



REMOTE RESEARCH

Real Users, Real Time, Real Research

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In-person lab research used to be the only game in town, and as with most industry practices, its procedures were developed, refined, and standardized, and then became entrenched in the corporate R&D product development cycle. Practically everything gets tested in a lab nowadays: commercial Web sites, professional and consumer software, even video games (see Figure 1.1).



PHOTO COURTESY OF DANNY HOPE

FIGURE 1.1
Brighton University's usability lab, from behind the traditional two-way mirror.

The Appeal of Lab Research

Part of the appeal of lab-based user research was that it provided a seemingly scientific basis for making decisions by using observational data, instead of someone's error-prone gut instincts. Stakeholders appreciated the firm protocol and apparent reliability of properly managed lab research. Lots of user research practitioners continue to perform lab research just because it's what people have been doing for a long time.

Market Research vs. User Experience Research

Let's make something clear. Focus groups are practically synonymous with user research in most people's minds, and focus groups belong to the world of market research. But there's a huge difference between market research and user experience (UX) research. Market research is much more common and comprises the lion's share of research spending; UX research comprises just a fraction of that (see Figure 1.2).



FIGURE 1.2
The relationship between market research and UX research. The two fields seem similar, but they have different goals and take different forms.

However, *this book is about user experience research, not market research.* The main difference between the two fields is that market research focuses on opinions and preferences, whereas UX research focuses on behaviors. The distinction can be confusing, especially since a lot of online consumer research companies try to convince you they give you insight into “what your customers are doing on your Web site,” when they're really just providing opinions.

Market Research vs. User Experience Research (continued)

A market research study might have goals like these:

- “Determine how users respond to our branding.”
- “Identify different segments’ color preferences for the homepage.”
- “See if users like our new mascot.”
- “Determine what users enjoy most and least about our site.”

While the goals of a UX study, on the other hand, would sound more like these:

- “Can anyone actually use my interface?”
- “Determine where users make errors in completing a purchase.”
- “See whether users can successfully create a playlist.”
- “Understand why users aren’t logging in.”
- “See how users mentally organize different product categories.”

It’s important to keep in mind that market research is pretty useless over small sample sizes. Opinions can vary widely across demographics and location, are very sensitive to the phrasing of the research questions, and can change fairly quickly. Behavior, on the other hand, is fairly consistent across demographics and location for many tasks, and most usability flaws in a given software interface can be uncovered in a moderated study by a much smaller number of users.

How small? That’s a contentious question. UX luminary Jakob Nielsen (in)famously claimed that having five users was enough to uncover 80% of usability flaws in an interface, but others like Jared Spool insist that the number depends on factors such as user segmentation, risks associated with the errors, task complexity, and so on. At any rate, our point is that a moderated UX study usually requires much fewer people than a market research study.

Market Research vs. User Experience Research (continued)

Put it this way: ask 10 people what they think about how well a door is designed, and their comments might not overlap at all. One blames the condition of the hinges, another talks about the weight of the door, another complains about the color of the doorframe, and so on. But if you observe 10 people walking through the door, and the first two accidentally try to push when they ought to pull, then you've found your design flaw right there.

So, to put it all together: whether you go with market research or UX research depends on what you're trying to find out. This book is about UX research, so it's focused on user behaviors rather than opinions.

FURTHER READING ABOUT THE SAMPLE SIZE QUESTION

Turner, C. W., Lewis, J. R., and Nielsen, J. (2006). Determining usability test sample size. In W. Karwowski (ed.), *International Encyclopedia of Ergonomics and Human Factors* (pp. 3084–3088). Boca Raton, FL: CRC Press.

Lewis, J. (2001). Evaluation of procedures for adjusting problem-discovery rates estimated from small samples. *The International Journal of Human–Computer Interaction* 13(4), 445–479.

Lindgaard, G., and Chattratchart, J. (2007). Usability testing: What have we overlooked? In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems* (San Jose, CA, USA, April 28–May 03, 2007). CHI '07. ACM, New York, NY, 1415–1424.

Is Lab Research Dead?

Heck no. Lab and remote research share the same broad purpose: to understand how people interact and behave with the thing you've made (from here on, let's just call it “the interface”). There's no need to set up a false opposition between the two approaches—one isn't inherently better than the other. Despite the versatility of remote research, there are lots of reasons you might want to conduct an in-person study instead, most of which have to do with security, equipment, or the type of interaction you want to have with your research participants. More generally, lab research

is appropriate when you need a high degree of control over some aspect of the session, such as the following situations.

