

8-1-2013

Does Your Website Meet Potential Customers' Needs? How to Conduct Usability Tests to Discover the Answer

Daphne Jameson Ph.D.
Cornell University

Follow this and additional works at: <http://scholarship.sha.cornell.edu/chrtools>

 Part of the [Hospitality Administration and Management Commons](#)

Recommended Citation

Jameson, D. A. (2013). Does your website meet potential customers' needs? *Cornell Hospitality Tools*, 4(2), 6-13.

This Article is brought to you for free and open access by the The Center for Hospitality Research (CHR) at The Scholarly Commons. It has been accepted for inclusion in Center for Hospitality Research Tools by an authorized administrator of The Scholarly Commons. For more information, please contact hlmdigital@cornell.edu.

Does Your Website Meet Potential Customers' Needs? How to Conduct Usability Tests to Discover the Answer

Abstract

This CHR tool explains how hospitality managers can evaluate the extent to which their hotel or restaurant website meets potential customers' needs by means of usability tests. As hospitality businesses seek to drive more business to their own websites rather than third-party sites, websites must not only look appealing but also be easy to use so that potential customers can find information quickly and easily. Functionality is equally important for internal websites, such as those used to communicate with employees about policies and benefits. In addition to explaining how to conduct usability tests, the report provides sample test results and summarizes recent research on website structure and functioning.

Keywords

Cornell, tools, website, hotel, restaurant

Disciplines

Hospitality Administration and Management

Comments

Required Publisher Statement

© [Cornell University](#). This report may not be reproduced or distributed without the express permission of the publisher.

The Center for Hospitality Research

Hospitality Leadership Through Learning

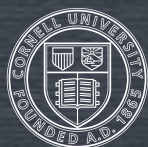


Does Your Website Meet Potential Customers' Needs? How to Conduct Usability Tests to Discover the Answer

by Daphne A. Jameson, Ph.D.

Cornell Hospitality Tool Vol. 4, No. 2 August 2013

All CHR reports are available for free download, but may not be reposted, reproduced, or distributed without the express permission of the publisher.



Cornell University
School of Hotel Administration



Cornell Hospitality Tools
Vol. 4, No. 2 (August 2013)
© 2013 Cornell University. This report may
not be reproduced or distributed without the
express permission of the publisher.

Cornell Hospitality Report is produced for
the benefit of the hospitality industry by The
Center for Hospitality Research at Cornell
University.

Robert J. Kwortnik, Academic Director
Glenn Withiam, Director of Publications

Center for Hospitality Research
Cornell University
School of Hotel Administration
537 Statler Hall
Ithaca, NY 14853

Phone: 607-255-9780
Fax: 607-254-2922
www.chr.cornell.edu

Advisory Board

*Jeffrey Alpaugh, Managing Director, Global Real Estate & Hospitality
Practice Leader, Marsh*

*Niklas Andréén, Group Vice President Global Hospitality & Partner
Marketing, Travelport GDS*

*Scott Berman '84, Principal, Real Estate Business Advisory Services,
Industry Leader, Hospitality & Leisure, PricewaterhouseCoopers*

*Raymond Bickson, Managing Director and Chief Executive Officer, Taj
Group of Hotels, Resorts, and Palaces*

*Michael Cascone, President and Chief Operating Officer, Forbes Travel
Guide*

Eric Danziger, President & CEO, Wyndham Hotel Group

*Benjamin J. "Patrick" Denihan, Chief Executive Officer,
Denihan Hospitality Group*

Chuck Floyd, Chief Operating Officer—North America, Hyatt

RJ Friedlander, CEO, ReviewPro

*Gregg Gilman, Partner, Co-Chair, Employment Practices, Davis &
Gilbert LLP*

*Susan Helstab, EVP Corporate Marketing,
Four Seasons Hotels and Resorts*

Paul Hineman, Executive Vice President, National Restaurant Association

Steve Hood, Senior Vice President of Research, STR

*Jeffrey A. Horwitz, Chair, Lodging & Gaming Group and Head, Private
Equity Real Estate, Proskauer*

*Kevin J. Jacobs '94, Executive Vice President & Chief of Staff, Head of
Real Estate, Hilton Worldwide*

