people take vacations and visit their hometowns for a few days. Most Korean students also take midterm and final exams and school vacations at

these times. On the other hand, the year-end season, including Christmas, is not as important in Korea as it is in Western countries.

In Korea, the culture of work is conservative, so workers are not usually free to participate in usability studies during office hours. When recruiting employed participants for the study, sessions should be scheduled after 6 p.m.

When conducting field research in participants' homes, it is very important to establish trust because many Koreans are not familiar with meeting foreigners. Participants must give their approval for recording video, and foreign observers should be introduced before the visit. For example, one of our clients from the United States gave his business card and introduced his company to participants whenever he entered their houses. At first, the participants felt uneasy with him, but after his introduction, they participated in interviews more enthusiastically.

Because courtesy is important in Korean culture, Koreans have a tendency to not be overly critical. It is quite common for them to answer more positively or not mention usability issues right away because they want to meet the moderator's expectations. Sometimes it is difficult to make participants think aloud because Koreans usually do not feel free to speak their minds in unfamiliar circumstances. Thus, it is helpful to have them practice thinking aloud before the test session begins.

Korean participants also tend to believe that they should be able to use a test product very skillfully even if it is new to them. Therefore, it is helpful to use an introduction such as "We don't take scores of how skillfully you use this product. That's not what we're interested in. Please explore it freely as if you were on your own. We just want to catch its problems to make it better for others." This approach will encourage participants to relax and be candid in their feedback.

7.13 MALAYSIA

Written by Alan Tay

Malaysia is a multicultural and multilingual country made up of Malays (60%), Chinese (30%), and Indians and other minority races (10%). Although Bahasa Malayu is the national language spoken by all Malaysians and Islam is the official religion for Malaysia, English is widely spoken and Malaysians are generally free to speak their mother tongues as well as choose their own religions and beliefs. As such, Malaysians have their freedom to celebrate their cultural festivals and participate in the other cultural activities that shape their general

behavior, attitudes, and perceptions. The unique cultural landscape of Malaysia can therefore affect the performance and outcome of usability tests being conducted there and should be taken into account when planning a study.

Although there are a total of 13 states and three federal territories in Malaysia, the population distribution is highly uneven throughout the country. Most of the Malaysians are generally located in Peninsula Malaysia, whereas East Malaysia is comparatively less populated. Among the various cities, Kuala Lumpur has the highest population followed by Subang Jaya.

Malaysia, as a whole, has little poverty, especially in the cities, such as Kuala Lumpur and Penang. The people tend to be middle to higher class, thus allowing them to have higher disposable incomes and spending power than those living in the suburbs. As such, those residing in the cities are generally more brand conscious and tend to receive better education. In general, living expenses in Malaysia are relatively high compared to those of its neighboring countries, such as Indonesia and Thailand. However, they are still much lower than those of its nearest neighbor – Singapore.

This type of research is still not as popular in the country compared to elsewhere, so dedicated usability labs or facilities are not commonly found in Malaysia. However, standard focus group rooms are common and can be found in most market research agencies in the country. Should special equipment be required for a research study, it will need to be brought into the country.

Malaysians' general lack of experiences with participating in usability tests is very evident. In terms of language or ways of communicating, Malaysians are generally more conservative than Singaporeans or Westerners. The Malaysians may not be as open-minded or vocal compared to Westerners in terms of expressing their views, and they may not be as open with providing input or voicing their opinions. They are also more passive and reactive in terms of responding to questions asked and afraid of saying wrong or irrelevant things. This might be a result of the culture and environment. In addition, they may also be uncomfortable or shy about being recorded on video, which is generally required as part of usability testing. Few people speak English well, even though the language is spoken widely in Malaysia. Generally, Malaysian respondents may have a limited English vocabulary to express their opinions and thoughts about technology, and their overall level of understanding of the language

is low. Thus, the chances of affecting the test results by conducting sessions in English are relatively high.

Despite the language issue within Malaysia as a whole, most people who live in the capital, Kuala Lumpur, are generally comfortable with speaking English. Thus, they are more likely to understand the requirements of the research studies better and be more expressive than the local people living in other Malaysian cities or towns. Nevertheless, should a study be required to be held in the rural areas of Malaysia, an interpreter will generally be needed on-site during testing to provide translations.

7.14 THE NETHERLANDS

**Written by Tjeerd de Boer and
Martijn Klompenhouwer**

The penetration of the Internet is very high in The Netherlands. You will find that most people will have a broadband Internet connection, have one or more mobile phones, and are using online banking applications and other Web sites. The Dutch society is very internationally focused, especially in the urban areas of the country.

Usability labs can be found in the major cities such as Amsterdam, Rotterdam, Utrecht, Eindhoven, and Groningen. However, most usability tests in The Netherlands will be conducted in an area called the “Randstad.” This is a conurbation in The Netherlands that consists of the four largest Dutch cities (Amsterdam, Rotterdam, The Hague, and Utrecht) and the surrounding areas. With approximately 8 million inhabitants, this area comprises almost half of the population of The Netherlands. Generally, there is not much difference between cities that are part of the Randstad.

An important point about researching in The Netherlands is that a qualitative approach to usability testing is generally employed. Participants find it fairly easy to talk about their experiences and are generally at ease using the thinking-aloud protocol. In most research situations, the test moderator and the participants interact in an informal manner. This often creates a relaxed atmosphere in which the participants feel at ease to be honest and critical.

Generally, participants arrive on time, but it is not unusual for them to arrive a few minutes late (depending on traffic conditions or parking opportunities nearby). Scheduling in additional time between sessions (e.g., 15 minutes) would allow for some flexibility. It is often

useful to reconfirm appointments 1 or 2 days before testing to increase the chances of participants showing up on time (especially with young participants and students).

Although the Dutch language might appear to be very similar to German, the grasp of the German language is not as good as might be expected, especially in the younger generations. In contrast, the younger generations understand and speak English fairly well. This makes it possible to use English testing materials, for example, when testing international Web sites that are offered in English only.

It is also important to be aware of local holidays, especially if they are close to a weekend. It is not uncommon for the Dutch to take additional free time to create a “long weekend.” If, for instance, a public holiday falls on a Monday, people might take the Friday off so they can enjoy 4 days off (including the weekend) for a short trip. If there is a public holiday on a Thursday, people might take the Friday off as well. Special Dutch free days are Koninginnedag (Queensday) on 30 April; Good Friday on the Friday before Easter; Ascension Day, 10 days before Pentecost (always a Thursday); and Pentecost Monday, the Monday after Pentecost (the seventh Sunday after Easter Sunday). For civil servants, 5 May (Liberation Day) is also a holiday.

Because most of the public holidays differ from year to year and region to region, it is wise to discuss this with a local partner to make sure you do not run into any surprises when recruiting. During the summer, many Dutch will go on holiday abroad, especially families with children who are dependent on school holidays (July and August). During this period, it might be more difficult to recruit participants with schoolgoing children.

7.15 NEW ZEALAND

Written by Shailesh Manga

The experience of usability testing in New Zealand is generally very similar to that in Australia. However, New Zealand’s smaller population of approximately 4 million people, approximately one fifth of Australia’s, should be taken into account when planning a study here, especially regarding recruitment. The two main cities are Auckland and Wellington, with respective populations of 1.3 million and 400,000 people. Depending on the study, it can be useful to conduct part of the study in Wellington and part in Auckland because

attitudes differ between the centers. For example, Wellington is the capital city and the population here has a larger appetite for political news than does that in Auckland.

Due to the population's small size and interconnectedness, it can sometimes be difficult to find participants when recruitment criteria need to be very focused. The population in general is culturally varied and internationally flavored, and many New Zealanders are reasonably well traveled.

Although New Zealanders consider themselves more reserved in personality than Americans or Australians, from our experience they are still honest and open people. In some ways, they are less likely to complain about bad service or poor quality not because they do not want to hurt someone's feelings but because they have lower expectations of service and are happy to work through situations. New Zealand does not really have a social hierarchy, and foreigners, particularly those from Asia, may be surprised by the informal, friendly nature of people even when they first meet.

The magnitude of the incentive is important. In cities such as Auckland, where significant travel may be required, participants expect the incentive to be higher to cover the cost of travel. Typically, an incentive of \$60 to \$80 NZ is used, although to attract people in executive positions we often use incentives of \$100 to \$150 NZ for an hour of their time. After the initial screener, participants also receive an e-mail or letter with a map of the venue. More important, the participants are given a reminder phone call the day before the testing. To help with recruiting, the use of recruitment agencies is becoming more popular to secure participants. Agencies charge approximately \$100 to \$150 NZ per person and prefer at least two weekends to recruit. Generally, compared to the United Kingdom and the United States, the lower cost of recruitment and incentives may be a positive surprise to foreigners. However, New Zealand has a Goods and Service Tax of 12.5%, which should be taken into consideration.

New Zealand's summer holidays fall in late December and early January, making it more difficult to recruit participants during this period. January through April, there are a number of public holidays that need to be considered when planning studies because it is unlikely that participants will be available on those days.

Depending on the nature of the study, a briefing on social and cultural norms is useful in providing context for behaviors that may be observed.

7.16 **RUSSIA**

Written by Natalia Kirillova

User research is a relatively new field on the Russian market. Only several years ago, sponsors mainly requested user interface design services, but during the past few years interest in user research has significantly piqued. Also, the fast-growing Russian market has attracted international attention as a part of global user research projects.

Because the field is so young, many participants do not even know that user experience firms exist in Russia. Despite this, the majority of participants are very excited while taking part in user research studies and enjoy the general idea and the goal of usability studies. They are also excited that somebody cares about the end users. For many, the idea that they can influence final results of the study is appealing.

Russia is a large, heterogeneous country with a population of 142 million people representing more than 180 nationalities. As such, it is impossible to choose one city or region as representative of the whole when doing a study in Russia. Although some might think that testing in Moscow would be representative, Moscow is actually a very special city that differs from the rest of the country with regard to the economy, cash flow, size, mix of multinational population, and habits and mentality of citizens. There are more than 10 cities with a population exceeding 1 million (e.g., Novosibirsk, Yekaterinburg, Nizhny Novgorod, Samara, Omsk, and Kazan), and it is a good idea to consider both Moscow and these other “regional” markets because they vary from each other in many ways. St. Petersburg should also be considered because it has historically competed with Moscow for the role of the capital of the country.

When performing user research studies, there are some features of the Russian audience that may differ from other countries. For example, Russians are typically not critical about products and services of foreign brands, especially famous ones with a good history and reputation on the Russian market. The reason for this dates back to when the country was known as the USSR and commercial products were deficient. It is wise to remember this while performing a user research study and to hide foreign brand names from participants. This step should help you obtain objective opinions and reactions. Also, Russian people are generally very critical about visual design. They like a nice visual style and pay much attention to it. Do not be surprised if a participant, while talking about overall impression of the

Web site, keeps saying that the site does not look nice or have clear enough pictures and images.

Although participants normally do not mind being recorded during sessions, they usually do not like to sign consent forms (or any other papers), especially complicated ones that are unclear or confusing. It is not in common practice.

When preparing for focus group studies, it might be useful to know that Russian people in general respect both social and organizational hierarchy, especially elderly people. Russians are influenced by a group's opinion. In this respect, focus groups should be well prepared and skillfully moderated. Also, when recruiting elderly participants (age 55 years or older) for a study, it is useful to know that, in general, they are not Internet users. Also, they might not criticize digital products/services because they think they are at fault for not using them correctly rather than the products/services being inadequately designed for them.

