Mobile Research: Benefits, Applications, and Outlooks

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Abstract. With the growth of the Internet, online surveys have enabled researchers to shorten the data collection and analysis cycle. While online survey is well-suited for collecting structured data and identifying relationships between variables, it's limited in providing immediacy and context. The prevalence of smartphones is enabling researchers to capture more context and minimize time lag between customer experience and data collection. This paper will discuss the merits, limitations, and application of mobile research, using a BlackBerry apps study as an example. Applications for different industries will also be discussed.

Keywords: Mobile, research, methodology, smartphone, user experience, design, contextual, longitudinal.

1 Introduction

The increasing prevalence of smartphones signifies an important evolution of how companies reach out to their customers. In particular, smartphones present an opportunity for companies to catch their customers during, or immediately after they have experienced a product or service. This often cannot be accomplished via current research methods, such as face-to-face/phone interviews, online surveys and analytics. Mobile research places companies closer to their customers, and hence enables them to gain a deeper understanding of the customer experience.

2 Literature

Online surveys often lack immediacy. This presents challenges when evaluating effectiveness of a product or service. Online surveys are often fielded to collect customer feedback weeks or months after they have experienced a product or service. Customers often cannot recall their experiences accurately or provide detailed feedback after the time delay, thereby reducing the usefulness of the data.

Also, online survey does not capture the context of the customers (e.g., customers' location and time point), making it difficult to understand the underlying motivations of the customers. Kaplan and Duchon noted that "The stripping of context...buys 'objectivity' and testability at the cost of a deeper understanding of what actually is occurring" [1]. Gable wrote "survey approach provides only a 'snap-shot' of the situation at a certain point in time, yielding little information on the underlying meaning of the data." [2]. Lazarsfeld pointed out many research techniques are

developed to ascertain the meaning of respondents' answers in the absence of contextual grounds. [3]

Research using mobile device complements online surveys to collect customer feedback with immediacy and context.

3   Study Overview

A recent study of BlackBerry apps will be used as an example[1]. The goal of the study was to reveal user experiences issues with a variety of BlackBerry apps and to capture the issues immediately after users have used the apps. BlackBerry users throughout the US were invited to download a mobile survey app. Over a period of a week and a half, after the respondents have used an app, they were asked to answer a small set of questions about their experiences. The survey app enabled the researchers to ask different questions at different time points of the study. In this case, we had a different set of questions at the beginning, middle, and the end of the study. At any time of the study, respondents can choose to discontinue their participation.

Mobile research can be conducted in a number of tools: SMS-based, web-based, app-based. The focus of this paper is app-based mobile research. All tools share similar benefits, but this paper will illustrate the added benefits of app-based mobile research. The benefits outlined are applicable to both quantitative and qualitative mobile research.

Fig. 1. App-based mobile study interface

4   Benefits of Mobile Research

4.1   Immediate

Mobile research is a powerful way to catch customers "in-the-moment". Customers are asked to provide feedback during or right after they experience a product or

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[1] Blackberry Apps Mobile Study: June 16-21, 2010, N=1248.

service. In the Blackberry apps study, users filled out a short survey immediately after they have used an app. Since it's still fresh in their memory, they were able to describe the specific problems experienced (e.g., a social networking app crashed repeatedly when uploading pictures), and the capabilities they desired.

In particular, compared with web-based mobile survey, app-based mobile surveys minimize the time delay between the customers' experience and the feedback. App-based mobile surveys allow users to take a survey with one click on the app, rather than requiring users to open a browser/e-mail, navigate to the survey, and click on the link, as with web-based mobile survey. This is especially useful when researchers wish to gather feedback from the same customer via multiple surveys.

In general, mobile research often uncovers issues that may not have been revealed by online surveys, because the data are fresh, and more accurate.

4.2 Longitudinal

Mobile is also a great enabler of longitudinal research. With the prevalence of mobile devices, professionals and consumers alike now carry their phones almost anytime, anywhere. This provides an opportunity for researchers to understand how customer behaviors change over time. In the Blackberry apps study, mobile research enabled us to capture users' different queries over a period of one week. Hence, we were able to tie the reported issues to their pertinent queries. For new features and services, researchers can analyze customers' learning curves, and how their interaction with a product/service changes over time.

4.3 Captures Customers' Context

Understanding customers' context has always been a challenge. Where customers are, when they are using a product/service, and their intention have important impact on perceptions of a product or service. Yet it has been very difficult to capture, especially with remote research methods, such as online surveys and analytics. Because customers can provide feedback wherever they have their smartphones, mobile research helps put together additional "pieces of the puzzle" by capturing customers' locations and time points. For example, makers of mobile search apps can gain a richer understanding of a customer by asking about their locations (e.g., in the car, in a store etc.) App-based mobile surveys also allow researchers to serve timed-based questions. For instance, a retailer may pose different questions to its customers on weekends vs. weekdays. This would be difficult to achieve in a web-based mobile survey or online survey. Mobile research is a great tool to help put together the puzzle for customers' context.