Kenneth Kahn, President/Owner, LRP Publications

*Kirk Kinsell MPS '80, President, The Americas, InterContinental Hotels
Group*

Mark Koehler, Senior Vice President, Hotels, priceline.com

Radhika Kulkarni, VP of Advanced Analytics R&D,

Gerald Lawless, Executive Chairman, Jumeirah Group

Christine Lee, Senior Director, U.S. Strategy, McDonald's Corporation

Mark V. Lomanno

*David Meltzer MMH '96, Chief Commercial Officer, Sabre Hospitality
Solutions*

*William F. Minnock III '79, Senior Vice President, Global Operations
Deployment and Program Management, Marriott International, Inc.*

*Mike Montanari, VP, Strategic Accounts, Sales - Sales Management,
Schneider Electric North America*

*Hari Nair, Vice President of Market Management North America,
Expedia, Inc.*

Brian Payea, Head of Industry Relations, TripAdvisor

Umar Riaz, Managing Director, Accenture

Carolyn D. Richmond, Partner, Hospitality Practice, Fox Rothschild LLP

*Susan Robertson, CAE, EVP of ASAE (501(c)6) & President of the ASAE
Foundation (501(c)3), ASAE Foundation*

Michele Sarkisian, Senior Vice President, Maritz

*K. Vijayaraghavan, Chief Executive, Sathguru Management Consultants
(P) Ltd.*

*Adam Weissenberg '85, Vice Chairman, US Travel, Hospitality, and Leisure
Leader, Deloitte & Touche USA LLP*

Michelle Wohl, Vice President of Marketing, Revinate

The Center for Hospitality Research

Hospitality Leadership Through Learning

Thank you to our generous Corporate Members

Senior Partners

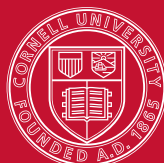
Accenture
ASAE Foundation
Carlson Rezidor Hotel Group
Hilton Worldwide
National Restaurant Association
SAS
STR
Taj Hotels Resorts and Palaces

Partners

Davis & Gilbert LLP
Deloitte & Touche USA LLP
Denihan Hospitality Group
Expedia, Inc.
Forbes Travel Guide
Four Seasons Hotels and Resorts
Fox Rothschild LLP
Hyatt Hotels Corporation
InterContinental Hotels Group
Jumeirah Group
LRP Publications
Maritz
Marriott International, Inc.
Marsh's Hospitality Practice
McDonald's USA
priceline.com
PricewaterhouseCoopers
Proskauer
ReviewPro
Revinat
Sabre Hospitality Solutions
Sathguru Management Consultants (P) Ltd.
Schneider Electric
Travelport
TripAdvisor
Wyndham Hotel Group

Friends

4Hoteliers.com • Berkshire Healthcare • Center for Advanced Retail Technology • Cleverdis • Complete Seating • Cruise Industry News • DK Shifflet & Associates • eCornell & Executive Education • ehotelier.com • EyeforTravel • The Federation of Hotel & Restaurant Associations of India (FHRAI) • Gerencia de Hoteles & Restaurantes • Global Hospitality Resources • Hospitality Financial and Technological Professionals • hospitalityInside.com • hospitalitynet.org • Hospitality Technology Magazine • HotelExecutive.com • HRH Group of Hotels Pvt. Ltd. • International CHRIE • International Society of Hospitality Consultants • iPerceptions • J.D. Power and Associates • The Leading Hotels of the World, Ltd. • The Lemon Tree Hotel Company • Lodging Hospitality • Lodging Magazine • LRA Worldwide, Inc. • Milestone Internet Marketing • MindFolio • Mindshare Technologies • The Park Hotels • PhoCusWright Inc. • PKF Hospitality Research • Questex Hospitality Group • The Resort Trades • RestaurantEdge.com • Shibata Publishing Co. • Sustainable Travel International • UniFocus • WIIWH.COM



Cornell University
School of Hotel Administration

Does Your Website Meet Potential Customers' Needs?