Russians like to show off, so if somebody has a fancy mobile phone, it might not indicate anything about his or her income level. There are cases in which people even borrow from a bank to buy a fancy, brand-new device. Thus, when working on profiles, take into account that personal income is not a determining characteristic of the owners of an expensive device. In short, it is better to consult with a local user research team regarding participant profiles.

Although increasingly more young people are starting to speak a foreign language, it is still difficult to find people who speak English fluently, and it is not possible to conduct a study or to talk to participants directly in English. Finding interpreters for almost any language is not a problem in Moscow; one only needs to find the best rates. As a general rule, interpreters who speak uncommon languages request a higher rate.

It is difficult to recruit participants on weekends or holidays, especially in Moscow, but in any large city people value their spare time. You can check Russian holidays on the calendar, but be aware that they tend to change, including free days for New Year's and Christmas. The period of vacation around these holidays, for example, can vary from several days (1 and 2 January and 6 and 7 January) to almost three weeks (1–19 January). Also, be aware that Russians return to work in January quite slowly after such a long vacation. For specific Russian holidays, check <http://www.timeanddate.com>.

Also consider the distances and time for traveling from one place to another, which can affect participants' punctuality. For example,

traveling from one end of the city to the other by metro may take more than 1.5 hours, whereas traveling by car might take several hours because of traffic jams. However, many people in Moscow work late in the evening and can be quite flexible regarding the time for sessions.

It is also important to understand some formalities when signing a contract with Russian firms. Working with foreign firms is quite complicated from the standpoint of a Russian company. A contract and acceptance report should be signed as obligatory documents. If the amount of the contract exceeds \$5000 USD, then the Central Bank of the Russian Federation controls the transaction and the Russian firm should report all official documents to the bank within certain deadlines. If the Russian firm is paying abroad, the contract amount is liable to an 18% VAT. Also, all Russian firms have their own stamp that it used in the previously mentioned documents. Do not be surprised if your Russian colleagues ask you to do the same.

Many visitors are very surprised to find that Moscow is very expensive. One can hardly find an inexpensive hotel in the city center. The hotels in the center start at \$250 EUR outside of the peak season, so you should spend some time to book a proper hotel and book it in advance. Many of them will ask you for 100% prepay. To save money, ask your host for some tips and try to avoid the tourist places and services. During the Soviet rule, Westerners were perceived as wealthy and, to this day, some visitors might be asked to pay double price. Again, it is very useful to have a Russian-speaking person as an attendant or consultant who can help you while you are staying in Moscow.

7.17 SPAIN

Written by Carlos González de Herrero

The Spanish usability and user experience market has been slightly behind the most mature European and U.S. markets, although it has caught up in the past few years. One of the reasons that might help explain this is that traditionally Spain has been slower than most advanced markets concerning Internet penetration, even though in 2009 it is close to 60%. However, one of the main characteristics of the Spanish technology market is that the mobile phone culture in Spain is huge – a fact that surprises some clients. It was one of the first countries to reach a one-to-one mobile phone penetration where the population equals the number of mobile phones. Today, there are even more devices than people in the country, and Spain is one of the leaders concerning broadband mobile Internet penetration, which is close to 20%.

Usability and user experience tests take place mainly in the two largest cities of Madrid and Barcelona, where most of the usability companies are based. In these cities are the headquarters of the largest and most important companies in Spain. These companies invest heavily in new technologies and their online presence and services. However, increasingly more small and medium enterprises are testing their Web sites, services, and products as online competition and revenues increase.

Testing in the two cities at the same time is not unusual. Madrid and Barcelona both have laboratory facilities that can be used in a coordinated way. On the other hand, tests requested in smaller cities or towns are covered through mobile laboratory technology. Infrastructure in Spain is quite good, and distances are not too great. This allows for a quick answer to occasional demands of testing in minor cities and other localities.

In Spain, there are four official languages: Spanish for the entire country and Catalan, Basque, and Galician in three regions. Bilingualism is a reality, and the most important companies publish specific versions of the Web for these regions.

The recruitment process differs slightly from that of other countries and normally begins just a week in advance. The problem with starting earlier is that the percentage of no-shows increases and makes the entire process less efficient. The testing schedule must be adapted to Spanish daily schedules as well. For example, lunch is normally from 2 to 3 p.m. When workers are involved, it is necessary to extend the time of sessions until later in the evening. These profiles usually attend the sessions from 6 to 8 p.m. because many people leave the office late in the evening. It is also important to take local public holidays into account, and this is usually something missed in planning. It is important to highlight that each region has its own public holidays, and you should know the holidays in the regions where you want to test before scheduling a study. We have not found it especially difficult to recruit in August, which is the traditional holiday month in Spain, because holiday patterns have changed much in the past decade.

It is normal that recruiting guidelines and user profiles are adjusted for the Spanish population. The main variables that are usually changed are Internet usage, socioeconomic levels, and education levels.

It is possible to find English speakers in Spain, but it depends on the profile. Education and socioeconomic level make a major difference. We have not encountered major problems when recruiting high-education (university level) and medium-high and high socioeconomic levels, but it becomes more difficult with lower profiles.

It is notable that Spain has a significant immigrant population, mainly from Latin America and North and West Africa. This allows for a very diverse recruit and also gives richer and more complete insights into communication and information technologies. In Spain, we are used to including foreign users in the test sample for Web and mobile devices and services, especially because clients frequently request it.

Although Spanish people are famous for their lack of punctuality, it is very unusual for users to arrive late to the session. On the contrary, users normally arrive early.

Testing in Spain is cheaper than in other European countries, which makes it more attractive for many clients to test Web sites, products, or services here. More than 50% of the projects are from clients not based in Spain. It is normal to have interpreters and simultaneous translation, usually English–Spanish, but other languages are possible, too. Laboratory facilities are specifically designed for this, and the translator has a special room that receives the sound from the laboratory room and sends the translation to the observation room. Therefore, the translator does not add noise in the observation room. In the session video, the Spanish and the English tracks are recorded simultaneously so the client can listen to both.

During even standard usability sessions, moderators in Spain are used to slightly less-structured tests that allow for greater flexibility. They can deviate from the test script or improvise when new or unexpected things are discovered during the sessions or if they suspect it could lead to something interesting. However, they are also used to following very structured lab sessions, which are usually requested from other partners or clients running international projects.

Much information is usually given to users before starting the test. We like to explain the process, how the lab works, what they are going to do, and what is expected. The ultimate goal is to have users feel familiar with the process and that they are not being evaluated. Spanish users are said to be very participative.

7.18 SWITZERLAND

Written by Florian Egger

Switzerland is a landlocked country in the center of Europe that has a population of 7.7 million. Its three main national languages are German, French, and Italian. This has considerable implications for localization: All products and software in Switzerland must be

available in the three main national languages and, ideally, should be tested in all three linguistic regions. The most important Swiss Web sites also have an English version to cater to Switzerland's large population of foreign residents and workers.

German speakers account for approximately two thirds of the Swiss population, with French ranking second at approximately 30%. Note that the German spoken in Switzerland is an Alemannic dialect called Swiss-German that Germans may find difficult to understand. All written communication and the main TV broadcasts are in standard German. Note that it is a myth that all Swiss people speak all three national languages.

In terms of user research, it is noteworthy that although Swiss people from the different linguistic regions share the same products and services, each linguistic group is also considerably influenced by the media of its larger neighbors—Germany, France, and Italy, respectively. That makes it all the more important to test for different expectations and proper localization of terms, currencies, units, and marketing positioning.

Although Berne is the Swiss capital, Zurich is the largest city, followed by Geneva and Basel. Typically, user research is conducted in Zurich and Geneva to cover German and French, and, rarely, in Lugano for Italian. Note that if you have research material only in English, most German speakers will be able to understand it fairly easily, whereas it can be a major problem for French and Italian speakers.

Because user-centered design is still not a mainstream activity, there are few dedicated usability labs. Alternatives are mobile usability labs that can be set up at the client's premises or in hotel meeting rooms, or focus group facilities that can be rented in larger cities.

Recruitment of participants is either done by external market research companies or by the user experience companies themselves, depending on the recruitment criteria. Recruitment costs are typically high, as are incentives for participants, given Switzerland's high wages and cost of living. Swiss participants are usually punctual and dependable, with a typical no-show rate of less than 5%.

Because user research is still rare in Switzerland, it is worth spending some time at the beginning of each session explaining what it consists of and what is expected from participants. Swiss participants are usually articulate and keen to share their point of view in a constructive manner.

When planning user research in Switzerland, it is worth noting that not all 26 cantons have the same public holidays. Therefore, check with your local partners on how best to organize sessions throughout the country. In terms of travel, it is best to fly to either Zurich or Geneva and use the railway for domestic travel.

7.19 TURKEY

Written by Erdogan Gundogdu

Turkey has a very dynamic and young population, with approximately 46% of the population younger than age 25 years. As a result, Turkish society is highly extroverted socially and technologically, even though the public is generally introverted politically. This is a major surprise to foreigners during test observations. For instance, the night before PlayStation 3 was released on the market, people lined up in front of stores so that they could be the first ones to buy it, and iPhones are currently very popular.

We sometimes get questions from our foreign clients about the attire in Turkey. Often, foreigners who visit Turkey think that Turkish people live like the Ottomans. For instance, when the footballer Roberto Carlos came to Turkey, he and his friends took a picture of themselves wearing fezzes. However, the common stereotypes of Turkish men wearing fezzes and women in headscarves are somewhat antiquated. The real situation is that usually Turks wear similar attire as that worn in south-eastern Europe. Typically, the only people one sees wearing a fez in the streets are the tourists. However, there has been a great migration from the rural villages to large cities, and, as a result, more women are wearing headscarves in cities. Thus, there is a mixture of different people dressed either conservatively or in a more European style in city centers because of the rural–urban integration. You can see this mixture of style on individual people as well. Often, young girls who wear headscarves will also be wearing makeup or have on tighter fitting outfits. Although some studies have shown some anti-Americanism among the young population, the United States is number one for them in terms of fashion, and many young people would like to live there.

Usability testing is not a common methodology in Turkey. However, it may increase as technological infrastructure, such as Web systems, improves. Internet speed is still quite slow in Turkey. The ADSL bandwidth in households and businesses is generally 1024/kbps. Businesses have started to convert their bandwidth to 4096/kbps. However, the speed is still slow and of poor quality compared to that in Europe. As a result, live Web streaming, which is often requested by

foreign clients, can be difficult. Also, because we lack formal usability labs in Turkey, we almost always hire wedding halls, Internet cafes, or conference rooms in hotels on busy avenues. Using an agency's office as a testing venue is not very common.

Usability studies are usually conducted in Istanbul, the industrial and cultural center of Turkey. Apart from Istanbul, Ankara and Izmir are preferred cities because they have the next highest populations behind Istanbul. Ankara is the capital city and is quite metropolitan. Izmir is the third largest city. It has a strategic seaport and, consequently, is one of the most important city in the Aegean region.

Recruiting members of the general population for a centrally located test is fairly easy, but recruiting professionals, such as physicians, can be difficult and they often need high incentives. Respondents are generally very interested in usability tests compared to other research methods because they think that they will truly have an impact on the design of the product being tested. However, in Turkey, the proportion of English speakers is low compared to that of other countries, so it is best for user research studies to be conducted in Turkish.