Info security. Security is often a concern for institutions like banks and hospitals, which deal in sensitive information, or companies concerned with guarding certain types of intellectual property. If you're testing a top-secret prototype, you obviously don't want to let people access something from their home computer, where it could be saved or screen-captured. On the other hand, you might also be doing a study on users who would be secretive about sharing what's on their screen—government employees, doctors, or lab technicians, for instance. Either way, you'll want to test users in a controlled lab environment to keep things confidential, especially if what you're testing is so hush-hush that you must have your users sign a nondisclosure form.

Inability to use screen sharing. You might also want to use a lab if your users are unable to share their screen over the Internet, for whatever reason. Some studies (of rural users, cybercafe patrons, etc.) may require you to talk to users who don't have reliable high-speed Internet connections, who own computers too slow or unstable to use screen sharing services effectively, or who have operating systems incompatible with the screen sharing tools you're using. These restrictions apply only to moderated studies, for which you need to see what's on your users' screens.

The need for special equipment. Depending on the interface you're testing, you may require certain special software or physical equipment to run the study properly, which is most often the case with software that's still under development. Getting users to install and configure tools to run elaborate software can be a pain (though that's not unheard of), and requiring users to have certain equipment can make recruiting needlessly difficult.

The importance of seeing the user's body. Some kinds of research will require you to study certain things about the user that are difficult to gather remotely. UX research has recently begun using eye-tracking studies, and for that kind of study, you'd need to bring the users to the eye-tracking device. Other studies might require you to attend to the participants' physical movements, which may be difficult to capture with a stationary

webcam. And then there are multiuser testing sessions, in which a single research moderator facilitates many participants at once; screen sharing is currently not well suited to sharing multiple desktops at once, though some tools (e.g., GoToMeeting) make it relatively painless to switch from one desktop to another. We want to emphasize, however, that for most studies, seeing the user at all is *not* actually important; we explain why in Chapters 5, “Moderating,” (see “Ain’t Nothing Wrong with Using the Phone”) and 10, “The Challenges of Remote Testing.”

Although these situations are all compelling reasons to conduct in-person research, part of what we want to demonstrate in this book is that remote research is very broad and adaptable, and even if a study is conducted in a lab, elements of remote methods can be adapted and incorporated to enhance in-person research methods. We’ll get to that in Chapter 9, “New Approaches to User Research.”

Why I Went Remote

by **Brian Beaver**

*Old habits die hard, but for any number of reasons—cost, convenience, international testing—a handful of former lab researchers have switched to remote methods and never looked back. **Brian Beaver**, award-winning creative director at Sony, explains why he decided to go with remote methods after many years of lab testing.*

ON GOING REMOTE

I have quite a bit of experience, either organizing user research sessions or participating in them, especially at Sony. My research has been pretty varied and the outcomes are always interesting, but I’m a big fan of remote usability testing. It seems to give me the best bang for my buck.

I’d read about it a few years back and had done some work with Adaptive Path when it had a focus on usability. Adaptive Path referred me to Nate [Bolt, coauthor of this book], and when he shared his remote approach with me, I knew we were in sync because a lot of the pain points and skeptical raised eyebrows around results we’d obtained in previous lab testing instantly diminished with remote usability testing.

Why I Went Remote (continued)

The pain points always involved recruiting. With a Web site you have such a diverse geographic base that it can be challenging to bring a core group of your users together in one location. Sony tends to be very protective of its customer information, and wouldn't share it with a research company for the purposes of recruiting, so we'd have to take on that task ourselves, which was always painful.

The raised eyebrows were always about participant motivation and validity of the recruiting process and methodology. There were always questions: How valid are these findings? Are these real users? But when you're intercepting users who are on your Web site in the middle of performing a task, those questions evaporate.

ON PARTICIPATING IN REMOTE RESEARCH

In the past we'd invite our business partners or stakeholders to the lab, but it was difficult to get them to take time out of their day to travel to the lab, and it was a big production. But if they can just bring their laptop to a conference room down the hall and just be there to listen in, it's fantastic. You'd get the same advantages if you had everyone available to go to the lab testing, and the level of engagement is a lot greater. By having a lot of stakeholders in the room, you get more diverse viewpoints, and the interaction between us observers and the moderator tends to be lively—we chat throughout that whole interview. The ability to observe and discuss things as they come up and then immediately give feedback to the moderator is really powerful.