How to Conduct Usability Tests to Discover the Answer

by Daphne A. Jameson

EXECUTIVE SUMMARY

This CHR tool explains how hospitality managers can evaluate the extent to which their hotel or restaurant website meets potential customers' needs by means of usability tests. As hospitality businesses seek to drive more business to their own websites rather than third-party sites, websites must not only look appealing but also be easy to use so that potential customers can find information quickly and easily. Functionality is equally important for internal websites, such as those used to communicate with employees about policies and benefits. In addition to explaining how to conduct usability tests, the report provides sample test results and summarizes recent research on website structure and functioning.

ABOUT THE AUTHOR



Daphne A. Jameson, Ph.D., is professor of management communication at the Cornell School of Hotel Administration, where she studies and teaches about the ways in which language is used in business, technical, and other professional contexts, with special attention to the hospitality industry (daj2@cornell.edu). Using theories, methods, and epistemologies of the humanities, she has explored how narrative discourse and rhetorical strategy influence management action, financial decision-making, service quality, and organizational ethos. Her interest in the intersection between language and technical subject matter arose from her dual background in mathematics and literature. Her publications include studies of management communication in the restaurant industry, discourse in public debates about convention center location and cost, narrative

strategy in investment reports, and the “green” rhetoric of environmental initiatives in the hotel industry. She has also written about the roles that language, symbolism, and storytelling played at Enron, Starbucks, and other corporations.

Does Your Website Meet Potential Customers' Needs?

How to Conduct Usability Tests to Discover the Answer

by Daphne A. Jameson

Are you certain that your company websites do the best possible job attracting new customers, answering clients' questions, or helping employees understand benefit options? Professionally designed websites with beautiful photos and colorful designs do not necessarily meet the needs of intended users. To succeed, websites must above all be functional so that users can easily accomplish their purposes in visiting the site, such as to book rooms, arrange meetings, plan events, identify possible convention sites, make vacation itineraries, apply for jobs, or choose employee benefits. This CHR tool provides detailed instructions for usability testing, a method that determines whether intended users can navigate a website successfully in a reasonable time frame to obtain information needed to make decisions. The process is illustrated with examples from usability tests conducted on 30 hotel websites.

Usability testing does not have to be expensive to be effective. This CHR tool shows how hospitality managers can evaluate and improve their own websites in a low-cost way. The CHR tool explains what usability testing is, why such testing is relevant for hospitality companies, what benefits you can gain, and how to conduct usability tests on your external and internal websites.

What is usability testing?

Hospitality companies rely on web designers and information-technology staff to create and maintain websites. Before major upgrades, you may turn to outside experts to evaluate websites and propose changes. Yet, in many cases, these evaluations are based exclusively on what is called heuristic testing, in which experts examine the website to determine how well it complies with a set of established principles and standards. To be sure, in constructing your site, you should use the principles established by research in web design, such as those shown in the sidebar at right, and studies of how to create content and organize pages, as described on page 13.¹ Though valuable, heuristic testing does not measure how actual users interact with the website.

In contrast, usability testing is based on observations of people actually using the website for a particular purpose, such as finding sufficient information on which to decide whether to reserve a room or book an event.² By observing and recording data about the interaction between the user and the website, you can learn whether the user achieved the goal and, if so, in how much time, through what website pathway, and with what level of satisfaction.³ With website testing, you can learn whether the user needed to visit six pages in ten minutes or two pages in one minute to find the information necessary to make a decision. Furthermore, if the user does not succeed in finding the information and making a decision, you can identify where the barriers occurred. Examples of barriers include broken links, inadequate content, out-of-date information, and unclear pathway connections. If you find out what the barriers are, you can then eliminate them.

In summary, heuristic testing concerns what experts think; usability testing concerns what users do.

¹ Examples of such standards include the following: U.S. Dept. of Health and Human Services. *Research-based Web Design & Usability Guidelines* (Washington, DC: U.S. Government Printing Office, 2006); Monideepa Tarafdar and Jie Zhang, "Analysis of Critical Website Characteristics: A Cross-Category Study of Successful Websites," *Journal of Computer Information Systems*, Vol. 46, No. 2 (December 2005), pp. 14-24; and Janice Redish, *Letting Go of the Words: Writing Web Content that Works*, 2d Edition (Amsterdam: Elsevier/Morgan Kaufmann, 2012).

² Carol M. Barnum, *Usability Testing and Research* (New York: Morgan Kaufmann, 2011).