In general, recruitment should not be difficult throughout most of the year, depending on the user profile, of course. However, during public holidays, it is unlikely that you will be able to find participants. The dates of religious holidays differ each year because the Islamic calendar used in Turkey is based on the lunar system. The major holidays in the Islamic calendar, Ramadan and Eid, usually last for a week, and it is very difficult to recruit participants during these times.

7.20 UNITED ARAB EMIRATES

Written by Ali al-Azzawi

The marketing industry is mature and sophisticated in the United Arab Emirates (UAE), albeit traditional in some areas, and finding agencies to help with this kind of effort is easy. However, "product testing" in the context of usability testing is still uncommon, although awareness of the need for this kind of research is increasing.

In terms of communication, English is commonly spoken here, especially within the professional community. However, using a translator during a study is advisable, especially for accessing nuance in users' experience.

It is very hot and very bright during most times of the year in the UAE, but it is quite comfortable in the winter months. The UAE is

also a very multinational, multicultural, and multiethnic country, and there is a very wide and extreme socioeconomic spectrum. In many respects, it is similar to New York City but with a total population of approximately 4.5 million. A third of the population are Arabs, and approximately half are from South Asia and the Asian subcontinent. The rest are a mixture of Western and other nationals.

There are seven Emirates (states), and they are all very different from each other. Although Abu Dhabi is the main and ruling state, Dubai is the most densely populated and has the most diverse cosmopolitan and cultural landscape, whereas Sharjah remains the most conservative. The other states – Ajman, Fujaira, Ras al-Khaimah, and Umm al-Quwain – are the least populated and least affluent.

The Arabic culture is also very diverse. There are, of course, the indigenous Emiratis, who are now a minority in terms of numbers among the other Arab populations. The Arabic culture spans from Morocco and Mauritania to Iraq and the UAE. Classical Arabic is the common language, but they all have their own local dialect. There are essentially four groups of dialects and cultures: Eastern Middle East, Western Middle East, East African, and West African. The UAE belongs to the Eastern Middle East group, and it would be prudent for anyone intending to run tests in the UAE to make sure that they have considered which group needs to be involved in the testing.

The Holy month of Ramadan is based on a lunar calendar and therefore shifts by approximately 11 days every year relative to the Western Gregorian calendar. The majority of the Muslim population fasts during the daylight hours of this month (no food and no water). This activity manifests in a general “go slow” during the month. Ramadan is followed by a 3-day Eid (feast) and then a few weeks later by a 4-day Eid that is linked to the pilgrimage to Mecca. Thus, find out when Ramadan occurs in the year one wants to perform your tests, and unless absolutely necessary, it is advisable to avoid this period.

In general, the sense of time and timekeeping is very different from that in the West. People here are more relaxed about time, and one would be advised to be flexible in the scheduling of testing sessions, allowing for extra time between sessions.

In terms of finding participants during the weekend (Friday and Saturday), this can prove to be problematic, especially on Friday. Also,

avoid scheduling anything for Friday lunchtime, when the weekly community prayers are held in the mosques.

Regarding transportation, public transportation is very much underdeveloped, traffic jams are very common, especially in Dubai, and taxis can be very difficult to find during rush hour.

Middle Eastern society, in general, is a formal and hierarchical society; courtesy is visible and explicit. Occasionally, however, this may be in stark contrast to the commonly seen banter and heated discussions between locals. This is OK and not a cause for concern.

In terms of cultural understanding, it is particularly important to be aware of issues involved in working with female participants. There are extremes regarding this aspect. Some parts of the UAE society have strict gender segregation where it is absolutely forbidden for nonmarried or nonrelated couples to be together in seclusion. Other parts of the same society, however, can be very liberal. Either way, permission to video female participants will probably not be granted, so it is best to avoid such a requirement. Also, some women may prefer not to shake hands (or any physical contact) with nonrelated males. Thus, to avoid any embarrassment, do not offer to shake hands.

Prayer times occur five times a day, and a large number of the Muslim population like to keep to the prescribed times. Asking ahead of time if the participant wishes to pray at a particular time would be courteous and may reduce any anxiety.

Regarding working hours, people generally have an early start; some start at 7 a.m. and finish at 2 p.m., and some work two shifts, finishing late at night. Thus, depending on the kind of profession of the participants required, this may force a particular time for the testing sessions.

7.21 UNITED KINGDOM

Written by Gemma Wisdom and Simon Herd

User research is well established in the United Kingdom and has become an integral part of the design process, especially in larger companies. However, the UK marketplace is still divided between low-cost pro forma testing and a full-service, deeply analytical approach. Aside from traditional usability testing, a wide range of services are also available in the United Kingdom, including ethnographic research, home visits, longitudinal studies, benchmarking studies, focus groups, and competitor research.

The United Kingdom can be an inherently more expensive country in which to conduct research because of its general cost of living. For example, a standard single underground fare for a short journey can cost £4 or \$8 USD.

The United Kingdom, and London in particular, is diverse and very multicultural. User tests may consist of people who speak many languages. Screeners need to be carefully worded to ensure against recruiting participants who were not born in the United Kingdom if this goes against the recruitment profile.

Although recruitment may be started early on in the project, it is common for the schedule to be provided only a day or so before the testing. Often, this can be concerning to clients, but it is quite the norm for the United Kingdom and does not necessarily mean that there are recruitment difficulties.

Testing in the United Kingdom is best conducted on weekdays. Testing early on Monday mornings, Friday evenings, or weekends can be arranged, but no-shows are more frequent at these times and need to be taken into consideration. Weekends are particularly difficult, especially because recruiters do not typically work on weekends and there is a lack of backup if problems occur. Also, it is often difficult to recruit users from the last week before Christmas until the first full week after New Year's due to holidays. Sessions scheduled around the Christmas period are also more prone to disruption due to no-shows. Other times subject to disruption are Easter holidays, which typically fall in early to mid-April.

In the United Kingdom, we are not generally very good at languages. Professional translation agencies do exist for a very wide range of languages, but research firms tend to be more familiar with working in English.

Criminal Records Bureau (CRB) checks are required for researchers who will be left alone with a child as part of research. However, this does not apply if a parent is present. It can be difficult for researchers to obtain CRB check status because typically they have to be applied for through schools or youth organizations. Recruiters will also not schedule children during school hours or late in the evening on ethical grounds, which can prolong a fieldwork phase.

It is preferential to run projects with two consultants (one moderating and the other note taking in a separate room) because users do not tend to narrate well unless they have someone in the room to chat

with. Similar to the United States, consultants alternate between moderation and note taking from session to session.

In the United Kingdom, there is a variable degree to which people say what they mean. Some are very direct, whereas others may be more circumspect than in other countries. There is also a tendency for UK participants to be overly positive in their comments. For example, we regularly encounter situations in which participants have struggled with an application and yet are still politely positive about it. Consequently, facilitators should probe for deeper meaning behind what users are saying, and they should apply more analysis and interpretation than in other countries.

It is worth bearing in mind that politeness is highly valued in the United Kingdom. The use of “Please” and “Thank you” is appreciated and is likely to produce better results with participants.

There are a few more details to keep in mind with respect to working with UK users. Cash incentives are fine and generally preferred, unless recruiting high net worth users such as lawyers, in which case a charitable donation may be more appropriate. Consider also that in the United Kingdom, people do not have official photo IDs, although they may have work IDs. A final concern may be the Data Protection Act laws, which protect participant confidentiality. Permission must be sought (and is usually given) to record video, and participants should be anonymous in reports.

7.22 UNITED STATES

Written by Wendy Yee

As in all other global locations, usability testing in the United States is conducted with an emphasis on understanding user behavior and capturing user feedback. Despite the underlying similarities with testing in other countries, there are a number of things to consider when arranging a usability study in the United States.

Although the United States has an extremely diverse population, we have found that three factors in a participant’s background are often a better predictor of quality study participation than demographics (e.g., gender, household income, profession, and education level). These factors are participants’ prior use of products or interfaces similar to the test stimuli, the specific context of this use, and the frequency of their use. For example, it will not come as a surprise that

the way in which U.S. participants use their mobile devices is sometimes approximately 5 or 6 years behind Japanese users and approximately 2 or 3 years behind European users. It has an undeniable impact on U.S. participants' understanding of why they might use a device in particular ways, especially "novel" mobile features. Among iPhone users, however, this gap is starting to narrow, so it is important to know participants' experience level.

In the United States, we typically recruit participants not only for their match to the study criteria but also for their ability to clearly articulate their thoughts and provide feedback. This, in combination with U.S. participants' general willingness to be critical, has led to feedback from some Asian clients that U.S. participants seem to talk noticeably more than they expected. The U.S. tendency to talk more has an impact when localizing study protocols to the United States. Usability test sessions that may have taken 60 minutes in Asia may take 75–90 minutes in the United States.

Although U.S. participants may provide extremely blunt or negative feedback on an interface, it is not unheard of for them to then turn around and award relatively positive satisfaction ratings because "once I figured it out, it was easy to use." This inconsistency can be surprising to our global clients and colleagues. We suspect that U.S. participants may feel a somewhat greater obligation to be polite in their numerical rankings than during their spur-of-the-moment qualitative feedback.

When scheduling test sessions, it is important to note that Tuesday, Wednesday, and Thursday typically have the highest show rates for usability studies. Monday tends to have a lower show rate because participants might not have the opportunity to check appointment reminders during the weekend. Friday tends to have a higher rate of last-minute cancellations simply because weekend plans sometimes take priority over a usability test appointment.

It is usually very difficult to schedule usability studies on the weekend. Most U.S. participants place a high premium on their weekend time and reserve it for family, friends, or weekend errands and chores. If a weekend study is required, we usually need to recruit for it much further in advance and provide higher incentives to encourage study participants to show up.

Due to Christmas and New Year's, it is often best not to schedule fieldwork for a usability test any later than the second week of December. In addition to these end-of-year holidays, there are several

holidays that the U.S. federal government and all school systems observe, which makes it difficult for many participants to attend test sessions on those dates.

Although most test participants treat their appointments seriously, work requests and weather conditions usually play a more important role in their days. Participant no-show rates in the United States range between 5% and 15%. Even if U.S. participants say “Yes” to a study request with full intent to show up, many rely on their employer’s flexibility when they take a couple of hours off from work. This means that last-minute work requests can limit a participant’s ability to actually show up for a study.

Most business-grade translators find it relatively straightforward to translate usability test sessions. U.S.-based translators often work in pairs when translating for more than a few hours. Based on our experience, translators for Asian languages (or Spanish, when testing with Hispanic participants) are most commonly used.

Because the United States is home to thousands of focus group facilities and dedicated usability test labs, most usability test sessions will take place at locations specifically designed for this function. It is rare for usability test sessions to be conducted at a hotel or convention center outside of a designated conference or large-scale meeting.

In the United States, we typically average 6 or 7 hours of test sessions per day. Because our working days are actually longer – with early morning final equipment checks, a lunch break, and end-of-day briefing discussions – we try to schedule usability test sessions to run between 9:00 a.m. and 5:00 p.m.

We typically conduct usability test sessions in teams of two, with a moderator in the test room with the participant and a note taker in the observation. Both team members are equally trained in the study protocol, which allows us to alternate moderation and note taking and avoid moderator burnout over a multiday study. We also use instant messaging to allow the moderator and note taker to remain in communication during sessions, which allows for more thorough probing with participants on a task-by-task basis, instead of saving follow-up questions for the end of a test session.

