

Utilizing the Full Research Toolbox

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As a marketer, one of the most important strategies to employ when making a change to your website, your product, or how you communicate with your customers is gathering and analyzing the appropriate data to guide your business decisions. Proper research can give you insight into your customers, your competitors, and your products—and help you make the most of your marketing dollars.

There are a plethora of research tools available to you. In addition to traditional tools like focus groups and observation, current technology has vastly increased the range of options, offering new techniques such as Web analytics, online surveys, and analysis of social media. These tools, when properly used, can yield useful, actionable data, helping you reach your business objectives. Improperly used, they can overwhelm you with large amounts of out-of-context information that can obscure the answers you're looking for.

Having access to a full range of research techniques is like having a well stocked toolkit in your workshop. It gives you the capability to build a range of models, but entails the responsibility of learning how to use each tool correctly. The following article outlines the process of determining which of the many research techniques available to you will best allow you to reach your business objectives, and provides examples to illustrate the approach.

Step One: Defining the Business Goals

Before selecting a research approach, it's important to consider and articulate the goals of the project. Just as you would decide on the parameters of your project before selecting the tools you'll use to complete it, you should consider what you want to do with your research before deciding on the approach you'll take.

Your goal should be focused and provide some guidance to your research. A very general goal, such as "a better website" won't give much direction to your research. What does a better website mean for your company? One useful way of thinking about the goals is to consider the differences between a successful launch and an unsuccessful one. Perhaps success means more sales on your site; perhaps it means users recommend your product to others; perhaps it means more people are aware of your product. Each of these definitions of success requires different types of tools to assess.

Finally, whenever possible, try to set specific, quantifiable goals. Using numbers as targets will help you to better access movement toward those goals.

Step Two: Asking the Right Questions

Once you've determined the goals of your project, you'll want to develop targeted research questions to identify the most effective ways to move toward those goals and to assess how well you're doing in achieving them. One important thing to consider is how you'll use the answer to your questions. If the answer will not be helpful in meeting your business objectives, then there's not much point in asking the question.

Here are some examples of the types of the questions you may want to ask, and how they relate to different goals.

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Goal	Research Questions	What we hope to accomplish
Increase sales	What types of customers do I have? Which customers are the most profitable? Who are the new customers to target?	<ul style="list-style-type: none"> Identify different types of current and future customers and the best ways to reach them. Learn about relative spending patterns to help you develop a targeted web site that addresses the needs of your most valuable customers or prospects. Explore the demographics of your audience: young or old, social networkers or Web introverted, Web-savvy or non-technical, loyal to your brand or cruise on by looking for the best deal.
Increase value of the brand	How is my brand perceived?	<ul style="list-style-type: none"> Assess baseline awareness and perception to identify problem areas and allow you to measure changes as you increase loyalty, raise awareness, or drive people to your site. Map the competitive landscape to identify the features that are associated with your brand and its competitors, and the emotional reactions your brand and others.
Grow customer base	What will attract people to my site? What will keep visitors engaged? What features provide the greatest opportunity for growth?	<ul style="list-style-type: none"> Identify the features most likely to lead to conversion so you can focus your resources on the areas that will be most effective. Assess the relative importance of various features and how satisfied customers and prospects are with the offerings available to them to identify areas of maximum potential.
Increase repeat customers	For frequent tasks, what's the most efficient experience for my repeat customers? For new tasks, what's the easiest path to learning?	<ul style="list-style-type: none"> Identify the optimal experiences for both first-time and expert users to make it more likely that they will return. Compare pages across your site to see which are most effective and which lead people to leave your site, so you can create a consistently positive site experience. Learn how visitors are using the features available to them so you can optimize user experience and encourage the actions that are most valuable to you (such as conversion events).

Step Three: Using the Right Methodology

Mapping the best research tool or tools to the question you want answered involves understanding the strengths, weaknesses, and costs of each technique. There are several ways of distinguishing between the types of data you can collect. All of these should factor into your choice:

- **What data sources can I access?**

There are a variety of different data that you can collect, from your website (using Web analytics), from your customers and prospects (using interviews and surveys), and from the Internet at large (using click stream data or assessing social media discussions). The type of data that will be most appropriate depends on your research questions, your budget, and your timeline.