³ Paul Sherman, *Usability Success Stories: How Organizations Improve by Making Easier-to-use Software and Web Sites* (Aldershot, England: Gower, 2006).

Seven design and navigation standards that make websites more usable

Research about how people use websites reveals that these design and navigation standards are most relevant and most supported with evidence:

- (1) *Use simple, easy-to-read page designs.* Align elements in consistent grid patterns and signal the hierarchy of ideas by placing important items towards the top. Avoid clutter and control visual density by balancing blank space, graphics, and text.
- (2) *Group related navigation elements.* Place the primary navigation menus on the left and limit the number of items, usually to no more than seven. For links and tab labels, choose phrasing that will be most clear to intended users, which may be different from phrasing that insiders prefer.
- (3) *Minimize scrolling.* Eliminate horizontal scrolling. If vertical scrolling is necessary, highlight key words and headings to help readers. Write page content as if it were divided into a series of index cards; this will make the site easier to read on mobile devices' small screens.
- (4) *Ensure visual consistency and clarity.* Make strong contrasts between text and background colors. Choose familiar fonts that are large enough for easy reading. Highlight important words and information.
- (5) *Group related items into lists.* Choose a logical order, usually with most important items at the top. Introduce lists to give users the context.
- (6) *Reduce users' frustrations.* Provide a search option on each page. Base the search function on terms and vocabulary that intended users are likely to enter. To help users enter data in forms, for instance to make reservations, label the fields clearly and consistently. Distinguish required from optional fields and anticipate typical errors.
- (7) *Consider cultural differences and accessibility needs.* For instance, take into account how colors symbolize different things in different cultures. Make the site accessible to the greatest number of users; for example, include a font-resizing option and a text transcript of video clips for low-vision users.

Sample issues resolved by web usability testing

Concern	Benefit
A <i>hotel marketing manager</i> wants the website to attract more business-meeting planners.	Usability testing can identify which pages attract meeting planners' attention and which do not, as well as which are most persuasive.
The <i>owner of a bed-and-breakfast</i> wants the website to provide enough local information without overwhelming potential guests.	Usability testing can determine how long potential guests spend on the site and which types of information are most important to them.
A <i>human resources manager</i> wonders whether line employees can find benefit information quickly and easily on the company's internal website.	Usability testing can reveal whether employees can find information they need and how long they will search before giving up.
A <i>restaurant owner</i> hopes to book more wedding receptions but is unsure whether the website provides sufficient information about menus, prices, and services.	Usability testing can show which details are of greatest interest to potential brides and how long they spend on site before moving on to a competitor's.
The <i>director of a convention and visitors bureau</i> wants to attract more organizers of health-care related conventions and trade shows.	Usability testing can tell which website elements most attract such potential clients.
An <i>amusement park manager</i> wants potential summer employees to apply on line rather than just showing up in person.	Usability testing can indicate what barriers cause potential employees not to complete on-line applications.
The <i>owner of a tour company</i> wants to target professionals ages 25 to 35 for a new series of adventure vacations.	Usability testing can document how such potential customers interact with the website and how fast they make decisions about their level of interest in such vacations.
A <i>marketing executive for a cruise line</i> wants to allay people's fears about the dangers of cruise ships.	Usability testing can document what elements on the website increase or decrease people's fears about cruise ships.

How are usability tests conducted?

Usability testing typically involves a small number of testers chosen because they have characteristics of some target audience. Developers of this methodology have argued that using as few as five testers identifies most problems, and using more than fifteen testers rarely identifies any additional problems.⁴ Many studies use eight to ten testers, sometimes working in pairs,⁵ hoping to identify about 85 percent of the problems. Users are given a scenario that describes a business situation and their purpose in consulting the website. They may be seeking to answer a specific factual question

⁴ Jakob Nielsen, "Why You Only Need to Test with Five Users," Alert-box Mar. 19, 2000, viewed December 20, 2012, <http://www.useit.com/alert-box/20000319.html>.

⁵ Maaikje J. van den Haak, Menno D. T. de Jong, and Peter Jan Schellens, "Constructive Interaction: An Analysis of Verbal Interaction in a Usability Setting," *IEEE Transactions on Professional Communication*, Vol. 49, No. 4 (December 2006).