Participants in the United States usually expect to be recorded and do not mind signing consent or nondisclosure forms. However, there is a greater sensitivity to facial recordings for health care studies, especially when patients are being asked to provide feedback on

a health care device or interface that is directly related to a medical condition that they have. In this case, we may focus the recording on their hands instead of their faces while they are using a health care device.

When we test with underage participants (e.g., students younger than 18 years), we require participants to fax parental consent forms prior to their study session. Depending on the study, some underage participants will also arrive at their test session with a parent. Although we have had rare situations in which the parent wants to check the test room to make certain that nothing is improper about the setup, most parents are content to sit in the waiting area and read.

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The role of professional organizations in user research

Elizabeth Rosenzweig

8.1 INTRODUCTION

This chapter discusses the role that professional organizations play in global research. These organizations help their members do thorough research by providing them with a powerful vehicle for support and crucial resources for planning and executing global user research projects. Perhaps one of the greatest benefits of membership is the opportunity to network and build connections during local chapter events, conferences, and other forums.

Professional organizations create networks to support and further the work of professionals in their field. Such organizations also promote a body of knowledge, such as journals, newsletters, and other publications. International meeting and event opportunities gather team members from multiple locations to exchange information and sometimes to work together on common projects.

Networking benefits: One of the primary reasons people join professional organizations is the incalculable benefit of professional networking through in-person events and conferences, as well as through electronic means such as social networking, e-mail lists, and job postings.

Journals and other publications: A professional organization may also provide a forum for information that professionals might not otherwise have. Research published in journals and other publications enables professionals to use the most current and proven methods and also provides the opportunity for authors to get exposure for their work.

Peer reviews are crucial to ensure that only high-quality articles get published.

International events and meetings: Events such as World Usability Day pull together professionals from multiple organizations on a single day to focus and create community to leverage skills and resources. This chapter showcases World Usability Day as an example of how professional organizations can be used to create global communities and jump-start world-class projects.

8.2 MAKING THE MOST OUT OF A PROFESSIONAL NETWORK

As a project leader, you should aim to be as well connected as possible because these connections will be important as you plan projects in different countries. Project leaders who want to conduct a study in a foreign location can use professional organizations to find contacts and people who are “on the ground” in a foreign location. The benefits of these organizations include the following:

- The opportunity to bring people together on a global level in a supportive environment
- The ability to compare notes about which processes and techniques work best and what the economy and the pricing structure are like in a given country

As you develop a network of global contacts, nurture these relationships by staying current with their personal and professional details. A richer relationship will make interaction easier. You should also feel confident about reaching out and asking for support, but aim to make your requests specific. For example, if you are running a project in China but do not know any good resources, you can reach out to colleagues who might know, asking the following: “I am looking to run a research project in China, do you know any good translators and research facilities there?”

If you are doing research on a specific topic, ask for help from people in your network who are established in that field. You can also contact people who have published articles of interest or have been in the public eye – even if you do not know them. The spirit of collegiality drives many professionals to help others. These people are often good to talk to and will say no if they cannot help. There is no way to lose by using your professional network to help plan a project.

8.3 THE LOCAL CHAPTERS OF PROFESSIONAL ORGANIZATIONS

Most organizations encourage the formation of local chapters, which are ideal places to begin networking as a user research professional. Attending events hosted by a local chapter will allow you to get to know like-minded people and become a part of the activity in your area. In addition, local chapter events can provide a forum to discuss the latest breakthroughs in research, legal and regulatory issues, and product and service ideas with peers.

When traveling, the resources provided by local chapters in areas other than your own can be especially helpful. Your organizations' events in other cities offer an excellent way to build your network and meet researchers with whom you may want to collaborate in future studies. It can even be worthwhile to contact professional organizations to which you do not belong when planning a trip because some chapters allow nonmembers to attend events. Events designed specifically for networking are the best for a project leader who is searching for help and connections in new or unfamiliar locations. Often, professionals who attend chapter events have experience that can be leveraged by a project leader who is searching for help.

Professional organizations' local chapters can also provide more direct assistance as you plan a study in the area. Find out which chapters are operating in the area in which the research will be performed, and contact the chapter leaders to find out what resources they have to help. Also, organizations will often post job boards and provide contact information for hiring organizations in a local area. For long-term projects, you might consider posting any open positions on these job boards. This will help to ensure that the people who see the post are professionals in the same field, and they will therefore be more likely to be trained in the theory and skills you require.

8.4 PROFESSIONAL ORGANIZATIONS IN A GLOBAL MARKET

During conferences, formal opportunities to help create and maintain personal and professional connections abound. These occasions are the simplest and easiest places to meet people.

Remember to always exchange business cards with new contacts. A good practice is to write at least one point on the back of the card

to follow up on later. When networking during a conference or event, keep the following considerations in mind:

- Maintain a balance between professional and other discussion.
- Establish a personal connection with new contacts because it helps each person to get more out of the connection. It is wise to prepare some culturally appropriate conversation starters if you plan to make contacts from other countries.

As you prepare to attend a conference, create a list of a few people you would like to meet and find out if they will be at the event. Plan to seek them out. Conference committees often publish lists of presenters and/or attendees prior to the event. Once you identify who to meet and when you would like to meet them, it is necessary to set goals for the conversation. Even if the exchange is short, it can be followed up at another time. When considering such a networking opportunity, you should ask yourself the following questions:

- What is the primary reason for connecting with this person?
- Is there a short-term and long-term reason to be connected?
- What outcome do I hope to achieve?
- What information should I share, and what message should I project?

Even during presentations, it is possible to make contacts. A good way to get information and make contact with the presenter is to ask a relevant question at the end of a session that can also serve as an introduction. For example, find something in the presentation that relates to your project. When asking the question, introduce your project and relate the question to the project. If there is an opportunity to meet the presenter after the session, reintroduce yourself and expand on your question.

Do not let your interactions end when the meeting ends. Following the conference, it is important to strengthen your professional connections by contacting your meeting acquaintances again, preferably by e-mail to create a written record of your communication. For each contact, mention your topic of discussion and perhaps the point that you jotted down on the back of the contact's business card, and further the dialog that you started in person.

The following are additional activities for global conferences:

- Volunteer at the conference to make connections, establish credibility, and make important connections.

Find a passion and volunteer to do it. Take on specific tasks you can do well.

Set specific goals for your volunteer work and use these as metrics to track progress. Start with a small, manageable task and work your way up to larger projects.

- Join governing bodies or assume elected positions to provide executive direction for the organization; this also provides you with a unique position to meet and understand others' work.

8.5 ORGANIZATIONS AND RESEARCH

In addition to strictly user research professionals' organizations, you might wonder if you must belong to any other types of organizations. For example, should you belong to a research-focused organization or just a practice-oriented organization? There might be several types of organizations that can help you do your work. You may benefit from belonging to multiple organizations outside of the user research field because each can provide different perspectives and growth opportunities. A list of organizations that operate worldwide is provided later. Additional categories for useful organizations for the user researcher include the following:

Localization organizations, which can provide specific "on the ground" resources geared toward helping professionals work in specific countries. This is extremely helpful for any researcher planning global studies, and these organizations should be considered second only to user-centered design organizations.

Marketing organizations can provide knowledge about market conditions, preferences, and opinions in many market segments and geographies.

Development organizations understand best-in-class, global development processes, which can be used to help focus and develop research.

Quality assurance and usability testing organizations provide concrete methodologies and forms for collecting data.

It is not always possible to attend meetings hosted by the various global organizations in person, but it is still possible to be current with the work of the organizations and their members. Many organizations publish meeting proceedings or stand-alone research journals. As a member, you can access peer-reviewed research articles discussed

at meetings and contact the authors directly with questions or comments. By reading current research, professionals can stay up-to-date with practices, findings, and new directions in the user research profession.

8.6 WORLD USABILITY DAY AS AN EXAMPLE

Professional organizations generally operate as nonprofit entities and therefore have a mission to promote the profession as a whole. Thus, professional organizations often take on initiatives with the goal of advancing their field. These initiatives serve a dual purpose of providing opportunities for professionals to get together and raising awareness of the profession within the larger community.

World Usability Day (WUD) is an annual event whose mission is to raise awareness of the importance of user-centered design in the research and development of products, services, and technologies. WUD is an initiative of the Usability Professionals' Association (UPA) but strives to include like-minded organizations throughout the world. The event is held on the second Thursday of November and involves many global organizations as well as local organizations throughout the world as they hold events and complete projects associated with each year's central theme.

WUD organizers run events in more than 43 countries. Although UPA and specific sponsors have funded the enterprise, it is through professional organizations and networks that the word spread and WUD took on a life of its own. Local professionals find sponsors and groups to work together for the common cause of creating a WUD event.

As a result of WUD, professionals in many countries have felt less isolated. WUD has provided seminars, meetings, and networking opportunities for professionals in countries that did not have professional development available before. Countries such as India, Brazil, Peru, Poland, Romania, Iceland, Indonesia, and the Philippines now have events and organizations for professionals who are engaged in user research. Everyone involved benefits as these professionals gain exposure, from those working on the ground to outside professionals planning global studies in these countries.

WUD has established a richer community by bringing working user research professionals together online as well as in person. For example, WUD's 2008 Global Transport Challenge was designed to raise

awareness and involvement through social networking and online activities about how transportation is used and how it impacts the environment. Professionals participated in activities such as meetings, presentations, and research projects. These activities were orchestrated with either local or global teams, and participants shared their outcomes, such as summaries of discussion topics or reports of research project findings, in the global forum.

WUD has also created working groups as a foundation for projects that occur throughout the year. These working groups serve as a community for professionals to make use of and network for other projects. WUD is an excellent example of the whole being greater than the sum of the parts, where people get involved in something larger than themselves and contribute to a community that gives back to them in return.

Readers can visit the World Usability Day Web site at <http://www.worldusabilityday.org>.

8.7 DIRECTORY OF ORGANIZATIONS

8.7.1 Informal online organizations

Online tools such as Twitter, Flickr, Facebook, YouTube, LinkedIn, and Plaxo have all been leveraged to keep up connection and maintain community. These online tools help create communities for professionals and provide excellent resources for project management. A simple “tweet” (post) on twitter or update on Facebook can provide a project leader with contacts, test participants, ideas for research, and many other resources. These online communities are continually growing. The benefits can be enormous and the cost is low, so participating in online organizations is a great option for user researchers.

One way to make use of these online organizations is to set up accounts on Twitter that are linked to a Facebook page. The tweets on Twitter can automatically update Facebook and connect with many hundreds of people throughout the world in a matter of minutes.

LinkedIn provides the same types of opportunities in a more traditional forum geared strictly toward professional activities.

YouTube and Flickr provide opportunities for professionals to start groups focused on a particular area. These create online global communities of interest, which can be a place to post video and pictures of work performed in countries throughout the world.

The previous list is not all-inclusive but provides the reader with many good examples of popular social networking sites and tools. Any of these tools can be used together or individually to create and maintain networks of professionals from throughout the world.

8.7.2 Formal research organizations

Usability Professionals' Association (UPA; <http://upassoc.org>):

UPA's mission is to support and advance the development of usable products. UPA provides an international network for usability professionals to work together and create a community. UPA also has an extensive network of local chapters worldwide. The list and contact information can be found on their chapter's Web page (<http://upassoc.org/chapters/index.html>).

Association for Computing Machinery (<http://www.acm.org>): This is a large-scale organization made up of many special interest groups in specific areas, such as computer-human interaction (see SIGCHI), artificial intelligence, computer architectures, and much more.

