userzoom

A Guide to Mobile User Experience Research

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Introduction to Mobile Usability

While following current market trends in retail, it is quite apparent that people are becoming increasingly comfortable with making online transactions through their mobile devices. Understanding the statistics and results found when conducting mobile usability testing could give your organization a huge advantage; it is very likely that your competitors are riding the same wave, hoping to create snazzier mobile products and achieve a bigger bang before you do.

Mobile Internet usage in the US is expected to approach 100% penetration and to reach 50% of total web usage this year (R. Kerr 2.). Forrester Research has projected that e-commerce spending in the US will reach $370 billion by 2017, up from $262 billion in 2013. It makes you wonder, if people are only going to be more dependent on mobile devices for social, personal, business and now spending needs, won't users just adapt to software and applications created for them by developers? Why should e-commerce businesses bother with creating positive mobile user experiences (UX)?

To understand why positive user experience and superior usability are essential, one must first understand user behavior. Online shoppers expect mobile web pages to load in 2 seconds or fewer; hence, after 3 seconds, up to 40% abandon the site (gomez.com, 2010). Users are more demanding about how e-commerce websites behave on their mobile devices and this should give organizations enough incentive to work towards creating a more usable mobile product.

E-commerce is reshaping the landscape of American retail consumption. Just two years ago, mobile devices were perceived as being used primarily for "research" that helped in the decision-making process before purchasing from stores. Consumers have transitioned from buying books & CDs to making more expensive, bold purchases such as furniture and appliances (Rueter, 2013).

It is now apparent that stores will continue to lose larger wallet share to online retailers. It is no surprise that consumer behavior experts have predicted the death of stores in the battle between "clicks & bricks" (Perlow, 2011). We have seen the retail industry experience the demise of the book and music businesses, with stores like Borders, Tower Records and Blockbuster being unable to sustain foot traffic in their premises due to the e-commerce onslaught (Jordan, 2012).

Today consumers carry out diverse tasks and make more complex purchases on their mobile devices and this presents retailers with an opportunity to extend their consumer reach and rethink the consumer buying experience. Mobile devices present retailers with direct access to a consumer's pocket. Thus, consider mobile devices to be portable show rooms that consumers use to shop from anywhere, anytime.

Growth in Time Spent per Shopping App Category

All Shopping Apps 274%

All Apps 132%

Retailer Apps	Price Comparison	Purchase Assistant	Online Marketplace	Daily Deals
525%	247%	228%	178%	126%

Source:Flurry Analytics, n=1,863 apps, December 2011-2012
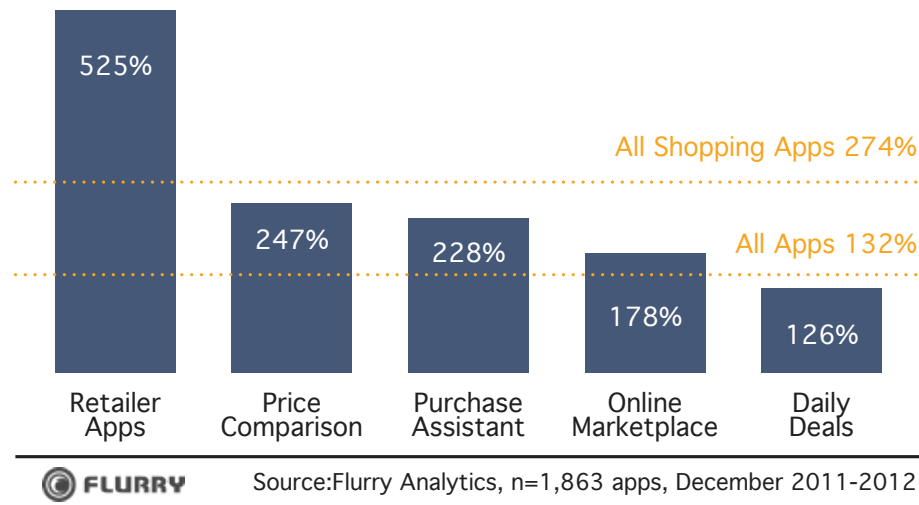
Figure 1: Rise of the App & Mortar Economy. Courtesy of flurry.com

What are Your Options?

If you are shopping for a mobile solution there are many options to choose from. The most common terms mentioned in this context include mobile-friendly, mobile-optimized, mobile apps and responsive designs. So what are the differences between them?

Mobile-Friendly

HTML sites designed without flash are considered mobile friendly. This enables access to websites on devices that do not support flash, like the iPhone. A mobile friendly site is viewable on the smartphone by installing a simple plug-in. To view content, a user has to pinch to view and scroll in all directions. This is cumbersome, yet better than a site that buffers endlessly.

Mobile-friendly sites should:

• Be designed and structured differently from full-flat sites
• Load instantly
• Support scrolling and zooming for content viewing
• Have greater contrast between foreground and background to optimally display text and to accountfor things like reading in the sunlight
• Use images and graphics sparingly

Mobile-Optimized

Websites designed specifically for mobile devices are considered "Mobile-optimized". A mobile-optimized site is free of excessive information and the content is prioritized to what the user needs most. The landing pages are usually clean and concise. More detailed information is reserved for secondary pages further into the site. Ideally, users have a clear path to actions such as buying, downloading and submitting.

Mobile-optimized sites should:

• Display a search bar for content-heavy mobile sites
• Be accessible from every platform and work with software used on all devices
• Do away with scroll, pinch and zoom (mobile-optimized sites rely on taps to make calls, send emails and to zoom in and out)
• Have content and images designed for small screens
• Look identical to native applications that help retain brand identity
• Ensure that users are engaged with the site and are designed to enhance ease of use, so that purchase-related tasks can be completed relatively easily

Mobile Apps

Mobile apps, short for mobile applications, are Internet applications that run on smartphones and mobile devices. Mobile apps help users connect to Internet services, typically accessed by desktop computers or notebooks, faster and easier. They are designed to make absolute use of screen real estate. Mobile apps access information from the Internet or sometimes download content without Internet access.They also take advantage of hardware features like cameras, motion sensors, graphics and GPS catered to the mobile device.