Because we are involved in the research process, we've got our customers and the usability to consider on the one hand, and on the other hand we have a lot of business stakeholders who have strong opinions about how things should be done. So having everyone in the room watching the feedback and engaging with the process is really powerful. We were recently in the middle of a digital camera usability session and were asking the user to go through the features and content we have on the site, and the customer's going through it and he's like, "This all seems really impressive, but I really just want to know if it takes great pictures." And you see this light bulb go off above the product marketing people's heads. We're so close to this that we have absolute myopia. It was a real eye-opening moment.

Why I Went Remote (continued)

ON BENEFITING FROM REMOTE METHODS

One study was about TVs and the TV shopping process. Sony has a broad line of TVs, somewhere around 9 to 10 different series, and each has a dozen size options, so you have a lot of choices. During the study there was an “Ah-ha!” moment, a phenomenon we haven’t seen before: people would often have half a dozen to a dozen sites already open when we contacted them, and they were seamlessly going between sites like Engadget, CNET, Sony, Circuit City, Best Buy, really taking advantage of browser tabs to cross-shop and gather information. We simply wouldn’t have gotten that insight from a lab environment because we wouldn’t have been intercepting people in their natural browsing environment; instead, they’d sit down, have the browser already open, and they’d go. So that behavior would have been completely missed.

The outcome was that, knowing that customers are looking not only for customer reviews but trustworthy, third-party editorial content, we’re actively pursuing ways to bring that content into the SonyStyle site, so that from within the interface they can access that info, instead of relying on the multi-tab approach. In the past, if a product was awarded an editor’s choice, we would have put that on the page as a badge of honor, but I doubt that we would have ever actually included the editorial alongside the product, if it hadn’t been for this study.

ADVICE FOR THOSE CONSIDERING GOING REMOTE

If we’re talking about remote testing for Web sites, from my perspective it’s really a nonchoice. Having the benefit of intercepting users that are already coming to your site in order to perform a task already puts you so far ahead of the game because the motivation is there, you’ve got them captive, and you just gain so many more insights compared to creating an artificial environment with artificial motives. So you know from the quality and granularity of the results you’re going to get, it’s so much richer. If given the choice, I’ll never go back to lab testing again. And there’s the cost savings. Clearly, overall, it’s a less costly proposition. You avoid all the travel costs. There’s always a dud user in every batch of lab participants, and the great thing with usability testing is, if you start talking to someone you want to cut loose, it’s no harm; you can move on to the next person, as the recruiting form is literally filling up before your eyes.

What's Remote Research Good For?

Again, most studies can successfully be done *either* in person or remotely, but, just as there are times when lab testing is more appropriate, there are also times when it makes more sense to use remote research methods.

Time-Aware Research

Remote research is more appropriate when you want to watch people performing real tasks, rather than tasks you assign to them. The soul of remote research is that it lets you conduct what we call *Time-Aware Research (TAR)*. By now, UX researchers are familiar with the importance of understanding the usage context of an interface—the physical environment where people are normally using an interface. Remote research opens the door to conducting research that also happens at the *moment* in people's real lives when they're performing a task of interest. This is possible because of live recruiting (the subject of Chapter 3), a method that allows you to instantly recruit people who are right in the middle of performing the task you're interested in, using anything from the Web to text messages. Time-awareness in research makes all the difference in user motivation: it means that users are personally invested in what they're doing because they're doing it for their own reasons, not because you're directing them to; they would have done it whether or not they were in your study.

Consider the difference between these two scenarios:

- You've been recruited for some sort of computer study. The moderator shows you this online map Web app you've never heard of and asks you to use it to find some random place you've never heard of. This task is a little tricky, but since you're sitting in this quiet lab and focusing—and you can't collect your incentive check and leave until you finish—you figure it out eventually. Not so bad.
- You've been planning a family vacation for months, but you've been busy at work so you procrastinated a bit on the planning, and now it's the morning of the trip and you're trying to quickly print out directions between finishing your packing and getting your kids packed. Your coworker told you about this MapTool Web site you've never used

Time-Aware Research.

Recruit someone who's
in the middle of a task.

Observe their behavior.

before, so you decide to give it a shot, and it's not so bad—that is, until you get stuck because you can't find the freaking button to print out the directions, and you're supposed to leave in an hour, but you can't until you print these damn directions, but your kids are jumping up and down on their suitcases and asking you where everything is. Why can't they just make this stupid crap *easy to use*? Isn't it *obvious* what's wrong with it? Haven't they ever seen a *real person* use it before?

Circumstances matter a lot in user research, and someone who's using an interface in real life, for real purposes, is going to behave a lot differently—and give more accurate feedback—than someone who's just being told to accomplish some little task to be able to collect an incentive check. Time-awareness is an important concept, so we'll bring it up again throughout this book to demonstrate how the concept relates to different aspects of the remote research process (recruiting, moderating, and so on).