ACM Special Interest Group for Computer-Human Interaction (SIGCHI; <http://www.sigchi.org>): SIGCHI brings together people working on the design, evaluations, implementation, and study of interactive computing systems for human use. The local SIG page (<http://sigchi.org/local-sigs>) provides links for chapters throughout the world, including contact information. This is a good resource for connecting with local professionals.

ACM Special Interest Group on Design of Communication (SIGDOC; <http://www.sigdoc.org>): SIGDOC is an organization that supports interdisciplinary problem solving related to online and print documentation and to communications technologies.

UXnet (<http://uxnet.org>): UXnet creates effective, functional, and strategic networks to enable cross-disciplinary collaboration between user experience professionals. It connects people, organizations, resources, and ideas to enable the growth and maturation of user experience as a practice, a community, and, eventually, a discipline. UXnet has an extensive network of global local organizations and local leaders available on their locale's Web page (<http://uxnet.org/locales>).

Human Factors and Ergonomics Society (HFES; <http://www.hfes.org>):

HFES is an organization whose mission is to promote the discovery and exchange of knowledge concerning the characteristics of human beings that are applicable to the design of systems and devices of all kinds. They also have a network of local chapters (http://www.hfes.org/web/Chapters/local_chapters.html).

British HCI Interaction (<http://www.bcs-hci.org.uk>): This is a group of the British Computer Society (<http://www.bcs.org>) and provides an organization for those working in computer-human interaction in Great Britain and throughout Europe.

8.7.3 Other professional organizations

Interaction Design Association (IxDA; <http://www.ixda.org/index.php>): IxDA describes itself as a novel kind of “un-organization” and there is no cost for membership. It claims 10,000 members and 70 local groups worldwide. The focus is on creating an interaction design community.

Information Architecture Institute (IAI; <http://iainstitute.org>): IAI’s mission is to support individuals and organizations specializing in the design and construction of shared information environments.

AIGA, the professional association for design (AIGA; <http://www.aiga.org>): Founded in 1914, AIGA is the oldest and largest professional society for design, and it aims to advance designing as a professional craft, strategic tool, and vital cultural force.

Society of Technical Communication (STC; <http://www.stc.org>): STC is an organization for technical writers with a strong usability group. Its mission is to advance the field of technical communication.

The Localization Industry Standards Association (LISA; <http://www.lisa.org>): LISA is one of the world-class industry organizations in the field of localization. LISA even has a tab on their Web site for networking and an online discussion forum.

Institute of Industrial Engineers (<http://www.iienet2.org/Default.aspx>): This is a global organization for industrial engineers who often do research on product concepts and designs. This organization has an extensive network of chapters throughout the world.

8.7.4 Conferences and seminars

HCI International (<http://www.hci-international.org>): HCI International is a biennial conference on human–computer interaction. It is one of the most internationally regarded conferences of its kind and alternates between locations in the United States, Europe, and Asia. It provides a great opportunity to network with professionals from throughout the world.

International Association of Societies of Design Research (<http://www.iasdr2009.org>): This group organizes an annual conference. This group brings together many user research organizations.

Human Factors in Telecommunication (International) (<http://www.hft.org>): This group is devoted to biannual conferences and published proceedings that cover human factors engineering research applied to information and communications technologies.

Designing for User eXperience (DUX); (<http://www.aiga.org/content.cfm/dux-designing-for-user-experience>): The DUX conference, which began in 2003, is a collaboration between ACM SIGCHI, ACM SIGGRAPH, and AIGA. The conferences gather researchers and practitioners to share their stories and experiences on how the needs and goals of both users and businesses are met through design.

8.7.5 Global user research consultant listings

UPA Consultants Directory (http://www.upassoc.org/people_pages/consultants_directory): This directory provides listings of professionals in the user research field from throughout the world.

Usability Net (<http://www.usabilitynet.org>): This is a European Union (EU) project that provides usability and user-centered design resources to practitioners, managers, and EU projects. The consultancy list provides an extensive listing of practitioners from throughout the world.

8.7.6 Other resources

General Web site for localization services (<http://www.theverybestofstuff.de/localization/localizationlinks.htm>): This is a Web site run by a group of independent localization professionals to help other people perform research studies in different countries.

8.8 KEY TAKEAWAYS

Professional organizations can help project leaders who are doing research in many locations throughout the world by providing basic resources such as recruiting, as well as assistance with local customs and cultural issues. Organizations can also help professionals create wide-ranging networks and expand their knowledge through their offered events, conferences, and publications.

World Usability Day is an excellent example of a project that has been enriched by professional organizations from the Usability Professionals' Association to local chapters, volunteer groups, and online social networking. World Usability Day has grown as a result of these resources and has taken on a life of its own to become an event where professionals connect, learn, and work together on projects and initiatives.

Project leaders can benefit from making use of their professional organizations and should consider them a vital part of their global research toolkits.

The impact of culture on user research

Thomas Visby Snitker

9.1 INTRODUCTION: HOW CULTURE IMPACTS USER RESEARCH

In recent years, interest in the field of user research has grown, from academia and practitioners, in all areas of the world. The influence of culture on user research has received much attention without much in the way of theory to support it. The user research is often focused on a specific product or service or on the cultural acceptance of a product in a specific context or culture – not just how the Web site works for a Chinese user but also if the Chinese user wants this Web site and how it fits a purpose and answers a need in a Chinese context. The complexities of accounting for culture are daunting to many user researchers; in many cases, they have few models and concepts for culture per se and even fewer for the implications of culture on their particular project.

This chapter introduces a framework for understanding how culture impacts user research and addresses the individual elements of a user research project to analyze the implications of culture. The chapter draws from cross-cultural theory and empirical user research results from various stages of the user research process.

At the core of user research is all things human. International user research must relate to human expressions and impressions throughout the world. In user research, the users are often described by gender, age, education, culture, ethnicity, country, one of several lifestyle segments, and many other characteristics. No matter which of these characteristics we choose, the choice has an effect on what we learn in a user research project. If, in a project, only little is known about the influence of

culture on the research, then the findings will be skewed and, often, without awareness. The attention to culture in all phases of the user research project can increase the quality of the research and the validity of the results.

9.2 THE IMPLICATIONS OF CONTEXT TO USER RESEARCH

Context refers to the circumstances, environment, and background (i.e., history) that determine, specify, or clarify the meaning of an event involving the system, product, or service being researched. The use of field studies to clarify the context and the local practice is increasingly gaining acceptance as a method. For example, [Honold \(2002\)](#) studied Indian households to learn why a specific modern washing machine was not being widely adopted in India. She observed and interviewed families and learned that the machine was actually well received by the Indians. However, because the machine had a long wash cycle, it did not fit well into the local washing practices; electricity supplies were restricted at certain times of the day, and often families employed cleaners who were only available for short periods of the day. Simply studying the usage of the buttons on the machine would have been meaningful; however, the context regarding the use of the machine offered incredibly valuable insights that usability research alone would not have uncovered.

9.3 THE IMPACT OF THE DEVELOPMENT PROCESS ON CROSS-CULTURAL USER RESEARCH

Most user research projects are executed in the wider context of a development project – before, during, or after the product or service is launched. The influence of culture on user research is present in all phases of a research project, such as the following:

- Initial analysis of the market and usage context
- Exploration and validation of the system
- Product or service testing
- Implementation through localization and or internationalization

The influence of culture throughout these project phases is discussed later. The development of physical products often follows the stage-gate process ([Cooper, 1993](#)), in which research often feeds into the development process at a number of decision points (gates). In the

development of digital products and services, the development processes are mostly either Scrum – an agile and more recent software development method – or Waterfall – the sequential development process, in which development is seen as flowing steadily downward (like a waterfall, not very different from the stage-gate process). User research can be applied by development projects throughout the development process, but as this section describes, the development process itself is challenged by issues related to culture.

Most information technology systems, Web sites, and other products and services follow a common process, referred to in this section as the general development process. Malaysian researcher [Alvin Yeo \(2001\)](#) presents a two-step internationalization and localization process for developing software for the global market that is relevant to most cross-cultural user research.

Internationalization is the process that separates software into two components – a culture-independent component and a culture-dependent component. The culture-independent component, known as the generic core, contains the bulk of the software and is devoid of culture-sensitive elements.

Localization is the culture-dependent component of the software and is rich with items specific to a particular target culture. These elements comprise things such as dialog and error messages and menu names that are translated and stored in a message file. There is a different message file for each culture, which will allow for adapting the page orientation (left to right in Danish or English and right to left in Arabic) and the vocabulary (“color” in American English and “colour” in British English). If an interface is required in a new language, the localization process takes place in the culture-dependent components – only the message files are localized; there is no modification of the culture-independent component of the software. In user research, the localized design versions are evaluated with users from the target culture. This evaluation is conducted to ensure that the translation of culture-dependent components is appropriate for the target culture. The evaluation is also carried out to ascertain that the accepted messages fit the available screen real estate. [Yeo \(2001\)](#) concludes that the user-research literature only supplies information that accommodates the target culture’s language and its language-associated issues, such as character sets, sorting, character display, and the data display formats (date, time, currency, and address formats). Issues relating to deeper levels of culture, such as factors pertaining to values and rituals, are omitted. This observation is evident in widely used software packages

today, which are available in many languages (and the respective data display formats) but neglect to take into account the “deeper” cultural issues. This emphasizes the need for user researchers to be aware of the level they are in fact studying – whether the research project is examining the overtly apparent level (e.g., how the software appears to the user, how it works, and if it is usable) or whether the project is examining the covert deeper levels (e.g., if the software is adapted to local values and if it supports existing customs). If the researcher is a stranger to the culture of the respondent, the overtly apparent levels of the user experience are indeed apparent to the researcher, and the researcher will be more aware of issues on this level compared to the issues on the covert deeper level.

9.4 A MODEL FOR UNDERSTANDING THE IMPACT OF CULTURE ON USER RESEARCH

The Cultural Usability Project, coordinated by Torkil Clemmensen at the Copenhagen Business School, aims “to investigate the impact of culture on the results of established methods of user research” (Clemmensen, 2008). The Project offers an in-depth investigation of the cultural specifics that go into user research test situations in three countries: Denmark, India, and China. The Project seeks to reduce cultural bias and to produce comparable results in testing methods across countries. The Project is a collaboration among senior researchers in all three countries as well as advisers from global institutions in the United States, Europe, and Asia.

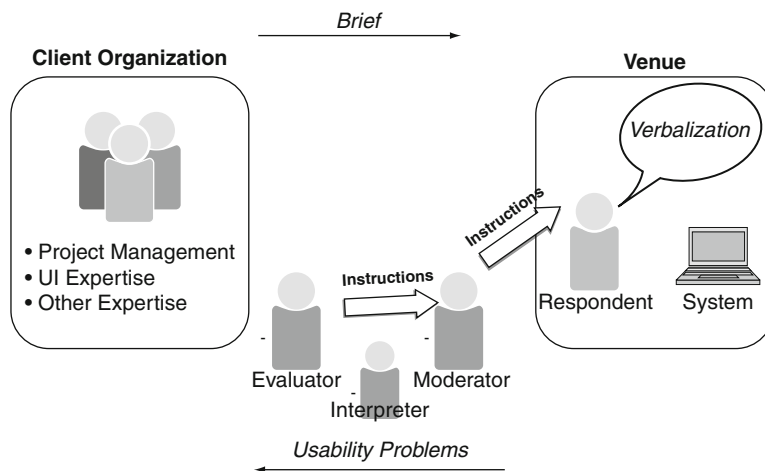
Findings indicate that user research varies depending on the cultural context, just as evaluation methods and the basis for user research tests do. Moderators trained in different cultural contexts will not necessarily produce the same results when conducting user research tests on the same stimuli. This is not just a cultural problem. Different moderators in the same country and even in the same lab do not always produce the same results; see, for example, Molich and Dumas (2008). In a comparative usability evaluation of the Web site for the Hotel Pennsylvania in New York, 17 teams reported 340 different usability issues. Only 9 of these issues were reported by more than half of the teams, whereas 205 issues (60%) were uniquely reported – that is, no two teams reported the same issue.