Mobile apps are Ideal for:

- Tasks that require regular usage and are personalized for individual users
- Content and information needed without Internet access
- Tasks that are sequential and goal-specific

Quick facts:

- Mobile apps can be designed to accomplish specific tasks through the mobile device
- Mobile apps are ideal for use by the mobile device's hardware and touch capabilities to perform tasks
- Mobile apps are easier to load and are perceived to be easier to use than websites
- Mobile apps take time to develop from scratch and are relatively more expensive to build and maintain than mobile websites and require frequent upgrades, which can sometimes require re-downloads
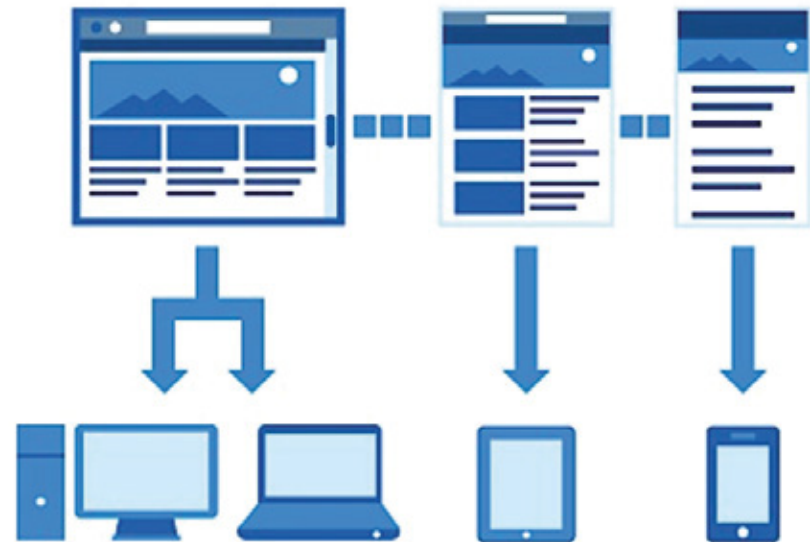
Responsive Design

Responsive design is an approach used to create an optimal viewing experience. Generally, responsive design sites adapt to the device (mobile or desktop). Responsive design reduces and de-compartmentalizes a myriad of problems faced within ever-changing mobile dimensions and requirements. The content molds itself appropriately to render on a desktop or a smaller screen smart device.

Responsive design uses a flexible grid that positions content based on the screen resolution. Since the content usually remains the same, it is written concisely. Responsive design is relevant in today's heavy reliance on mobile devices for Internet search and purchases, where having navigation that is layers deep into a site doesn't fit in the fast-paced "search and locate" needs of busy users.

Responsive design:

- Often relies on the golden grid system (GGS) that splits the screen into 18 even columns to accommodate all screen resolutions
- Has a zoomable baseline grid to scale all font-styling options proportionally
- Uses CSS styling and percentages to recalculate the widths to accommodate fonts, texts and images for various screen resolutions
- Increases the target area on links for smaller screens
- Does not adjust well beyond the desktop metaphor and may not be ideal for the various small screens

While the outcomes of both traditional and mobile websites are the same, the design approaches are different where site structures are geared for easy navigation.

Mobile Friendly	Mobile Optimized	Mobile App	Responsive Design
Is a full-flat html website that doesn't have Flash and loads quickly on a mobile device	Is an html website designed specifically for a mobile device	Is an Internet application that runs on smart devices	Is a "one-size–fits-all" flexible design system that molds to the device it is required to serve
Requires scroll, pinch and zoom. Could be tedious for content-oriented and task-specific sites	Is designed to minimize or eliminate scroll, pinch and zoom. Designed to minimize content processing and data entry	Is designed specifically for the mobile device and efficiently uses every pixel of screen real estate	Potentially detects and adapts to all screens and resolutions and is thereby more attuned to the interactive needs for that device
Is inexpensive as it uses the full desktop version to render on the mobile device	Is relatively less expensive to develop, while retaining the features of a full desktop website version and brand identity	Is more expensive and time consuming to develop and requires constant updates every few months	—
Research by Nielson shows that users are less likely to complete tasks on full version websites on mobile devices, and are 13% less likely to return to the site again	Mobile-optimized sites fare better than mobile-friendly sites on task completion and overall usability	Apps are known to perform better on usability tests than mobile websites. However, whether a business needs an app or website depends on the purpose it wishes to serve	—

Table 1: Choosing Your Mobile Options

Despite technological advancement and the myriad options to choose from, mobile usability and user experience on mobile devices are not much better than on regular desktop websites. Task completion rates using the mobile web range from 38% to 75%, depending on the mobile device. The success rates for mobile device websites are 59%, which is lower than regular desktop websites, which have an approximately 80% success rate (Nielsen, 2011).

The available evidence should convince businesses to move in the direction of mobile accessibility and choose a mobile customization option that would best suit their business model. To help with this regard, this e-book discusses different mobile research methods to help you choose the right method to test with users. Also, it includes helpful tips for creating usability tests for mobile devices. Finally, as a case study, it presents a mobile website benchmark study where 200 users performed 3 tasks on the mobile websites of 4 fashion brands.

Mobile Usage: Research To Date

The earliest academic research papers in mobile research date back to the early 1990s. Since early mobile researchers did not have much to work on, they used intuition, deduction and induction, thus research was both basic and applied in nature. The goal of the research process was to understand the requirements, understand usage and develop products and/or services.

Kjeldskov and Graham found that applied research constituted upto 55% of all research effort in the early 1990s. The result of these early studies is what we now know and understand as approaches to solving problems related to physical constraints. Early researchers were preoccupied with building systems and were relatively less concerned with the human interaction with their system. Once a physical product is developed, basic research aids in understanding solutions to well-known problems that arise from physical constraints of both humans and the system (Kjeldskov & Graham, 2003).