(e.g., Does Hotel X have a ballroom big enough for my convention banquet?) or to gather enough information to make a business decision (e.g., Does Hotel X offer the types of catering, facilities, and services that make me want to consider it as a site for my association's convention?). Then the users visit the website to try to accomplish the purpose set forth in the scenario. It is important to remember that it is the website that is being tested, not the users.

Data about the test can be collected via direct observation, video recording, audio recording (if users are asked to verbalize their thoughts aloud during the test), electronic trails (i.e., sequence of pages visited), post-test questionnaires, and debriefing interviews.⁶ Testers may do the work at different times and places.

⁶ Lynne Cooke, "Assessing Concurrent Think-Aloud Protocol as a Usability Test Method: A Technical Communication Approach," *IEEE Transactions on Professional Communication*, Vol. 53, No. 3 (September 2010), pp. 202-215.

Why is usability testing relevant to hospitality companies?

Usability testing is especially useful for hotel and restaurant websites because these form such critical entry doors to business relationships. In the past, for instance, it took substantial time and effort for meeting planners to gather information about possible hotels where they could hold an event or convention; now they can skim dozens of hotel websites quickly and easily. If one website is hard to navigate or lacks important information, meeting planners simply move on to another. Hotels whose websites are visually attractive but functionally inadequate will lose potential clients quickly without even knowing it. Similarly quick decision making occurs for potential customers deciding where to dine or where to vacation. However, when users perceive a website's usability to be high, their trust in and satisfaction with the site and its sponsor increase.⁷

Usability testing is also useful to improve internal websites. In the past, employees attended group meetings or individual conferences to learn about company benefits, for instance. Now, this increasingly complex information is on internal websites that employees navigate by themselves in order to make decisions about such matters as career advancement opportunities and health-care benefits. If an internal website is confusing, employees may make bad decisions without the employer even knowing.

Past studies of hotel and travel websites relied on users' perceptions of usability as reported in surveys, rather than on actual usability testing.⁸ The findings were that users perceived that the websites' usability was low. One study that did usability tests of a well-known hotel's website identified over 300 problems with it.⁹

Who could benefit from usability testing?

Exhibit 1 shows examples of concerns that usability testing would help hospitality managers resolve. In each case, a usability test would help the manager or owner understand how the target audience typically interacted with the website, how easy or difficult it was to find information on which to

⁷ Luis V. Casaló, Carlos Flavián, and Miguel Guinalú, "Generating Trust and Satisfaction in E-Services: The Impact of Usability on Consumer Behavior," *Journal of Relationship Marketing*, Vol. 9, No. 4 (2010), pp. 247-263.

⁸ Rob Law and Cathy Ngai, "Usability of Travel Websites: A Case Study of the Perceptions of Hong Kong Travelers," *Journal of Hospitality & Leisure Marketing*, Vol. 13, No. 2 (2005), pp.19-31; Demetris Vrontis, Despo Ktoridou, and Yioula Melanthiou, "Website Design and Development as an Effective and Efficient Promotional Tool: A Case Study in the Hotel Industry in Cyprus," *Journal of Website Promotion*, Vol. 2, No. 3/4 (2007), pp.125-139.

⁹ Rolf Molich and Joseph S. Dumas, "Comparative Usability Evaluation (CUE-4)," *Behaviour & Information Technology*, Vol. 27, No. 3 (May-June 2008), pp. 263-281.

EXHIBIT 2

Sample instructions for a usability test

Scenario: Imagine that your company is planning to hold regional meetings for your most important clients in different parts of the U.S. You are researching hotels where these meetings could be held. Your group will need about 25 hotel rooms of different sizes and types, as well as one function room where the group of up to 25 people can meet during the day. You want the hotel's catering department to prepare most meals for the group.

Each of the hotels whose website you will look at has an acceptable location in one of the regions, so you need not consider that. You will be holding meetings in every region of the U.S., so you are not comparing hotels with one another directly.