- **Do I want emotional, cognitive, or behavioral data?**

Emotional data reflect individuals' feelings and emotional beliefs--data that is well suited to brand investigations. *Behavioral* data reflect individuals' actions and is the usual focus for usability testing. *Cognitive* data reflect individuals' understandings, intellectual beliefs and attitudes, and is needed for understanding the person's mental model of your site.

- **Is my question best answered by observation or self-reporting?**

Observational data are based on observation, either directly watching what people do, or examining the impact of their behavior on such things as market inventory or click stream data. *Self-reported* data are goals, attitudes, intentions, etc., mainly extracted from what people say.

In general, self-reported data is more cost effective than observed data (the exception is data from your own website), but are subject to a variety of biases. Respondents may deliberately lie, can answer randomly, or may simply have poor insight or memory about their own behavior.

- **Do I need quantitative or qualitative data?**

Qualitative data, characterized by open-ended queries and small sample sizes, allow for deep exploration and insight in a variety of areas, including many that are uncovered during the data collection process. *Quantitative* data, characterized by close-ended questions and large (often statistically significant) sample sizes, are useful for estimating the prevalence of specific variables or quantifying differences across groups. Qualitative is good for brainstorming and idea generation, while quantitative is best for proving something.

There are inexpensive quantitative data tools available and team members may be able to design and conduct interviews. Thus, it is possible to gather and analyze both quantitative and qualitative data quickly and inexpensively. However, collecting and interpreting data *effectively* requires trained professionals. You're more likely to glean useful information if you invest in good software and experienced personnel to design the research questions, develop the appropriate instruments, and analyze the data.

- **Is my question best answered using a combination of data?**

Different types of data can be combined in a number of ways to best achieve your goals, for example:

- Quantitative, self-reported emotional data, such as a survey in which you ask your customers how they feel about your product. This combination can be a strong strategy for branding goals.
- Qualitative, observed behavioral data, such as a user testing session in which you present your new social media platform to a small group of people and note how each of them interact with it. This combination can be useful if your goals include engaging customers and potentials using Web 2.0 applications.
- Quantitative, observed cognitive data, such as a small pop-up quiz on your site where you ask a large number of visitors questions about your product and see how much they know. This combination can be a great way to assess baseline and benchmark data as you move toward a goal of raising awareness about your product.

- **What's my budget and timeline?**

Last but not least, different research techniques come with different price tags and time constraints, and have differing returns on investment. A research project may be best served by one more-expensive technique that is comprehensive and thorough, or several less-expensive "quick hit" techniques that can be compared against each other.

Putting It All Together

Now that we've identified the steps involved in determining which research technique will best allow you to reach your business objectives, let's use a hypothetical case study to illustrate the approach.

A major airline decides that they want to reduce overhead costs by improving their online ticket sales. The business goals are to increase ticket purchases, and reduce overhead by increasing successful completions (so there are fewer calls to the help center, abandoned purchases, etc.). Movement toward goals is easier to assess when the goals are quantified. Let's assume that the hypothetical airline wants to increase ticket sales by 2%, and reduce call center frequency by 2%.

Now that the business goals have been well-defined, we can start formulating research questions:

1. What kinds of customers currently buy flight tickets online? What types of new customers can be convinced to start doing so?

Increasing sales requires retaining current customers and adding new ones to the mix, so we need to know about *both* market segments before we make design changes. If the research identifies those customers who can be newly attracted to online tickets sales, a site can be designed to appeal to them.

2. What type of purchasing process will maximize conversions and successful ticket sales?

It's important to attract new people into the purchase funnel, but it's meaningless if they abandon the process part-way through. If roadblocks are found in the purchase funnel, then those blocks need to be fixed.