Thanks to progress made by persistent mobile research, we now know what to build and what specific problems to overcome. For example, we do not need to go back to the drawing board to understand that users have limited real estate, limited means for interaction, dynamic use contexts and evolving network bandwidth to work with.

Search Behavior

Another area of academic research related to mobile usage is search behavior. Church and Oliver (2011) examined search requests on mobile phones and desktop computers, finding that search requests on the mobile phone are shorter, more targeted and navigational in nature.

Recent Google research data suggests that, although iPhone search queries mimic that of desktops, mobile search behavior is a constantly evolving landscape. They found that users are clicking more often, exploring more within a single search query (Kamvar, Kellar, Patel, & Xu, 2013). In 2005, users followed fewer than 10% of queries but this rose to 50% in two years. There are also more diverse search queries and more exploration within each search query.

A 2013 survey study conducted to understand mobile search behavior found that people who search on mobile devices are highly motivated buyers and that 70% of mobile searches led to website action within one hour. Moreover, 40% of users choose other results if the search returns are not mobile friendly (Rowley, 2013).

Context of Use

In a web-based diary study, Amin et al. (2009) found that people usually use mobile searches in the presence of others. Other researchers found that search behavior is contingent on location, context and social circumstances.

Muller et al. (2012) found that most tablet interactions occur at home and often while the users are engaged in other activities such as watching TV, eating, cooking and/or waiting. They also found 42% of users have made purchases through their tablet. Consumers tend to use the tablet as a device to do shopping research while making actual purchases either on their computer or in person (Müller, Gove, & Webb, 2012).

However, the notion that tablets are mere search tools is changing. While tablets were once bought for novelty and used primarily for searches, they are now also used as a productivity device in the work place. In research done by Baseline, 59% of survey respondents use their own tablet at work while 34% use one issued by the company. In addition, 84% of respondents said that the main reason for using a tablet at work is because it made them better multitaskers (McCafferty, 2012).

Comparing context of use: tablet versus mobile phone

Smartphone usage is associated with being "on the go" and tablets are found to be overwhelmingly used at home, during relaxing times of the day and as "me time" (Frank, 2013). However, these results are not conclusive and cannot be generalized as the landscape of contextual mobile experience is forever evolving. Improved network coverage, changing demands on productivity and dynamic form-factor specifications contribute to the ever-changing perceptions of where, when and how mobile devices are used.

Mobile Research:
Methods & Tools

No team or organization sets out with the goal to create unattractive, cluttered and difficult-to-use products and services. It is now common sense that products with poor user experience affect brand identity and, equally importantly, sales and profit. One would be hard pressed to find an organization that does not claim that building a positive user experience is at the core of its development processes. While their intentions are well placed, few earnestly invest time, money and resources toward the goal to enhance user experience with every product release.

As Cockton (2013) observed, "Usability is not a characteristic, property or quality, but an extent within a multi-dimensional space." What this means is that usability, and more so for user experience, is more than the sum of its parts; it is more than just the effectiveness, efficiency and satisfaction scores obtained from a research endeavor. To understand user experience in its entirety, we must endeavor to understand users' context, motivation and goals of usage.

Mobile research efforts in academia and the industry have captured the current contexts of use, nature of mobile web activity (e.g., search behavior) as well as common physical constraints that users adapt to while using mobile devices. Most research methods used in the industry help researchers understand usability problems and are concentrated on understanding efficiency, effectiveness and satisfaction. An examination of where usability research methods currently used in the industry evolved from and what their goals and outcomes were will help us better understand how the prevalent tools and methodologies were created and what the best outcomes may be.

Many testing methodologies are borrowed from psychology and other social science research. Often, there may be more than one methodology applicable to the same project to serve different objectives. A UX professional might be able to intuitively select the best method based on client requirement. More often than not, the choice of the best research method is tied to where the product is in its development lifecycle.

Methods	Strengths	Weaknesses	Use
Natural Case **Field studies** **Action research**	Natural settings rich data	Time demanding Limited generalizability	Descriptions, explanations, developing hypothesis
	Replicable	Difficult data collection Unknown sample bias	Studying current practice Evaluating new practices
	First hand experience Applying theory to practice	Ethics, time Unknown generalizability	Generate hypothesis/theory Testing theories/hypothesis
Artificial Laboratory setting experiments	Control of variables Replicable	Limited realism Unknown generalizability	Controlled experiments Testing theories/hypothesis
Environment independent setting **Survey research** **Applied research** **Basic research** **Normative writing**	Easy, low cost Can reduce sample bias	Context insensitive No variable manipulation	Collecting descriptive data from large samples
	The goal is a product which may be evaluated	May need further design to make product general	Product development, testing hypothesis/concepts
	No restrictions on solutions Solve new problems	Costly, time demanding May produce no solution	Theory building
	Insight into firsthand experience	Opinions may influence outcome	

Table 2: Kjeldskov & Grahams, Research Methods

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Social Sciences Research Methods in Software Engineering

Wynekoop and Conger (1990) created a summary of research methods' strengths and weaknesses, subsequently proposing 5 purposes for conducting research, which are also applicable to mobile research:

Understanding	Engineering	Re-engineering	Evaluating	Describing
The purpose of research is on finding the meaning of studied phenomena through frameworks or theories developed from collected data.	The purpose of research is to develop new systems or parts of systems such as an interaction technique for mobile phones.	The purpose of research is improving existing systems by redeveloping them. For example, a web browser adapted to a small display.	The purpose of research is assessing or validating products, theories or methods. For example, assessing the usability of a specific mobile device design or a theory of interaction.	The purpose of research is on defining desirable properties of products e.g. a mobile system.