However, the moderator’s cultural background may systematically impact the types of results found as well. To determine how culture specifically affects user research, the Cultural Usability Project produced a model for locating and understanding when, where, and

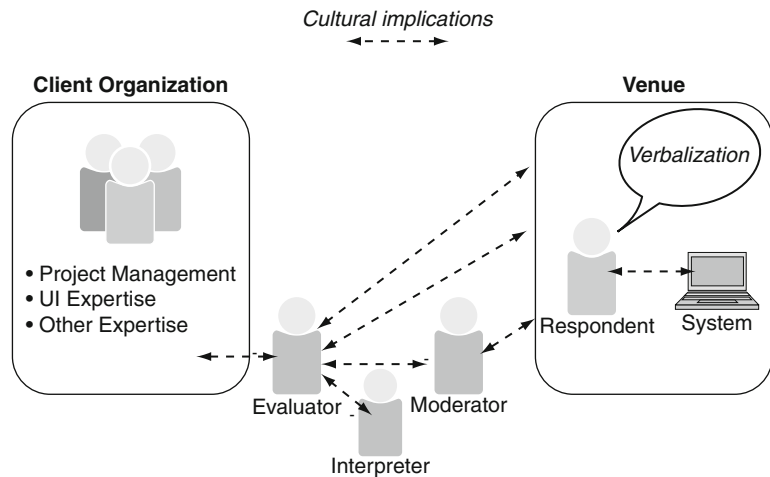
how culture affects a standard user research test. The original model was conceived by Hertzum (2007), and for the purpose of this chapter it has been expanded to include the cultural factors related to the sponsoring body – the client – of a user research study.

Here, the Hertzum model starts with an organization's need to research a user group interacting with a system in order to assess its usability. The organization can be an internal group (e.g., marketing) or an external company; similarly, the user research group can be internal to the organization or an outside agency. In either case, the client organization is often the producer of the system with different competencies and authorities represented, each of whom has his or her own specific focus or interests, such as project management, marketing research, interface design, information architecture, programming, and business process, and each of whom has a vested interest in the outcome of the research.

The model next assumes that the client organization briefs an evaluator (internal or external), who then briefs one or many moderators and the interpreter. The moderator also adapts the brief into test instructions for the respondent. The moderator and the respondent are at the test facility or venue – be it formal (e.g., a market research center) or informal (e.g., meeting rooms in a hotel) – with the interpreter and client observers. The purpose of the rather standard process described is to feed user research guidance back to the client organization, preferably in a structured and actionable manner, as shown in Figure 9.1.



■ FIGURE 9.1 The feedback loop of usability problems.



■ FIGURE 9.2 Multiple cultural influences during a research project.

The Cultural Usability Project has shown that culture influences the process across all of the elements and interactions (Fig. 9.2). In a user research study, it is important to consider these cultural influences, and if the study spans more cultures, it is important to consider the *different* influences in all of the cultures involved (see Table 9.1).

Later, the model is applied to a framework for the analysis of how culture influences user research.

9.5 THE IMPACT ON USER RESEARCH OF THE CULTURAL DIFFERENCES BETWEEN MODERATORS

Shi (2008) showed a distinct difference in how Danish and Chinese user research specialists rated the severity of problems found in a qualitative usability test. She studied think-aloud tests conducted with Chinese and Danish evaluators in China and Denmark with English-proficient respondents. Usability problems were ranked following a simple scale from “minor usability problem” to “important to fix” and “imperative to fix.” Her main findings were that the local and foreign evaluators found similar usability problems and that they also found a similar number of usability problems in Denmark and China. However, Chinese evaluators tended to rate the usability problems as “important” and the tendency was especially significant with Chinese users. Danish evaluators did not have such a tendency, and they tended to give similar numbers of ranks of “minor,” “important,” or “critical.”

Culture influence	In what way?
Client organization proper	When different project members have different cultural backgrounds, or when departments working together are located in different countries: Do they share the references, strategies, and goals for the project? Do they even share the terms for key concepts and issues?
Client organization vis-à-vis that of the moderators and the respondents	When communicating the research brief to a moderator from a different culture, the client organization holds assumptions that are valid only within the culture of the client organization.
Moderator vis-à-vis that of the interpreters, the venue, and the moderators and the respondents	When the moderator designs the study, careful planning and local insight are essential to minimize the risks of choosing venues and test times that are ill-suited or inconvenient for the target group. Also, when the moderator recruits and briefs the local staff about the study specifics, back-translations are often needed to ensure the quality of the screeners, stimulus, question guides, and other relevant material.
Moderator vis-à-vis that of the respondent	By ensuring that the relationship between the moderator and the respondent is socially acceptable and efficient for the study, and by avoiding power, age, or gender imbalance between the two.
Respondent vis-à-vis that of the system	When the study design, including the recruitment criteria, ensures that the system is actually relevant to the particular target audience in the particular culture.

Researchers in the East and the West react differently to unexpected information or surprises. According to [Nisbett \(2003\)](#), easterners expect frequent, dynamic change and therefore experience less surprise when things evolve in “inconsistent” ways, whereas Westerners, who to a larger extent perceive their world through means of logical inference, notice – with surprise – when things evolve in “inconsistent” ways. Thus, [Shi \(2008\)](#) adds weight to theories that the holism tolerance is lower in the West and higher in Asia, see [Hofstede \(1991\)](#) and [Nisbett \(2003\)](#).

In general, and allowing some range of interpretation for the following argument, the Western concept of “self” is of an individual who is separate, autonomous, and atomized (i.e., made up of a set of discrete traits, abilities, values, and motives), seeking separateness

and independence from others. In contrast, in Eastern cultures, relatedness, connectedness, and interdependence are sought, rooted in a concept of the self not as a discrete entity but, rather, as inherently linked to others. Markus and Kitayama (1991) advocate a twofold distinction between an independent self and interdependent self, and that these different constructs have consequences for how people experience themselves and others and also for cognition, emotion, and motivation. The independent construal of the self further implies that people view themselves as unique, promote their own goals, and seek self-expression. People with an interdependent construct of the self seek to belong and fit in, to promote others' goals, and to occupy their proper place; this is illustrated as follows:

The Western notion of the self as an entity containing significant dispositional attributes, and as detached from context, is simply not an adequate description of self hood. Rather, in many construals, the self is viewed as interdependent with the surrounding context, and it is the "other" or the "self-in-relation-to-other" that is focal in individual experience. One general consequence of this divergence in self-construal is that when psychological processes (e.g., cognition, emotion, and motivation) explicitly, or even quite implicitly, implicate the self as a target or as a referent, the nature of these processes will vary according to the exact form or organization of self inherent in a given construal. With respect to cognition, for example, for those with interdependent selves, in contrast to those with independent selves, some aspects of knowledge representation and some of the processes involved in social and nonsocial thinking alike are influenced by a pervasive attentiveness to the relevant others in the social context. Thus, one's actions are more likely to be seen as situationally bound, and characterizations of the individual will include this context. (p. 225)

The difference in self-perception between easterners and Westerners may also exist in the user research. Chinese users may not talk directly about their opinion of the interface but, rather, may talk much about others' opinions of the interface. They may say "I did it well because I am very familiar with this kind of interface generally, most people may think it is very hard, because. . . ." They may be more willing to look at the interface in this situation rather than as a static or fixed item and may tolerate more changes to the interface (or in some ways they may even expect more changes).

Likewise, Chinese moderators may also lead the users to talk about “most people’s thought or general opinion” and may expect the individual users to express inconsistent views – that is, different views in different situations.

9.6 THE CULTURE OF NATIONS AND ORGANIZATIONS AND ITS IMPLICATIONS ON USER RESEARCH

Hofstede (1991) and Hofstede and Hofstede (2004) demonstrated that there are national and regional cultural groupings that affect the behavior of societies and organizations, and these behaviors are persistent across time. In this section, Hofstede’s findings are compared with the framework offered by the Cultural Usability Project model.

Hofstede (see www.geert-hofstede.com) founded and managed the personnel research department of IBM Europe from 1965 to 1971, during which time he developed cultural dimensions based on a large international survey consisting of thousands of questionnaire responses from more than 60 countries addressing specific cultural issues.

Hofstede developed a model whereby an individual country could be assigned a score on each of five dimensions (Table 9.2), thus offering multiple ways of comparing various cultures. Hofstede’s dimensions provide guidance on how to avoid pitfalls and achieve insight from his and his associates’ studies – from research design and planning to execution and analysis. His dimensions also allow the ability to analyze the influence of culture on user research. Hofstede (1991) and Hofstede and Hofstede (2004) derived the following five dimensions to compare cultures:

- Power distance
- Individualism (vs. collectivism)
- Masculinity (vs. femininity)
- Uncertainty avoidance
- Long-term orientation

Hofstede’s focus is on highlighting essential patterns of thinking, feeling, and acting that are well established in a person early on in life, thus defining culture. These cultural patterns affect user research in profound ways, and being aware of them can help improve how global user research is executed. Each of these is discussed in the following sections.

Table 9.2 Values for Hofstede's Dimensions for Selected Countries*

Country	Power distance	Individualism/collectivism	Masculinity/femininity	Uncertainty avoidance	Long-term orientation
Australia	36	90	61	51	31
Austria	11	55	79	70	
Brazil	69	38	49	76	65
China	80	20	66	30	118
Czech Republic	57	58	57	74	13
Denmark	18	74	16	23	
Finland	33	63	26	59	
France	68	71	43	86	
Germany	35	67	66	65	31
Greece	60	35	57	112	
Guatemala	95	6	37	101	
India	77	48	56	40	61
Italy	50	76	70	75	
Japan	54	46	95	92	80
Malaysia	104	26	50	36	
Mexico	81	30	69	82	
The Netherlands	38	80	14	53	44
New Zealand	22	79	58	49	30
Russia	93	39	36	95	
Singapore	74	20	48	8	48
Slovakia	104	52	110	51	38
South Korea	60	18	39	85	75
Spain	57	51	42	86	
Sweden	31	71	5	29	33

Continued

Table 9.2 Values for Hofstede's Dimensions for Selected Countries*—cont'd

Country	Power distance	Individualism/collectivism	Masculinity/femininity	Uncertainty avoidance	Long-term orientation
Switzerland	34	68	70	58	
Turkey	66	37	45	85	
United Kingdom	35	89	66	35	25
United States	40	91	62	46	29

**Boldface numbers indicate the high and low values for each dimension.*

9.6.1 Power distance

Hofstede's power distance dimension describes the extent to which the less powerful members of institutions and organizations expect and accept that power is distributed unequally. Table 9.2 shows the values for several countries in the power distance column. Low-power distance countries such as Austria (11), Denmark (18), and New Zealand (22) expect and accept power relations that are more consultative or democratic, and people relate to one another more as equals regardless of formal positions. Subordinates are more comfortable with and demand the right to contribute to and critique the decision making of those in power. In high power distance countries (e.g., Malaysia and Slovakia, 104 each), the less powerful accept power relations that are more autocratic and paternalistic. Subordinates acknowledge the power of others simply based on where they are situated in the formal hierarchy. As such, the Power Distance Index Hofstede defines does not reflect an objective difference in power distribution but, rather, the way people perceive power differences. In Europe, power distance tends to be lower in northern countries and higher in southern and eastern countries.