After defining the questions, it's time to develop a research methodology. A variety of techniques can be used to address the questions articulated above:

- For the first question about the types of customers who purchase tickets online and which ones don't, a survey is conducted and the data gathered is used to create quantitative personas. The personas identify what's important to current customers, and to prospects that may be ready to start buying tickets online.
- For the second question about the purchasing process, a usability study of the current purchasing process is conducted to find out where people are dropping off and why. Web analytics can also be used to learn which parts of the existing site lead to user abandonment. All the information gathered helps to identify the most important features and guides the re-design of the purchase process. The data can also inform marketing techniques to drive people to the first purchase page.
- Finally, the effectiveness of our changes needs to be assessed. To address this, multivariable optimization is applied to the new design after launch. This technique allows the airline to continue to tweak small changes in things like buttons or text choice, and continue to learn about what features are most likely to lead to sales (and which features users aren't interested in).

Still not sure how to pull it all together to address your specific needs? Here are some additional examples of moving from goals to questions to tools:

Goal: Increase customer satisfaction and loyalty relative to the competition

Questions: What opinions do customers have of you and of your competition? What features drive those opinions? What inspires customers' trust in your product line?

Some appropriate tools:

- Interviews and focus groups to explore your customers opinions about your product and its various features
- Social media monitoring to investigate the way people talk about your product and its competitors
- Surveys to compare and contrast opinions of your product to opinions of your competition

Goal: Develop a new product or move into a new area

Questions: What are your customers' needs in the new area? How well are these needs being met, and by what means? Where is there oversaturation, and where is there opportunity for growth?

Some appropriate tools:

- Contextual inquiry and site visits, learning about how customers deal with tasks in the area you're considering
- Usage log analysis, to look for patterns in how they use your current feature set
- Participatory design and paper prototyping, to test early how customer segments respond to the new idea

Conclusion

When starting a new design project, take the following approach:

- Collect the business goals and objectives: what are you trying to achieve with a new project or initiative?
- Identify what you *don't know* and what's most important to research.
- Select a research tool that will tell you what you need to know, and will give you actionable results and intelligence.

Targeted and well-designed research is just as critical as a targeted and well-designed web site! You are the best judge of what information will provide you with meaningful, actionable information, but you may want to work with someone who has expertise in selecting appropriate data collection techniques to insure that you get that information and analyze it in a way that meets your goals. Given the array of traditional and digital tools available, it is worthwhile to take the time to consider the method or methods that will give you the greatest returns.

Appendix: Tools of the Trade

The following appendix details some of the more common research techniques, along with the goals they are likely to address, and the resources needed. They have been divided into qualitative and quantitative methods. Note that combining these two methods can be very effective, because qualitative research allows for deeper open ended exploration, while quantitative research provides an understanding of the pervasiveness of your findings. Often researchers will do qualitative research first to identify areas for further exploration, and follow up with quantitative, to determine the relative importance of the findings. It's also possible to reverse the process: do quantitative to identify common trends, followed by qualitative to understand the underpinnings.

Qualitative

Name	What Is It?	What goals does it address?	What benefits does it provide?	What challenges does it pose?
User Interviews	Facilitated question and answer session.	Identifying and defining user problems and needs. Exploring goals and barriers, learning about the methods individuals use to learn about and make decisions about your product.	Quick and relatively simple to do, creates contact with user goals as soon as a project starts. Allows for discovery of unexpected avenues to explore.	Subject to bias, which can be greatly reduced by utilizing trained interviewers. Difficult to synthesize data across respondents because each may discuss different topics.
Focus Groups	Structured group interview of multiple users at one time.	See user interviews.	It is less resource intensive to gather data from a single group than from single respondents. Provides insights into which issues impact multiple respondents.	Group pressures can prevent some individuals from voicing their true opinions. It may be difficult to keep the group focused and moving through the questions at a good speed.