Kjeldskov and Graham (2003) used Wynekoop and Conger's (1990) methods, reviewing 102 research papers in mobile HCI, published in top conference proceeding series and journals. Based on their research, they found that there is a far lesser focus on real use contexts compared to engineering and mobile systems evaluation, resulting in the HCI community having knowledge of what problems to overcome related to mobile configuration and contextual constraints.

This is understandable since mobile phone usage contexts are very difficult to emulate in a lab. While Field studies offer the ideal opportunity to understand context of use, they do not help in understanding the actual performance of the applications that are in use. In a scenario where context as well as performance needs to be tested, more than one research method needs to be applied.

Research Methods and Testing Contexts

With mobile devices, researchers need to account for physical movement and geographical challenges when examining user experience. This requires researchers to observe people using the mobile devices, often following them in and out of different contexts. However, there are various private contexts within the home and confidential meetings within the work place, where observation is neither practical nor ethical. Hence, researchers have developed remote unmoderated usability testing, a methodology that helps gather usability metrics in the context of usage, but more on that later.

Mobile Research Categories

Keeping the constraints unique to mobile research, Hagen et al grouped mobile research methodologies into the following 3 categories:

1. Mediated Data Collection
Where data collection is mediated by technology. Participants carry devices such as sensors or video cameras that record usage data.

2. Simulations and Enactments
Simulations and enactments are used to make available experiential information sensitized to real contexts of use. Lab tests, heuristics, prototypes and simulators gather real-world usage information.

3. Combinations
Existing methods, and/or mediated data collection and/or simulations and enactments are combined to allow access to complementary data.

Software Development Lifecycle and Mobile Research Methods

Figure 1: SDLC & Research Phases
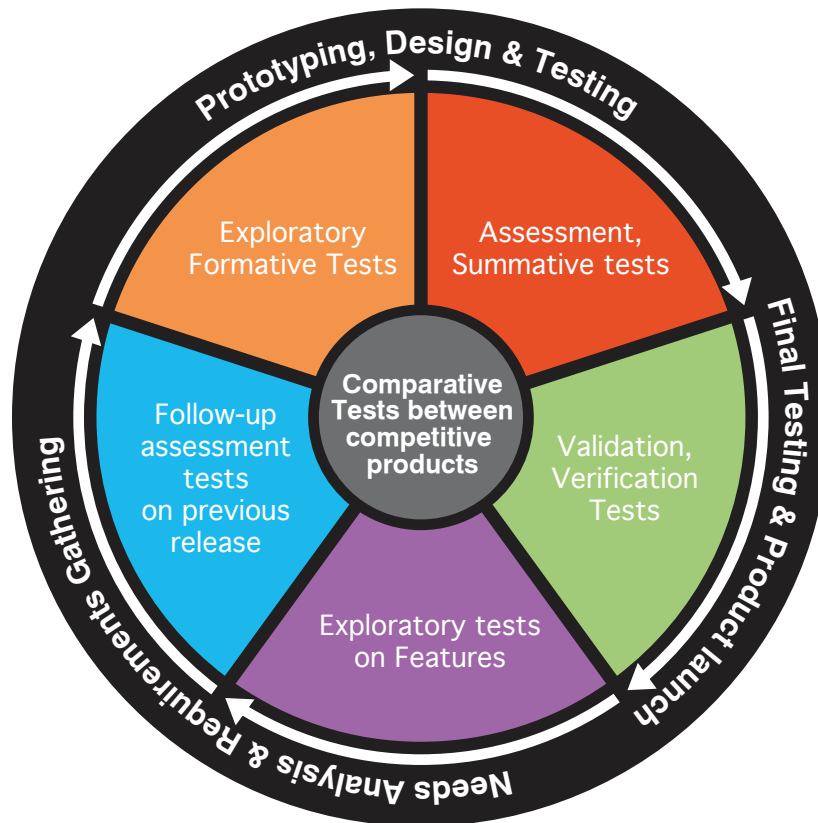
Similar to traditional UX methods, mobile development research methods are based on the kind of test we would like to perform. This is, inturn, closely entwined with the development phase the project is in.

- Formative Testing
- Summative Testing
- Validation Testing

Usability methods provide maximum benefit in an agile development process.

Exploratory or Formative Testing

Exploratory research is carried out in more iterative software development lifecycle processes where there is time and resources allotted to more exploratory research endeavors. Each interface design has some assumptions about a user's ability and willingness to use the product.

Formative testing helpsin understanding the "What" of user experiences. A more effective use, though, would be to also verify the underlying assumptions the designers and stakeholders have made about the product, via understanding:

• How do users perceive using the product?
• What contexts and scenarios would best support the usage?
• What motivates users to use this product?
• What value does the product provide?

Purpose

To get a high-level understanding of user behavior, developers usually use very low-fidelity product interface designs. The idea is to understand whether users grasp the fundamental purpose behind primary actions, whether the flow of tasks is clear and whether users understand how navigation flows from one screen to another.

What

It is not uncommon to test paper prototypes of software and wax or foam core hardware products in this stage. Designers often create quick prototypes using wire-framing tools like Fireworks, Axure and Balsamiq. Therefter, these prototypes are usually hosted on a server to test basic navigation with users or can even be presented to users as static screenshots on the screen.

The goal of the exploratory test is to explore high-level concepts and thought processes to help designers make informed decisions about the final designs.

Summative Tests

Assessment tests are done early or midway into the product development cycle, usually after the fundamental or high-level design of the product is conceptualized.

Objective

Summative tests help in understanding the efficacy of a concept. The goal is to understand how users perform on real tasks on a fully functional website to identify any usability issues that are in the way of successful task completion. Users perform tasks rather than merely comment on the screens or pages. Typically, the moderator is present only to ask follow-up questions and make observations while users perform tasks since the emphasis is on actual behavior on the website or software application rather than on thought processes and attitudes.

Validation or Verification Test

When

Validation tests are done to measure the usability of a product or software against its competitors in the market. In the case of verification testing, the goal is to make sure the usability issues identified in the earlier phases have been weeded out and that no new issues have cropped up in the interim.