In user research, the power distance will affect most phases of a project, including the relationship among key members of the sponsoring organization and the researchers, moderators, translators, venue staff, and participants.

As mentioned previously, the power distance in the countries participating in the project will help determine if the project member roles can be adapted to the specific country.

If, for example, the client organization is perceived as superior by the local moderator but not by the client organization, handling mistakes and errors might be difficult. This would mean that the moderator accepts the instructions from the client organization even if the instructions are not relevant or adapted to the local research practice, and that the research is thus not delivering to its full capacity. The client will expect a low power distance and to have an informal exchange of ideas and of mistakes and errors, but the suppliers will lack an equal counterpart (the client is perceived as being at a higher power level) and thus the necessary exchange of information and instructions could be impaired.

A similar imbalance will be possible in the relationship between the evaluator and the moderator and also between the moderator and the respondent; if the two parties have different perceptions of the power distance, the communication is hindered and the research results will be skewed. To avoid this, all members of the research project, from client to evaluator and moderator, need to have a clear understanding of possible power level-related obstacles and how to remedy them. In the previous example, one solution would be for the client to explicitly provide a lower ranking project member as contact point for the supplier.

9.6.2 Individualism/collectivism

Individualism is contrasted with collectivism (Hofstede & Hofstede, 2004) and refers to the extent to which people are expected to stand up for themselves and choose their own affiliations or, alternatively, act predominantly as a member of a lifelong group or organization. Table 9.2 shows the values for several countries in the individualism/collectivism column. Latin American cultures including Guatemala (6), that might otherwise consider themselves as Western, rank among the most collectivist in this category, whereas Western countries such as the United States (91), the United Kingdom (89), and Australia (90) are the most individualistic cultures.

Similar to the influence of the power distance in the countries participating in a user research project, understanding the individualism/collectivism levels of the countries will help to determine if the project member roles can be adapted to the specific country. The individualism/collectivism dimension also has great influence on how a system, product, or service is used and perceived. A person from an individualistic culture, if participating in user research, will focus on

the personal benefits and problems of the system, and a person from a collectivist culture will focus on how the system will affect his or her group life and how using the system will be perceived by others. For example, testing the utility of a mobile phone in Denmark (high individualism with a score of 74) and in China (high collectivism, 20) using the same set of research procedures in both countries may lead to incomparable results. If, due to their general cultural characteristics, Danes speak mostly on their own behalf and Chinese speak mainly on the behalf of their group, the results might be incomparable.

Two values that are important to a collectivist society are maintenance of harmony and the preservation of face. Harmony must be maintained to perpetuate the closely knit social framework. One way of maintaining harmony is the preservation of face. "Preserving face" means maintaining one's dignity by not embarrassing or humiliating a person in front of others. The fundamental thought is that by preserving one's face, interpersonal relations can be improved, and harmony and respect can be sustained. In most collectivist cultures, direct confrontation of another person is considered rude and undesirable. According to Yeo (2001), the think-aloud usability testing technique may have limitations due to this dimension. Malaysians have been observed to be less forthright in expressing views and opinions and are uncomfortable in criticizing and evaluating peers and subordinates even if by proxy through criticizing an interface. Yeo attributes this to the features of a collectivist society.

In collectivist cultures, giving frank negative opinions can therefore undermine harmonious relationships and threaten group solidarity. To mitigate this issue in research design, researchers can encourage the respondent to try to assess what would pose problems for others or for the society as a whole rather than to the respondent individually. Also, researchers could try to avoid concepts such as "problems" and "criticism" and instead focus on areas of improvements and increased harmony.

9.6.3 **Cultural masculinity/femininity**

The masculinity/femininity dimension refers to the value placed on traditionally male or female values as understood in most Western cultures. So-called masculine (M) cultures value competitiveness, assertiveness, ambition, and the accumulation of wealth and material possessions, whereas "feminine" (F) cultures place more value on

relationships and quality of life. Table 9.2 shows the values for several countries in the masculinity/femininity column. Slovakia (110) is considered by Hofstede to be the most masculine culture, followed by Japan (95), and Sweden (5) is the most feminine. Anglo cultures are moderately masculine. Another reading of the same dimension holds that in M cultures, the differences between gender roles are more dramatic and less fluid than those in F cultures.

Similar to the influence of the power distance and individualism/collectivism levels, understanding the masculinity/femininity levels of the countries will help the project to determine if the moderator role can be adapted to the specific country. In some countries, females and males can hold the same positions in society (e.g., as a head of state), in business (e.g., as a CEO), or at home (e.g., as a caregiver), and in some countries they cannot, or they can in business but not in society. The masculinity/femininity dimension has many implications for user research in how the target audience is specified, and it highlights how important it is to involve local research recruitment when designing the research.

The influence may also be significant in the staffing of a given project and in the relationship among the project members. If, for instance, a client or an evaluator from a masculine country has certain expectations about the gender of the local moderator, then these expectations need to be explicit for the project to run well. Ultimately, the reporting from a project spanning both M and F cultures may also be skewed if, for example, an evaluator originating from an F culture is simply unaware of the implications of gender in an M culture to the use of a system, product, or service, and vice versa.

Yeo (2001) reports that in Malaysia (50), the participant's societal rank in relation to the moderator's rank influences the number of positive remarks (more positive remarks occur when the participant has the lower rank) and negative remarks (more negative remarks occur when the participant has the higher rank). Also, he notes that the codiscovery (where two participants are tested at the same time) method was "found to be problematic when people of differing status were employed; in particular, women when paired with a man were found to talk very little."

9.6.4 Uncertainty avoidance

According to Hofstede, uncertainty avoidance reflects the extent to which members of a society attempt to cope with anxiety by minimizing uncertainty. Cultures that score high in uncertainty avoidance

prefer rules (e.g., about religion and food) and structured circumstances, and employees tend to remain longer with their current employer. [Table 9.2](#) shows the values for several countries in the uncertainty avoidance column. Mediterranean cultures (Greece, 112), Latin America (Guatemala, 101), and Japan (92) rank the highest in this category, whereas Singapore (8) ranks the lowest.

In user research, uncertainty avoidance will influence the results and the process in many ways. Understanding the perception of uncertainty is important in all of the cultures involved, from the client side to the evaluator side, the local moderator, and the venue – if e.g., the client accepts little uncertainty but the venue management accepts a high degree of uncertainty, the client may misunderstand the venue management’s attitude and experience anxiety.

A client from a high uncertainty avoidance culture may expect a project to need more formal documentation and more structure than a moderator from a low uncertainty avoidance culture can deliver. This may manifest itself in the extent of the feedback and in the attentiveness to formal rules in planning and conducting the research, and also in practicalities such as the times a meeting or a research session is supposed to start and end (strictly on time or “more or less”) and who actually attends the meeting or the research. This dimension can help highlight expectations about the patience levels and security/safety levels among the project members to avoid anxiety and misunderstandings.

9.6.5 Long-term or short-term orientation¹

This dimension refers to a culture’s “time horizon” or the importance attached to the future versus the past and present. In long-term-oriented cultures, values include persistence (perseverance), ordering relationships by status, thrift, and having a sense of shame. In short-term-oriented societies, values include normative statements, personal steadiness and stability, protecting one’s face, respect for tradition, and reciprocation of greetings, favors, and gifts. [Table 9.2](#) shows the values for several countries in the long-term orientation column. China (118), Japan (80), and other Asian countries score especially high (long term); Western nations (United Kingdom, 25; United States, 29) and many less developed nations score low (short term).

¹This fifth dimension was argued by Michael H. Bond ([Hofstede & Bond, 1988](#)) subsequent to the publishing of the first four dimensions. Initially, it was called Confucian dynamism, and Hofstede later incorporated this into his framework as long-term versus short-term orientation.

In a user research project, the values and benefits of the system, product, or service in question for the users can be perceived very differently depending on whether the perception is on the short term or on the long term. Because it is important to understand what research participants are talking about, knowing their time horizon is crucial: Are they referring to a present-day task, need, or benefit or sometime in the future?

9.6.6 Applying Hofstede's model to user research

Hofstede's dimensions allow project team members to learn and achieve more when planning and executing studies in multiple cultures, especially cultures that are unfamiliar to the researchers. In the planning stage, Hofstede's dimensions may be used to determine if alterations to the method are needed. For example, if a study needs to compare results from a low power distance country to a high power distance country, the role of the moderator has to be carefully thought through ahead of time. Specifically, it must be clear if the moderator should maintain a formal relationship with the respondent in high power distance countries as well as in low power distance countries, or if the moderator role can be adapted to the specific country.

Certainly, these cultural differences describe averages or tendencies and not characteristics of individuals. A Japanese person, for example, can have a very low uncertainty avoidance compared to a Filipino even though their national cultures point strongly in different directions. Consequently, a country's scores should not be interpreted as deterministic.

Using Hofstede's dimensions and the Cultural Usability Project model in the poststudy analysis phase will allow a better understanding of the impact of a specific culture on the results. For instance, if results from one culture point to a certain aspect (e.g., that the country's scores are high on individualism), the project can expect similar results from countries with a similar individualism score.

9.7 COGNITIVE DIFFERENCES BETWEEN EAST AND WEST AND THEIR RELATIONSHIP TO USER RESEARCH

Applying the works of Richard E. Nisbett to user research is easy because of a common focus on cognition, perception, and, by extension, user performance. In his book, *The Geography of Thought* (2003), Nisbett builds on an analysis of ancient Greek and Chinese civilizations. Much of this work defines and elaborates on cultural differences through a series of laboratory experiments.

Nisbett delimits his analysis to the thought systems of East Asia (specifically China), but often the term *Eastern* can cover Korea and Japan as well. He compares Asian thought systems with the thought systems of the West, meaning the Anglo-American areas of North America and northwest Europe, specifically the United States and the British Isles.

Nisbett categorizes behavior on the basis of dispositional and situational as well as interaction theory. In the context of cross-cultural user research, the following findings are relevant to cross-cultural user research:

- Causal attribution
- Categorization based on rules (Western) or relationship (Eastern)
- Attention to the field (Eastern) or salient objects (Western)
- Task-focus orientation (Western) and socioemotional relational orientation (Eastern)

9.7.1 Causal attribution

Nisbett suggests that the attribution of causation differs across cultures. Westerners are inclined to attend to some focal object, analyzing its attributes and categorizing it in an effort to find out what rules govern its behavior. Causal attributions tend to focus exclusively on the object and are therefore often mistaken. East Asians are more likely to attend to a broader perceptual and conceptual field, noticing relationships and changes and grouping objects based on family resemblance rather than category membership. Causal attributions emphasize the context. Social factors are likely to be important in directing attention. East Asians (more than Westerners) report that from their perspective, they live in complex social networks with prescribed role relations. To East Asians, attention to context is important to effective functioning. More independent Westerners live in less constraining social worlds and have the luxury of attending to the object and their goals with respect to it.

This could mean that moderators from different cultures react to different events when observing a user research test and thus may report different user research problems. For instance, “Chinese people are inclined to attribute behavior to context and Americans tend to attribute the same behavior to the actor” (Nisbett, 2003, p. 114). One example reported by Nisbett showed that Americans were much more likely to attribute certain behavior to the presumed personality traits of the person; Indians emphasized that contextual factors attributed to the behavior.