Name	What Is It?	What goals does it address?	What benefits does it provide?	What challenges does it pose?
Usability Testing	Structured one-on-one interviews that observe users performing tasks with product prototypes or live sites.	Identifying interaction problems and stop points that prevent access through an interface.	Allows respondents to express their reaction to the site in their own words while they are experiencing it.	Requires a working prototype; if the prototype does not have full functionality, users may respond to these limitations rather than to features of the site itself.
Contextual Inquiry and Task Analysis	Observation of users as they conduct tasks, solve problems, or try to meet goals.	Defining user problems and needs.	Reveals unconscious or unself-aware actions and unstated goals of users. Allows for the development of mental models.	Can be resource expensive; users generally only use and discuss tools they are familiar with, rather than brainstorming new ways to solve problems.
Digital Ethnographic Research	Observation of behavior and interactions of people in chat rooms, social media, etc.	Understanding the online behavior of customers and potential customers.	Provides an opportunity to hear unscripted, unprompted conversation about your product, its competitive space, and your customers' needs and challenges.	Vendors such as Communispace can create highly effective spaces focused on your product, but they are quite expensive; legal issues around privacy limit the amount of data that can be gathered in public online spaces.

Quantitative

Name	What Is It?	What goals does it address?	What benefits does it provide?	What challenges does it pose?
Surveys	A large sample is drawn from the population and all members are asked the same (mostly close-ended) questions. Surveys can be conducted by personal interviewers, using pencil and paper, or online – computer surveys are becoming increasingly popular.	Surveys can assess a wide range of behaviors, beliefs, attitudes, goals, and challenges, and can provide estimates of their prevalence in the population of interest. Surveys can identify areas of greatest opportunities, or provide profiles of users and potential customers.	Statistically significant sample size allows for projection of survey results onto the entire population. This permits estimation of attitudes, needs, and challenges in the population beyond the sample, as well as examination of differences across subgroups.	Survey data are subject to the biases of self-report: respondents' answers may be affected by their moods (happy people report fewer problems), by the desire to appear more socially acceptable (respondents may report more responsible behavior than they actually engage in), or simply poor memory.
Usage Logs and Customer Support	Analysis of Web server logs to analyze actual visitor behavior on a site.	Identify specific areas on a site that are particularly effective or problematic.	Utilizes already existing data (no need for additional collection). Allows for accurate assessment of visitor behavior.	Cannot provide insight into why customers respond the way they do to specific pages.
Customer Support Logs	Analysis of phone calls and emails to customer support.	Identify common problems and areas of confusion.	Utilizes already existing data (no need for additional collection). Allows for accurate assessment of visitor behavior.	Only a small proportion of users contact customer support, and they may not be representative of all users.
User Profiles	Target audiences are turned into thumbnail descriptions of users. Data for User profiles can be collected via surveys, Web use, or other means.	Basic descriptions of users and potential users; identify differences between pre-determined groups.	Relatively quick and inexpensive method to develop an understanding of the audience.	Important features are chosen by the analyst, who may not identify the most relevant ones.

Name	What Is It?	What goals does it address?	What benefits does it provide?	What challenges does it pose?
Personas	Similar to User Profiles, but based on segmentation data; rather than deciding what factors differentiate groups, segmentation analysis is a purely data driven technique that allows for the identification of the most important features.	Identify groups of users who have similar goals and needs; these groups can be assessed in a number of ways, including potential value, cost of retention, likelihood of churn, etc.	Captures essential data about desirable user segments; can uncover unexpected segments that may be profitable. Slotting models can allow for quick and easy identification of persona membership, allowing better targeting of important customers or prospects.	Analysis is time-consuming and sometimes counter-intuitive. It requires someone with a deep understanding of multivariate statistics and strong business intelligence. Ideally, these should be the same individual; at minimum they should be able to communicate effectively with one another.
Multivariate testing	Real time testing of various features of Web pages to determine which feature(s) lead to the strongest results.	Optimization of web page.	Allows for identification of specific Web assets that are most likely to lead to sales, conversion, increased loyalty, etc.	Requires specialized software and a trained programmer to insert tags. For sites with low traffic, gathering sufficient data may take a long time (up to several months for very low-traffic sites.)