Purpose

The purpose is to compare the product with usability standards set for the product or software within the company or to compare/benchmark it against industry standards or a market competitor.

Objective

The usability objectives are typically the efficiency and effectiveness scores of the product against industry standards or internally defined performance expectations. Sometimes, criteria are also set in terms of achieving certain rating or ranking from the users.

Requirement Gathering Phase

Goal	Approach	Research Methods
To understand and choose new directions and opportunities.	Qualitative & Quantitative	Etnographic field studies, focus groups, diary studies, surveys, data mining.

Design & Development Phase

Goal	Approach	Research Methods
Design and test prototypes and early concepts with users to minimize risks due to poor usability.	Predominantly qualitative	Card sorting, field studies, participatory design, paper prototype and usability studies, desirability studies, Remote Usability Testing (Moderated & Unmoderated).

Final Testing & Product Launch

Goal	Approach	Research Methods
Measure product performance against itself or its competition.	Predominantly quanitative	Usability benchmarking, online assessments, surveys, A/B Testing, Remote Usability Testing (Moderated & Unmoderated).

Figure 2: Goals & Approaches Within The Software Development Lifecycle

What Research Method to Use? What are the Tools Available?

Rohrer (2008) defined research methods based on the nature of information to be gathered. He proposed research methods based on 3 dimensions.

• Attitudinal vs. Behavioral
• Qualitative vs. Quantitative
• Context of Website or Product Use

Choosing the best method to use is a function of budget, time and the product's development phase. There are many resources online that discuss usability testing in the lab. A good place to start is Nielson Norman Group's Alert Box. A handy book to have on your desktop is the Handbook of Usability Testing. However, as mentioned earlier, an emerging method popular with UX researchers is remote usability testing. The next chapter focuses on remote usability testing methods and popular tools that aid in research.
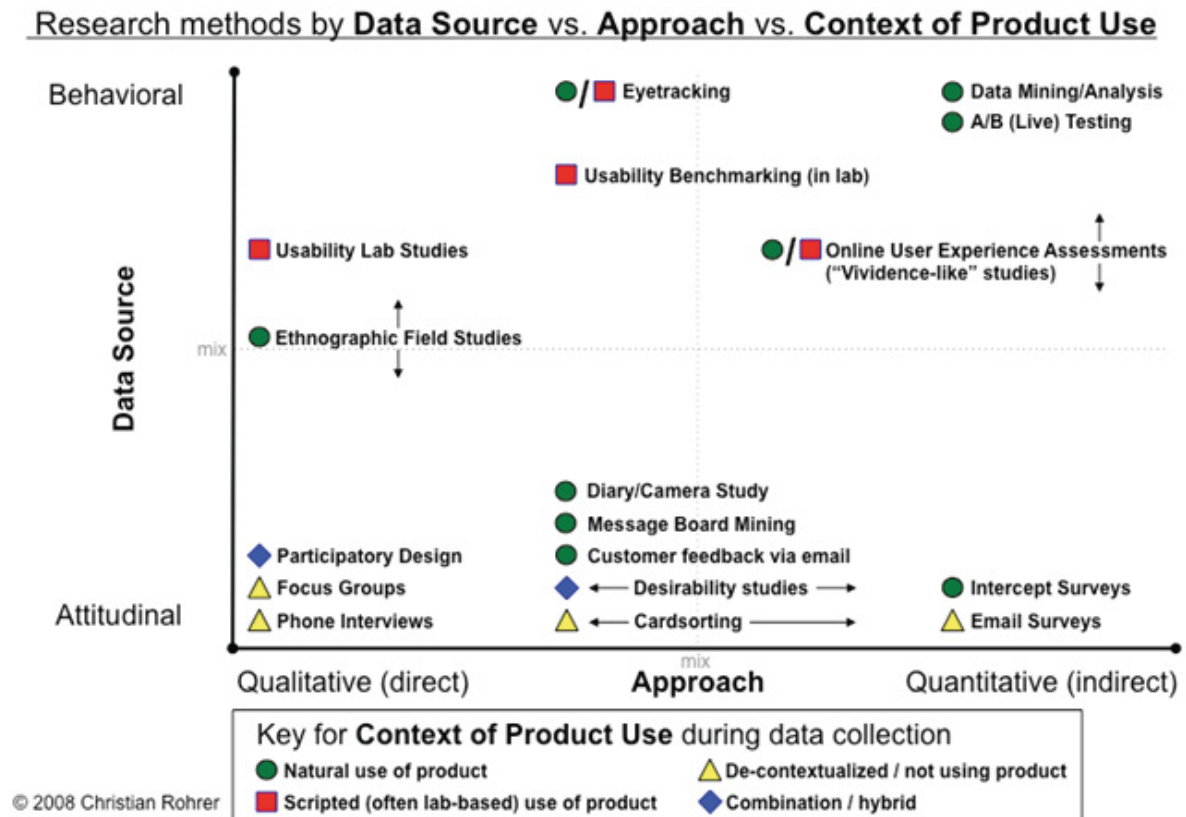

Figure 3: Research Methods In The SDLC, Rohrer (2008)

Remote Usability Testing

Lab-based and ethnographic research provides rich behavioral and contextual data. Lab-based research typically has 8-15 users observed in approximately 1-hour sessions. In a mobile device-testing scenario, users usually interact with the mobile device while researchers observe, ask questions and take notes. It usually takes 2-5 days to gather data and about a week to analyze and report. The lab testing usually has a camera mounted on the device to capture screen usage behavior and one camera focused on the user's upper body and face to capture body movement and facial expressions.

While lab-based mobile research is great to observe behavior and provides researchers an opportunity to ask probing questions, it is time consuming. Additionally, with a maximum of 15 users, researchers usually hesitate to generalize results to the entire user population. Analyzing data for task-based studies is still relatively easy compared to coding and analyzing in-depth interviews and contextual research data. Also, sampling user groups from different locations is an expensive proposition for an in-person moderated research.