Furthermore, it seems that westerners are more likely to embark on causal attribution to describe a few factors as being the reason behind some observed phenomena. If these effects hold also for user research evaluators, it may have implications. Most important, evaluators may differ to the extent to which they clearly identify a factor behind some observed difficulty; the number of problems that are attributed to users' personality traits (e.g., being slow and inexperienced) may also differ.

9.7.2 **Categorization based on rules (Western) or based on relationship (Eastern)**

Nisbett suggests that East Asians classify objects and events on the basis of relationship and family resemblance rather than on rule-based categorization as done by Westerners (mainly Americans), where objects and people are separated from their environment, categorized, and reasoned about using logical rules. East Asians share a "holistic" orientation perceiving and thinking about objects in relation to their environments and reasoning dialectically, trying to find the middle way between opposing propositions.

When including Westerners and easterners in the same user research project, some portion of the results from the research will likely be influenced by the categorization performed by participants because user research often includes some type of process of sorting or arranging things into categories or classes. An obvious example is card sorting, a user research technique used to design an information architecture for a product user interface. Card sorting is used in design where a group of users, however inexperienced with design, are guided to generate a category tree or a so-called folksonomy (a user-generated taxonomy). It is a useful approach for designing workflows, menu structures, or navigation paths. In this case, the categorization is the very point of the user research. In other research techniques such as usability testing, the categorization may relate to how words and icons and their relations are interpreted and understood by participants.

9.7.3 **Attention to the field (Eastern) or to salient objects (Western)**

According to Nisbett, Westerners pay more attention to focal objects, whereas East Asians are inclined to focus their attention broadly on the field – the entire perceivable area. It is more difficult for East Asians than Westerners to make a separation between an object and the field in which it appears ("field dependence"). East Asians attend

to the field more than do Westerners; changes in the field, including relationships between objects, are likely to be easier for East Asians to detect. Because Westerners focus more on objects and their attributes, it is likely easier for them to detect changes in salient objects.

Western attention to the objects encourages categorization of those objects, assignment of rules to the objects, and causal attribution in terms of the objects. Attention to the field encourages noticing relationships and change, and it prompts causal attribution in terms of the context and distal forces. In addition, attention to the field could be expected to make it difficult to segregate a particular object from a field in which it is embedded.

In the context of user research, the effect of attention to field or to salient objects has consequences in all phases of the study. In the study design phase, less contextual information is needed when building test scenarios for Westerners than for East Asians. A Western moderator might supply adequate context for a western respondent but too little to be meaningful to an East Asian. An East Asian moderator might confuse the Western respondent in the attempt to provide the necessary amount of information to balance a test scenario. These differences in the test scenarios will lead to similar differences in the execution phase and in the analysis phase.

9.7.4 **Task-focus orientation (Western) and socioemotional relational orientation (Eastern)**

When conducting one-to-one sessions, respondents from different cultures may be affected by the evaluator to different degrees. According to Nisbett, there are two kinds of orientation – task-focus orientation and socioemotional relational orientation. Task-focus orientation refers to how people direct their effort toward task-related goals and how their attention is focused on monitoring the extent to which these goals are being accomplished. Socioemotional relational orientation refers to how people direct their effort and attention toward the interpersonal climate of the situation and how they strive to maintain social harmony.

In a typical task-focus culture, such as northern European, the perception of the moderator may not influence the users' behavior much because respondents will tend to focus on their task and care less about the evaluator's status, background, or other characteristics. In Asian countries, being socioemotional relational orientation cultures, respondents may be influenced more by the perception of the evaluators.

According to this perspective, people from the East and the West would appear to be affected by thinking aloud to quite different degrees: Asking people to think aloud does not degrade the problem-solving performance of Westerners, compared to performing in silence, but it may degrade the performance of easterners.

If applying this theory to the testing of design and graphic layouts on a computer screen, East Asians would be more likely to focus on the background as much as on the foreground before making a choice, whereas Westerners would pay little attention to the background. During a user research test, Asians would report the action but not the fact that their emphasis is on the background because it is “natural” for them.

9.8 KEY TAKEAWAYS

This chapter included elements in all phases and all the agents of a user research project – the role of culture between the client and the moderator, between the moderator and the translator, between the moderator and the respondent, etc. The point is not that culture implies insurmountable problems to a project in theory or in the practical application of methods. The field is still being developed by projects, practitioners, and academics, and it is hoped that this chapter encourages practitioners to support this effort and to include increasingly more cultural aspects in their research. After all, projects need to engage their end users and to draw a full picture of their end users’ context – be it local or global.

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Closing thoughts

Robert M. Schumacher

It is difficult to say anything these days about the pace of technological innovation that does not seem trite. With no danger of being hyperbolic, the technology revolution has fundamentally, totally, and forever changed humankind. And it will continue to do so. Human factors have played a key role: Pilots fly and land planes more safely than ever, engineers keep power plants running, drivers have fewer accidents, doctors operate with the smallest of incisions, and mobile phone users send billions of text messages every day. These changes have affected not only developed nations but also developing nations, albeit at different velocities. Adapting technology for users to cope with technological change at different educational levels, in different languages, and at different skill levels is the challenge for the global user researcher. As we look forward to the role of user research in the future, what do we take as axiomatic?

- The pace of innovation will positively accelerate.
- The importance of technology will continue to increase in our daily lives.
- Human capabilities will not change substantially.

Despite how it might feel, we do not serve the technology but, rather, the technology serves us. Continuing to bridge the gap between technology and human performance, user research and user-centered design will be essential. But user research will change for both intrinsic and extrinsic reasons. So what does the future look like for user research in general and global user research in particular? Let's speculate.

Future for organizations

- There will be increasing awareness that usability is a market requirement and/or a market differentiator. Accompanying this awareness will be an increase in demand for both internal and external user researchers.
- As the role of user research is more defined and understood, it will earn its place next to market research. Along with the understanding of what user research is, its application within an organization will extend not only to revenue-based activities but also to cost-reduction areas (e.g., call centers).
- User experience and branding will become more symbiotic. Organizations will realize that the customer (user) experience is integral to the brand and that brand perception can overwhelm utility and usability perceptions.
- Organizations will hire more user researchers and user-centered design professionals in key global markets, particularly India and China, to help them localize products. For growth in areas where presence has yet to be established, organizations will hire outside researchers in-market to augment and extend their knowledge of users in those markets.
- Increasingly, user experience consultancies will offer services globally.

Future for researchers

- In going global, the skills of the user researcher must expand; being skilled in multiple languages and being culturally aware will be critical. Researchers must be mindful of and sensitive to how artifacts (e.g., reports) are received in other cultures and be able to communicate the essence effectively with stakeholders of many nationalities. Possessing and building on the qualities outlined in Chapter 2 will be vital to success.
- As a result of the growth in demand for user research, there will be a growth in people doing user research. There has been a notable increase in the number of university programs offering degrees in human-computer interaction and related fields. It is important that the field of user research *not* break loose from the moorings of the behavioral sciences. We, as researchers, have to be careful *not* to communicate the *wrong* message: To wit, researchers can be trained to competence quickly. There are no shortcuts to this knowledge. Nothing risks the integrity of the field more than a lot of poorly trained practitioners.

- This brings us to discussion of professional standards. As a professional discipline, we should embrace a certification process through which researchers and practitioners demonstrate (1) foundational knowledge of the behavioral science underlying the field, (2) fundamental skills with the tools and methods for practicing the profession, as well as (3) practical, relevant experience. Because researchers have the potential to effect important, even life-altering, change, professional responsibility through certification should be part of the future. Certification exists today through the Board of Certification in Professional Ergonomics (<http://www.bcpe.org>) and is experiencing a level of success; the hope is that this success accelerates. Many professions (e.g., architects, financial planners, project managers, and even aerobics instructors) have both certification and continuing education requirements. Companies, organizations, and governments should demand user researchers with skills bolstered by a robust certification process.

Future for technologies and techniques

- The pace of technological change will affect not only *what* user researchers work on but also *how* they work on it.
- Trying to forecast the *what* is virtually impossible. Any *thing* that involves people to learn, remember, or extend capabilities is a candidate for user research. We have vision, in the short term, on what things will demand our attention: mobile devices, ecommerce, process control, etc. We have quietly accepted that just about every device has a microprocessor. As such, the ability to have more “aware” environments (e.g., Bluetooth-enabled bathroom scales that automatically update your personal health record via wireless network) will require users to have sophisticated mental models of interconnected devices. The rise of subtle embedded computers presents fascinating challenges for user researchers. These technology ecosystems will demand a high level of user-centered design and user research.
- The nascent field of neuroergonomics and neuroscience will likely play a key role in improving human–machine interaction.
- As applications of social media grow, improvement of human performance vis-à-vis social networks will be advanced by unlocking the potential in the science and methods of

ethnographers, consumer psychologists, social psychologists, demographers, and even economists.

- Researchers will become smarter about application of tools and technologies, and matching those to the questions at hand (see Chapter 6). As a field, we have to break out and understand that user research is not just usability testing. Usability testing is one of many methods; our fundamental role is to use our knowledge, insights, and tools to make things more useful and usable.
- How does the dimension of “global” factor into this? *What* we work on is affected by technology deployments that rely on infrastructures that vary widely from region to region and country to country. Perhaps the main impact is that lessons that are learned from deployments in one country or region can affect how technology is rolled out or accepted in another region. Yet, because the layers of culture and language, it is unclear how applicable those technology transfer lessons will be.
- *How* things are done, in some ways, is as a result of user research going global. Face-to-face interaction with users will always be necessary – the human connection for qualitative research cannot be done effectively over a webcam or through Web analytics. Thus, there will not be fewer demands for fieldwork. Through all the technological advances, the human connection will prevail as a necessary method for user researchers to understand the user’s needs and capabilities.
- However, because of relatively lower cost, time, and resource demands, some research methods (see Chapter 6) will have broader application for validation and quantitative studies. Other remote testing methods will gain prominence. For instance, the mobile phone can be conceived of as a data collection device (Lew, 2008). User panels can provide incredibly rich data on their experiences (e.g., taking and e-mailing photos of artifacts), surveys can be pushed based on a variety of internal and external events, and long-term usage can be overtly measured. The joint conceptualization of mobile-phone-as-data-collection-device and user-as-research-assistant could be one of the most revolutionary advances in user research techniques in the coming decade. Still, it is not about technology; it is about people. Local researchers will still be involved in any sort of automated research. Help is needed in each country or market to localize, coordinate, execute, and interpret the data.

In summary, in the future, the dynamics of technology change, organizational demand, and new tools and techniques will impact user research significantly.

In Closing

When quantifying the positive impact of good user research and good user-centered design, one measure is simply to count the number of users who interact with these products and services. There is a hint of satisfaction in these numbers to reward us for a job well done knowing that we've helped 500,000 people get easier access to their on-line account (for example). As we expand our reach globally, the temptation to do this calculus increases. However, that which brings many user researchers to the field is not the counting of increasing transactions but, rather, the desire to make a difference in a moment of frustration never realized. No matter what we accomplish for "the masses," what matters more is what we do for the individual. Whether we simplify the process for a grandmother looking at pictures of her grandchildren across the continent, make a destination easier to find when in a hurry, or protect a patient from a medical error, it all comes down to the simple fact that our mission is to improve the quality of life for people throughout the world.

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