Task: Explore each website in order to determine whether the hotel seems like a good place for one of the regional meetings. Your goal is to make a well-informed decision in which you have confidence, not necessarily to make a fast decision. If you decide "yes," this means that you will keep the hotel on the list of possibilities and your assistant will contact the hotel for further information, such as group pricing.

make a decision, and how long it took to find such information. In addition, a usability test would reveal what barriers to successful communication might exist, such as broken links, illogical pathways, or insufficient factual information.

What kinds of information can a usability test of a hotel website reveal?

A study of 30 hotel websites, conducted at Cornell's School of Hotel Administration, illustrates the types of information usability testing can provide. As part of a class project, students in a management communication course analyzed websites of a wide variety of hotel properties located throughout the United States. Each website was independently evaluated by 10 or more users, who followed the defined test scenario shown in Exhibit 2 and answered the questions shown in Exhibit 3, overleaf. In this scenario, users took the perspective of business meeting planners who were researching which hotels met the company's needs as sites for a series of upcoming events. This study was conducted in a university computer lab.

Sample Test Findings

Based on this study, let's look at the findings about the website of Hotel #1, a well-known, 800-room property in the western United States, to see what types of information usability tests reveal:

Sample questions for a usability test

1. How long did you take to make a well-informed decision?
 Start time: _____ End time: _____
 Elapsed time in minutes: _____
 2. How many screens did you look at? _____. To see your list of screens, view your browser's history "by order visited today." Print the list.
 3. Referring to the test scenario, what is your decision?
 - Yes, based on the website information, this hotel seems like a good place for one of the regional meetings, and I want to keep it on the list of possibilities.
 - No, based on the website information, this hotel does not seem like a good place for one of the regional meetings, and I want to eliminate it from the list of possibilities.
- Rate the quality of this hotel as a place for your company's meetings based on the website information. The scale is 1–10, with 1 = totally unacceptable and 10 = excellent. _____*
3. What elements of the hotel website most influenced your decision about this hotel?
 4. How easy to use was the website? Circle your answer and add an explanation:
 - 1 = very easy
 - 2 = moderately easy
 - 3 = neutral
 - 4 = moderately difficult or frustrating
 - 5 = very difficult or frustrating
 Explanation: _____
 5. How much information did the website give you? Circle your answer and add an explanation:
 - 1 = not enough
 - 2 = less than I wanted
 - 3 = just the right amount
 - 4 = more than I wanted
 - 5 = too much
 Explanation: _____
 6. From the user's perspective, what are your positive comments about the website?
 7. From the user's perspective, what are your negative comments about the website?
 8. What specific suggestions would you make to improve the website?

Time elapsed. Adopting the perspective of meeting planners, the website users spent an average of 8 minutes exploring the website in order to decide whether to put this property in the "Yes" category, which would mean that the property would remain on the list of good possibilities. The scenario specified that the next step would be for an assistant to contact the sales department of each property on the "Yes" list to obtain more detailed information, such as group pricing. The range of time that the 16 testers spent exploring the website was 3 to 13 minutes. Those who looked at the website for the longest times were most likely to make positive decisions about keeping the property in the "Yes" category.

Number and sequence of pages. Users looked at an average of 19 page views of Hotel #1's website, with a range of 5 to 44, counting pages that were visited more than once. This is made clear from the computer browsers' history feature, which shows the sequence of pages visited, including backtracks. Some browsers also record the amount of time spent on each page so you can identify which particular pages are biggest draws for particular types of users. In this case, users paused for the longest time on pages that showed the meeting room floor plans and also on the sales brochure, a PDF file that was linked to the website. Users who visited the fewest pages put the property in the "No" category before ever viewing the floor plans. These users eliminated the property from consideration after viewing photos alone. The overwhelming majority of users, however, did put the property in the "Yes" category.

Decision about whether to consider the property further. Thirteen of the 16 users concluded that "Yes, based on the website information, this hotel seems like a good place for one of the regional meetings, and I want to keep it on the list of possibilities." The ratings of the hotel as a possible place for company meetings, based on website information, ranged from 3 to 9 on a 10-point scale, where 10 was most positive. The average was 7.5. When asked what elements of the website most influenced their decisions, the 13 users who were positive typically mentioned the substantive information, easy navigation, and establishment of credibility. The three users who were negative said that the hotel's photos did not look enticing or exciting.