During remote usability testing users and a moderator are in two different physical locations. Users participate in a study on their own phone and in their own environment. Remote usability testing can be moderated, where a moderator is watching the usability test remotely as it happens and communicating directly with the participant via the telephone or chat and unmoderated, where participants complete the study on their own schedule which is reviewed by the usability expert at a later point in time.

Why Remote Mobile Research?

A critical drawback of lab-based mobile research is that mounted video cameras hamper a user's natural gestures when using mobile devices. Also, as academic research indicates, context is critical to mobile phone usage. A lab is an artificial environment that does not capture contextual information and restricts free movement, aspects that are unique to mobile device usage.

Remote usability testing is especially suited to mobile device testing because you get context-specific information with users distributed geographically, enabling researchers to conduct studies with users who are not tied to a specific location. It is a great solution for teams on a limited budget and tight timeframe since no travel is required and no lab facilities need to be secured.

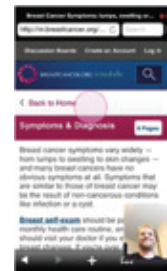# Moderated Remote Usability Testing

Early remote moderated testing efforts required researchers to use WebEx or GoToMeeting for recording sessions. A researcher would screen participants to match the required user profile, send participation requests to the users that fit the profile, and set up interview time slots with them. Researchers had to rely on chance that the users would have good web-cameras that would record facial expressions. Today, there are several remote testing tools available with competitive pricing; there is no dearth of options to choose from.

Moderated Remote Usability Testing Tools:

UX Recorder

The UX Recorder is an iOS app that records on-screen activity and gestures with a front facing camera. It also gathers audio feedback. However, it works on mobile websites only and doesn't work with mobile apps. It supports devices running on iOS - 5 and higher. It costs $1.99 for one session and $59.99 for unlimited session recordings.

www.uxrecorder.com

SolidifyApp

Solidify helps you create clickable prototypes as well as launch quick and simple remote usability tests. They provide templates to launch mobile remote usability testing. Solidify app works on any device, and users can access recording links from their email. Once they have interacted with a website or app, researchers can ask follow-up questions for a more thorough understanding of the user experience.

www.solidifyapp.com

The MailChimp Method

This method utilizes recording tools readily available on a user's laptop or tablet camera and in-built microphone. Users turn their laptops around and hug it so that the laptop's camera can capture their gestures. Researchers can connect over Skype, WebEx or GotoMeeting to record and observe the sessions.

Revelation

Revelation is a mobile research tool that gathers qualitative data by creating diary studies. It helps researchers gather usage feedback when users capture photographs and comments and share their experiences of using a website or an app.

www.revelationglobal.com

Dscout

Dscout is a task-based mobile app testing tool. It allows conducting in-context research and capturing audience experiences by primarily using mobile apps. It creates missions (i.e., tasks or assignments) for users who "scout" and provide feedback by submitting photos and commentary.

www.dscout.com
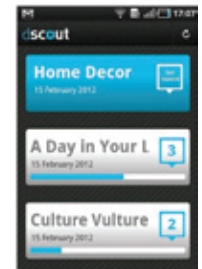
Unmoderated Remote Usability Testing

Moderated remote usability testing can be as time-consuming as lab-based testing. The difference between them is that users in remote testing are often present in the context of usage and not tied to any geographic location.

Unmoderated remote tests are a convenient, cost-effective alternative that helps gather ten times the responses in half the time. Another advantage is that the researcher does not have to monitor data collection as it is automated. It gathers hundreds of responses concurrently, while being true to the context of usage (Bolt, 2010).

Unmoderated remote testing is especially useful in collecting quantitative and qualitative data throughout the development lifecycle, without having to slow down for the data collection and analysis, as is often the case with lab-based studies.

Unmoderated Remote Usability Testing Tools:

UserTesting Mobile

UserTesting's mobile remote usability testing tool helps researchers test websites, apps and prototypes. UserTesting has its own panel of users to select from. The study results are presented in the form of recorded screen videos and audio feedback.

www.usertesting.com
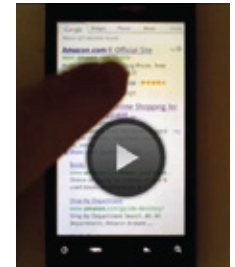
UserZoom Mobile

UserZoom Mobile is a powerful solution for mobile customer experience management. It enables companies to listen to the voice of their mobile customers, conduct usability testing and UX research on both phones and tablets (iOS and Android).

With UserZoom's **remote mobile usability testing** solution companies can conduct task-based studies on mobile websites and prototypes. During a mobile usability test, users participate in the study simultaneously in their natural context, where no human moderation is needed.

What makes UserZoom's remote mobile usability testing noteworthy is that it is the only solution on the market that allows collecting quantitative and qualitative data in the same study. It allows collecting the following data:
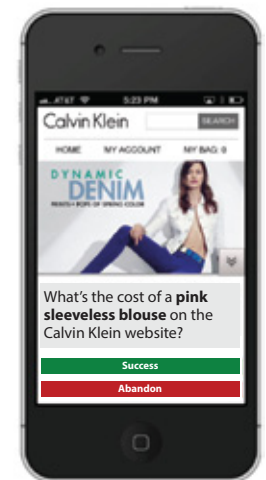
- video and audio recording of participants
- user session recording including gestures, clicks and form entry
- effectiveness ratios (success, error, abandonment and timeout)
- efficiency ratios (time on task and number of clicks)
- satisfaction metrics
- user comments
- rating scales
- clickstreams

One key benefit of this particular mobile testing solution is its ability to conduct competitive benchmarking and discover how a company's mobile website stands against the competition. It is possible to test any mobile site because no coding is required.
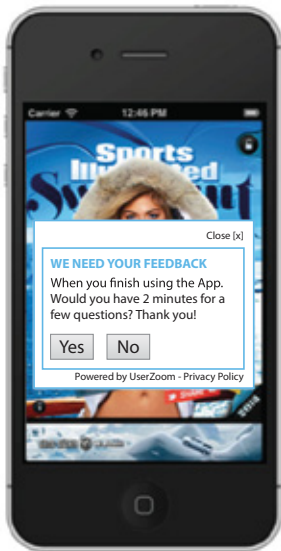
UserZoom's **mobile app Voice of the Customer (VOC)** solution enables companies to run surveys once visitors exit their mobile application. Visitors are invited to participate in a survey via UserZoom's intercept layer. This solution allows researchers to find out what users are searching for, if they obtain all the needed information, if they are satisfied with the product and if their expectations are met.