NOTE TAR KEEPS YOU IN THE RIGHT 1985

Remember that diagram in *Back to The Future II*? Doc argues that messing with time has sent the world crashing hopelessly toward an alternate reality where things are horrible—the “wrong 1985.” And that's sort of what happens when you try to assign people a hypothetical task to do at a time when they may or may not actually want to do it: you're meddling with their time, and it'll create results that look like the real thing but are all wrong.

When you schedule participants in advance and then ask them to pretend to care, you're sending your research into the wrong 1985. If you don't want to create a time paradox—thereby ending the universe—you should do time-aware research.

Other Benefits of Remote Research

Here are some additional benefits of remote research.

Geographic diversity. Even if you do have a lab, the users you want to talk to may not be able to get to it. This is actually the most common scenario: your interface, like most, is designed to be accessed and used all around the world, and you want to talk to users from around the world to get a range of

perspectives. Will Chinese players like my video game? Is my online map widget intuitive even for users outside Silicon Valley? Big companies like Nokia and Microsoft are often able to conduct huge, ambitious research projects to address these questions, coordinating research projects in different labs around the world, flying researchers around in first-class. If you don't have the cash for an international Gorillas-in-the-Mist project, then remote research is a no-brainer solution. If you can't get to where your users are, test them remotely.

Ability to test almost anywhere. Remote research has comparatively minimal setup requirements and can reach anywhere that computers and the Internet can go: you can be anywhere; your participants can be anywhere. Lone-wolf consultants and start-up teams working out of cafés can have trouble finding the quiet office space they need to do in-person testing. If it's too much bother to set up a proper lab, go remote; all you'll need is a desk.

Some reduced costs. Beyond travel expenses, other costs associated with lab testing may be reduced or eliminated when you test remotely. With live recruiting methods, you can get around third-party recruiting costs, and because the recruiting pool is larger, you may not have to offer as much in the way of incentives as you might otherwise to attract enough participants. Because sessions are conducted through the computer, you can use relatively inexpensive software to replace costly testing accessories, such as video cameras, observation monitors, and screen recording devices. (Note, however, that the overall cost of a remote research study is often comparable to an in-person study for many reasons; see Chapter 10 for reasons why.)

Quicker setup. Closely related to the issue of money, as always, is time. Nearly all existing recruiting methods take many weeks. Recruiting agencies usually require a couple of weeks to gather recruits, and writing out precise recruiting requirements and explaining the study to them can eat up a lot of time. Getting users from your own mailing list can be faster and moderately effective, but what if you don't have one? Or what if you've overfished the list from previous studies, or you don't want to spam your customers, or you're looking to test people who've never used your interface or heard of your company before? In any of these cases, recruiting your users online makes a

lot of sense, since it allows you to do your recruiting as research sessions are ongoing. (We teach you how to do all this in Chapter 3.)

Context-dependent interfaces. Some interfaces just don't make any sense to test outside their intended usage environment. If you need users to have their own photos and videos to use in a video editing tool, having them bring their laptop or media to a lab will be a tremendous hassle. Or, let's say you're testing a recipe Web site that guides users step-by-step through preparing a meal; it wouldn't make much sense to take people out of their kitchen, where they're unable to perform the task of interest. When this is the case, remote research is usually the most practical solution, unless the users *also* lack the necessary equipment.

When to Go Remote

If you have the gumption, you can test almost anything remotely. There are ways to get around nearly any obstacle, but the approach you take is all about what's most practical and accurate. If it's significantly cheaper, faster, or less of a hassle for you to just bring people into a lab, then by all means bring 'em in. Sometimes this decision can be a tough call; users in the developing world may have limited access to the Internet, for instance, so you'd have to decide whether it's worthwhile to fly over and talk to users in person, or to find people from that demographic in your area, or to arrange for the users to be at a workable Internet kiosk to test them remotely.

For clarity's sake, let's talk about some clear-cut cases of things you should and shouldn't test remotely.

Remote testing is a no-brainer for Web sites, software, or anything that runs on a desktop computer—this is the kind of stuff remote research was practically invented to test. The only hitch is that the participants need to be able to use their own computer to access whatever's being tested. Other Web sites besides your own are a cinch: just tell your users during the session to point their Web browsers to any address you want. If you're testing prototype software, there needs to be a secure way to digitally deliver it to them; if it's a prototype Web site, give them temporary password-protected access. If the testing is just too confidential to give them direct access on their computer,