Positive and negative website elements. This usability test also asked users to comment on the positive and negative aspects of the website. Users often complimented the logical structure of the website and its depth of information, including floor plans, a sales brochure, podcasts, contact information (names and phone numbers of sales people), photos, and testimonials. Users liked an e-events booking feature that made it possible to book events for up to 25 people on line. Negative aspects of the website that users mentioned included small, hard-to-read font sizes on some

pages, the low resolution of photos in an opening slide show, an inconsistency in the way meeting room information was presented, and the awkward sizing of PDF documents.

Suggestions. Users rated the website's ease of use "moderately easy" and the amount of information "just the right amount." Though these results are positive, the subsequent open-ended questions provided several suggestions that Hotel #1 could use to make its website even better. Recurring comments concerned the scrolling required on many pages and the difficulty of reading the PDF documents, such as the floor plans and sales brochure, without resizing them. Although users were overall positive about the content of the website, most requested more details about banquets and catering, including sample menus, which the website lacked. Some users also requested more information about the technology available in the meeting rooms.

Overall. Usability testing thus showed that Hotel #1's website was effectively meeting most needs of corporate meeting planners but could be improved with some technological adjustments in scrolling and PDF sizing, as well as the addition of more specific catering and banquet information.

The findings of this study are limited by several factors. The testers were university students, and thus were younger than the meeting planners they were asked to portray. Although the testers were not experienced in meeting planning, all had work experience in either hotels or restaurants and, as hospitality majors, were interested and engaged in the hotel website evaluations. It would be well worth the time for Hotel #1 to consider their suggestions.

How can usability tests of hotel websites provide a competitive advantage?

Another benefit of usability testing is to compare the websites of competing properties. For instance, you might conduct tests of your and your direct competitors' websites to identify which is easier to use, which has more information targeted to a specific type of clientele, or which has a faster way to make reservations.

The results of the Cornell study described above also can be used to make this type of comparison. Let's look at the results for Hotel #4 and Hotel #29, for example, which are similar size and type properties, located in the same West Coast city. The results of the usability tests, however, were strikingly different. When asked if they wanted to keep Hotel #4 in the pool of possible sites for their company's business meetings, only 25 percent of the users said "yes," whereas all agreed to retain Hotel #29. The rating of the hotels based on the website information was 5.5 (out of 10) for #4 and 8.5 for #29.

What in their websites accounted for the different results? It certainly was not the time spent exploring the websites. Users spent an average of 8.5 minutes on website #4 and 8.0 minutes on #29. The range was slightly wider for #4 (4–20 minutes) than for #29 (3–15 minutes). However, when we consider the number of page views, an important distinction appears. Although users spent on average no more time looking at the two websites, they looked at about half as many pages on website #4. This suggests that the pages were harder to find, to read, or to understand. The explanations in the open-ended questions confirm this conclusion that both website #4's structure and its navigation were less than ideal. Users said that the website was "confusing" and "too complex" because it had "irrelevant information everywhere," "too many things going on at once," "embedded links that don't make sense," slow loading times, and a virtual tour that did not work well.

Suggested improvements for Hotel #4's website included adding specific dimensions for the floor plans and adding more photos of meeting rooms to give the planner a clearer sense of what they are really like. Many users recommended changing the website's color scheme of vivid primary hues because it seemed "kid-like" or "like McDonald's," rather than supporting the claims that the hotel provided a "stylish and relaxed atmosphere for meetings" and had a "grand, elegant restaurant." The disconnect between the website text and its colors exacerbated the problems in structure and navigation. These were the reasons that 75 percent of the users put Hotel #4 in the "No" category.

The response to the website of Hotel #29 was quite different. Users were able to look at many more pages in the same amount of time and thus gained more information about the property. They noted that scrolling down was never necessary, that the top navigation bar allowed easy maneuvering throughout the site, and that the menus on each page were easy to use. A typical comment was "In a minimal number of clicks, I was able to extract just what I needed." Users appreciated having sales persons' names and phone numbers for follow up, complete dimensions of function rooms, catering menus, examples of companies that had held events there, and a specific "meeting planner" section. The design and color scheme were described as professional, classy, and suitable for business meetings. Website text conveyed to users that the hotel staff would be flexible and work with them cooperatively to make their functions a success.