Some key benefits to this solution lie in being able to gather real user feedback directly after a user interacted with a mobile app and collect hundreds of responses in just a few days.

UserZoom also offers an easy to install software development kit (SDK) for mobile apps. It enables researchers to launch in-app surveys, launch exit survey, track clickstreams and events.

Common results of UserZoom's Mobile App VOC solution include:

- videos of users interacting with the app
- user comments
- clickstream charts
- satisfaction metrics
- rating scales
- reasons for abandonment

And finally, UserZoom's **mobile surveys** allow companies design quick surveys to obtain feedback from users on the go.

To learn more about UserZoom Mobile, please go to www.userzoom.com/mobile-testing

Tips for Designing a Mobile Unmoderated Remote Study

There are certain key features of desktop web-based unmoderated remote testing design that can be generalized to mobile unmoderated remote testing study design as well. The key things to bear in mind while designing an unmoderated remote testing study are:

• Mind the Duration

Ensure the study does not exceed 15 – 20 minutes. If the study is longer than 15 – 20 minutes, there will be greater mid-study drop-off rates and poor quality of responses. This can be frustrating because you will need to wait for longer period of time to get the required number of responses.

• Mind the Incentive

The incentive should be commensurable with the task expectations from the user. If you have a draw where users have 1-5 chances of receiving the prize, then make sure the prize is worth the effort. This is applicable to fixed incentives for all participants as well. In our experience, $15 – 25 for a 20-minute study is reasonable.

• Mind the Motivation

Ideally, you would like to have users participate in the study, regardless of the incentive. This reduces the chance that a user just clicks through the pages and responds mindlessly to survey questions to qualify for the incentive.

• Mind the Quality

In UserZoom, we have "speeder" and "cheater" controls where a researcher can set reasonable task completion expectations. Usually researchers set expectations such as a minimum of 10 seconds and 5 clicks per task for the response to be considered valid. If responses don't meet these expectations, they will not be included in the valid response pool.

• Mind the Design

The beauty of remote unmoderated research is thatresearchers can gather quantitative and behavioral data supplemented with qualitative feedback. Keeping this in mind, it is preferable to ask close-ended and directed questions, especially in task-based studies.

Ask open-ended questions only if it is a must. Imagine having to read through hundreds of open-ended responses, coding common patterns and analyzing the results. Word-clouds do provide rich user experience insights but should be used to supplement behavioral data.

Since users' time is especially precious, only ask questions that you are certain will be included in the final report.

Considerations for mobile unmoderated remote research:

• Keep the study short (er):

If it is a mobile phone study, users are probably performing the tasks on the go. With limited screen real estate, ideally, users should have a very directed experience while doing the study. The aim should be to have a maximum study duration of 10 minutes.

• Crisp Task Description

Avoid users from having to scroll.

• Close-Ended Questions

Keep the questions close ended. Unless the users are highly motivated, they are not likely to type in a lot of text using their touch keypads. Keep open-ended questions to a minimum. Rely on task success rate, time-on-task and satisfaction rating to do the talking.[23]

http://answerlab.com/blog/2013/03/13/quantitative-ux-on-mobile-sites/
http://www.userfocus.co.uk/articles/unmoderated.html

Mobile Unmoderated Remote Research – A Case Study:

Mobile unmoderated remote research is a relatively new entry in the suite of mobile testing methodology. To showcase the potential of gathering unmoderated remote usability data, UserZoom conducted an international benchmark study on mobile (tablet) websites of leading fashion retail brands.

Study Details

To understand mobile website usage behavior, UserZoom researchers wanted to understand how fashion retail mobile websites perform on routine purchase-related tasks. The mobile websites of Bebe, Guess, Kenneth Cole, and White Housel Black Market were put to the test. Two hundred female users were asked to perform the following purchase-related tasks:

Choose a black dress and go through the purchase process as if to buy it

Look for a necklace that goes with your dress and continue to checkout

Look for information on how to return an item ONLINE and whether there is an associated cost.

Study Design

The study was conducted between April 15 – 21, 2013 across 3 countries: Spain, the UK and the USA. Two hundred users in each country were selected on the basis of gender (female), age (between 25- 45) and whether they made regular purchases on their tablet. To avoid any carry-over effects and transference of learning, a between-subjects experimental design was chosen; i.e, each user performed the three tasks mentioned above on one randomly selected brand. Each brand had 50 responses.

Study Set-Up

Building the study in UserZoom

The research questions were formulated online within the UserZoom tool. The tasks were described in detail. Success was validated on whether users were able to find the information and answer the questions related to the task at hand. For the task of finding a black dress and going through the purchase process for example, users were asked to find payment options on the website. After every task, users were also asked specific questions related to the task such as whether they used search bar or whether they used filters to narrow their search. Once they performed all three tasks on the website, they were asked to give their overall impressions of the website in a final questionnaire.

Brands	Mobile site	Tablet	
		iPad	Android
bebe	✓	✗	✗
GUESS BY MARCIANO	✓	✓	✗
Kenneth Cole NEW YORK	✓	✗	✓
WHITE BLACK	✓	✓	✗

Collecting Data

After the study was designed within UserZoom, it took about a day to complete, and the study links were sent to the recruiting company. UserZoom has several trusted recruiting companies that can be contacted from within the tool itself. This helps in creating a process that moves from screening to recruiting and finally to data collection in one seamless flow.