4.4 Complements Existing Qualitative, Quantitative, and Data Analytics Methods

Despite the benefits of mobile research, it's not meant to replace any existing research methods. Rather, with its capability to capture immediate, longitudinal, and contextual customer feedback, mobile research adds an additional touch point to help paint a more complete picture of the customers.

5   Methodological Considerations

5.1   Sample

The sample may not always be representative. Even though smartphone users no longer consist of only early adopters, when interpreting the data, practitioners should note that respondents of mobile research tend to be relatively more sophisticated with technology.

5.2   Completion Rate

Completion rates with mobile research are generally good. Even with app-based mobile research, in which respondents are asked to download and install an app in order to provide feedback, in our experience, the completion rate is generally around 6%. (ie. Respondents that accept a study invitation, successfully download the app, and complete the study). Overall, the completion rate mostly ranges from 3% to 7%. Factors such as convenience and novelty will continue to increase or decrease completion rate, which should be continuously monitored, as mobile research methods evolve.

5.3   Level of Interactivity

Compared to personal computers, smartphone's smaller screen size and reduced functionalities limit the level of interactivity with the respondents. Even though stimuli can still be shown as on personal computers, interactive features such as drag and drop are mostly not supported. That said, increased level of interactivity of mobile research will likely be available in the foreseeable future.

5.4   Extent of Context

While mobile research is helpful in capturing customers' context, it's worth noting that as with most remote research methods, the context captured won't be as rich as face-to-face research.

6   Best Practices

Do…

Keep the questionnaire short. Respondents' expectation for time spent on smartphones for each task is short. Compared to online, telephone, or face to face methods, mobile research questionnaires need to be short.

Keep the list short. Smartphone screen sizes tend to be smaller than personal computers. To minimize scrolling, keep the response choices lists short.

Be very selective but don't underestimate the power of verbatim questions in mobile research. Contrary to the assumption that customers don't take time to provide thoughtful verbatim, in our experience, verbatim feedback from mobile

research has been very insightful. This may be due to mobile users being used to texting and messaging via their devices. That said, as with most remote research methods, keep the number of verbatim questions at a minimum.

Minimalist UI. Screen real estate is limited on smartphones. Consider foregoing widgets such as progress bar, and cosmetic elements, to minimize scrolling, especially on smartphones.

7   Applications of Mobile Research

Mobile research's strength in immediacy lends itself to products/services where collecting feedback immediately after customers have experienced them is important. In our experience working with clients, sectors that benefit from mobile research include:

7.1   Mobile Device/App Makers

Besides the benefit of gathering user feedback immediately after they have used a device or an app, as outline in our example, mobile device or app makers can benefit from app-based mobile research's capability to gather longitudinal feedback. This is especially useful for features or apps that have high repeated usage, such as search, social networking, and map tools, where users may revisit the tools multiple times a day, and often for different purposes.

7.2   Event/Conference Organizers

Soliciting feedback about an event/conference can be challenging. After the event, attendees return to their daily routines and may not take the time to respond to online surveys. For those that do, recalling their experience at the event is often not easy. Mobile research allows event/conference organizers to reach out to the attendees immediately after an event, or a specific program of an event (e.g., a workshop at a conference), collect feedback while attendees' memory are fresh, and store the data electronically (as opposed to paper-based research, which requires data entry before analysis can begin).

7.3   Hospitality Industry

Similar to event/conference organizers, hospitality industry (e.g., hotels, restaurants) can also leverage mobile research to collect feedback about their service immediately after customers have experienced it, rather than after the customers have left their proximity.

7.4   Merchandising/Advertising

App-based mobile research is also a great tool to measure the effectiveness of merchandising/advertising. Geo-targeting capabilities will enable retailers and merchandisers to collect feedback about advertisements and items while shoppers are

exposed to them in stores. Feedback is collected during the shopping process, rather than after.

7.5 Media/Content Provider

Media and content providers (e.g., network/cable channels) can also leverage app-based mobile research to understand viewers' perception of their content. App-based mobile research is time-based. This enables content providers to pose questions specific to a show/program at the beginning, during, and after the show/program. The immediate, fresh feedback from viewers allows content providers to not only measure viewership, but also to understand viewer perceptions and identify issues almost real-time, rather than days after the show/program has been shown.

8 Upcoming Advancements and Conclusion

As technology evolves, mobile research will evolve with increasing sophistication. For example, location-based triggers will enable researchers to pose different questions to customers, depending on their locations (e.g., at a particular store, restaurant). The advancement in technology will continuously augment mobile research's capabilities to capture immediate, contextual, and longitudinal data at large scale.

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