For this study we partnered with SSI (Survey Sampling International). They linked our study to their screening tool and emailed their database with instructions specific to this study.For example, users were to access the recruitment survey from their mobile devices. If users fit the criteria (female, between 25- 45 and frequent purchasers of merchandise on mobile devices), they were then directed to the UserZoom study. Before they started the UserZoom study, users were instructed to download a UserZoom App. On completing the download, users were instructed to perform the three tasks on a randomly assigned fashion brand website.
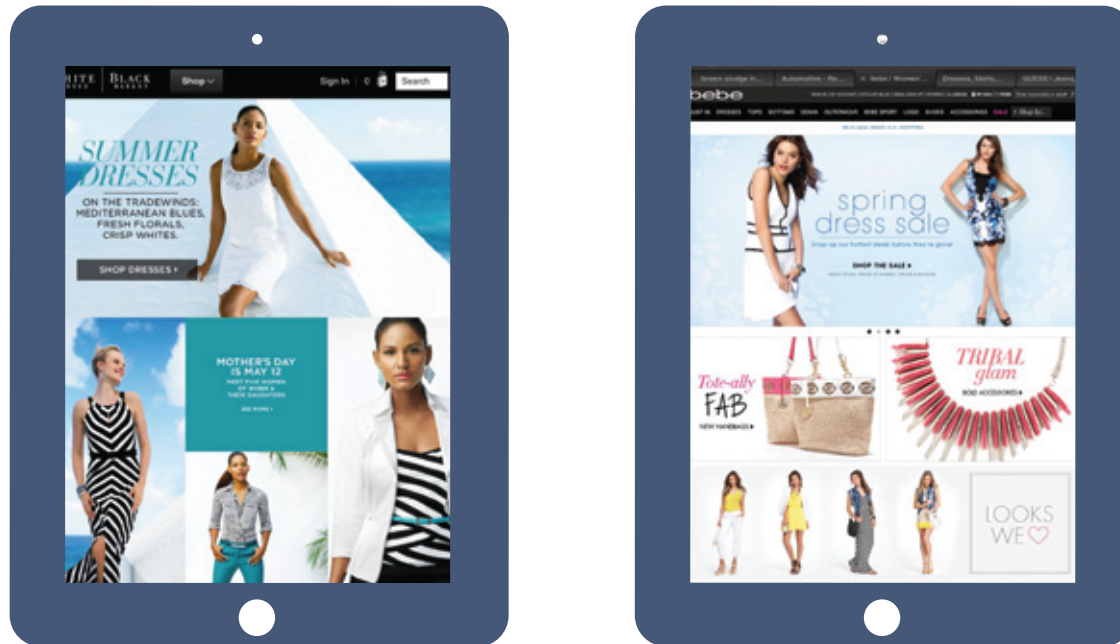

Figure 2: Tablet Optimized Websites

Data Analysis

We received the 200 responses in six days. Analysis within UserZoom is fairly easy. Effectiveness, efficiency and satisfaction and other questions specific to a study are gathered automatically and are available for review immediately. Close-ended responses are presented as percentages and open-ended responses are presented as word-clouds and lists.

Manipulating the data within the UserZoom—for example, filtering responses based on a certain criterion like operating system or age—is easy to do within the tool, and the outcome is instantly available for review. Researchers can export this information in Excel, Word or PowerPoint format instantly.

Main Findings

1. Based on the user feedback on the three tasks, White House Black Market fares the best in searching and finding products (a black dress and a necklace). It also has the highest Net Promoter Score of +26.
2. Users found it difficult to find return policy information on all four websites.
3. Users do not like registering and disclosing personal information before making a purchase.
4. Material, length, weight and how the item looks on a person are important product information that users seek while making purchasing decisions.

This report was a brief summary of existing research methods for research on mobile devices, as well as a case for conducting remote unmoderated usability testing. Remote unmoderated usability testing has been around for a few years now and is becoming popular on regular websites. Almost all big e-commerce companies perform remote unmoderated user testing on their websites frequently and often on a daily basis. However, remote unmoderated usability testing method on the mobile devices is fairly new.

UserZoom conducted an unmoderated usability testing on mobile websites of four American fashion brands as a case study presenting the advantages of this method. The responses of 200 users were gathered in six days, with the results automatically generated within UserZoom, so all the researchers had to do was interpret it.

A more detailed report of this study can be downloaded here: Measuring the User Experience of Fashion Web Stores on Tablet Devices

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About **UserZoom**

UserZoom is the #1 platform for cost-effective and agile usability testing and user experience analytics. We offer a worry-free, all-in-one solution: software + services + recruitment.

1 Software Platform

Unmoderated Remote Usability Testing

- ✔ Live Web & Mobile Task-based Surveys
- ✔ UX Benchmarking
- ✔ Competitive Research
- ✔ International Research

Information Architecture & Design Validation

- ✔ Card Sorting
- ✔ Tree Testing
- ✔ Click Testing
- ✔ Prototype Testing

CX Measurement / VOC

- ✔ Live Web & Mobile True Intent Studies (Intercepts)
- ✔ Online Surveys
- ✔ Web Analytics Integration

2 UX Research Services

Our UX Research Team ensures your success:

1. Strategizing
2. Initial training & support
3. Setting up studies
4. Managing all recruiting tasks
5. Launching, monitoring
6. Analyzing results, reporting

3 Recruiting Solutions

We recruit in 3 ways:

1. Using a Panel
- ✔ Strict quality controls
- ✔ National and international reach
2. Customized invitation layer
- ✔ Intercept studies
3. Invitation links
- ✔ Private email list
- ✔ Social media

The best way to understand the power of UserZoom is to see it for yourself

Request a Free Demo

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