Even though website #29 received high marks, the testers offered specific suggestions for making the website even better. Recommendations included adding a table or other way to compare all the function rooms at once, more photos of meeting rooms, and more information about meeting amenities. Overall, a typical user comment was "I like the usability and elegance of this website, as well as its simplic-

ity.” That type of response translated into the hotel’s perfect record of having every user put it in the “Yes” category, indicating the desire to follow up with the sales department in person to get more information.

In sum, whether your hotel’s website needs major improvements like #4 or just small refinements like #29, a usability study could give you many ideas of how make your website more effective in attracting a particular type of clientele. But can such advice be obtained for a reasonable cost?

How can costs of usability testing be minimized?

Fear of the costs of usability testing has prevented many hospitality companies from reaping the benefits of this important business tool. It’s true that professionally conducted testing programs are costly. One British consulting company estimates a cost of £5,250 (about \$8,486) plus tax for a single usability test with six users.¹⁰ An American market research company says that a typical study with 8 to 12 users costs \$12,000 to \$18,000.¹¹

However, hospitality managers can conduct their own usability tests at relatively low cost. As demonstrated with the pilot test above, such tests can be effective in providing helpful information. Thus, almost any individual manager or owner can afford usability testing. The next section provides detailed but easy-to-use instructions for hospitality managers who want to conduct their own usability tests of websites.

How to conduct usability tests on your website

Step 1: Define your purpose.

Usability tests work best when they have a specific focus on a particular target audience and a particular question. Examples of these are the “concerns” listed in Exhibit 1, which discusses who benefits from usability testing. Sometimes a concern arises from a problem. For instance, a hotel manager may be distressed about a steady decline in the number of conventions, or a human resource manager may fear that employees do not understand their benefit packages. In other cases, the concern arises not from a problem but from a desire for expansion into new business markets. For instance, a restaurant owner may want to appeal to prospective brides who could schedule receptions, or a tour operator may want to reach potential customers in a specific age group.

Step 2: Develop a scenario and questions that match your purpose.

The scenario used in the Cornell study (shown in Exhibit 2) and the associated questions for testers (in Exhibit 3) provide an example of how you might phrase these key

¹⁰ “Usability Testing,” SimpleUsability Ltd., viewed December 20, 2012, <http://www.simpleusability.com/costs/>.

¹¹ “Usability Testing,” Mediabarn Research Services, viewed December 20, 2012, <http://www.mediabarnresearch.com/usability-testing>.

documents. The scenario needs to be detailed enough to help testers have the right frame of mind when doing the test and answering the questions. This is especially important if, as in our study, testers are asked to play a role or imagine themselves in a circumstance other than their own.

Pretest the scenario and questions to ensure that they are unambiguous. Ask specifically how the questions might be misunderstood.

Step 3: Plan the logistics of the test.

If you have a quiet office with a computer available, you could conduct the test there. Testers can be scheduled to do the test one at a time over several weeks if necessary. Most tests will take no more than an hour, so they could be scheduled sequentially over several days. It is not necessary to have a designated computer lab or to have all tests done concurrently.

Another option is to have testers work at home. You will have less control, but the context may be more realistic. For instance, if you are conducting a usability study of your benefits website and you recruit some of your own employees to do the testing, then having them complete the usability test at home re-creates a realistic setting. If as a tour operator you are trying to attract young professionals to several new adventure tours, then having your testers explore the websites at home also creates a natural environment. Usability tests done in informal settings can provide valuable information.

Step 4: Recruit testers.

As suggested at the outset, you will need at least five and no more than fifteen testers, and many studies have found that eight is a good number.¹² In many cases, you can recruit testers who are just as appropriate as those that a commercial testing firm would use. Your testers should not be familiar with the website being evaluated. So, for instance, if you want information about your human resources website, you should seek volunteers who have not used that website (or at least have not used it recently). However, finding perfectly matched testers is often difficult or impossible. If you want to learn how well your website appeals to meeting planners, then the ideal testers are meeting planners who are unfamiliar with your hotel and its website. Because it will be hard to find and recruit such people, you might identify adults who have an appropriate background and are able to imagine themselves in such a role. Often colleagues and coworkers can help you recruit volunteers.

Testers are usually compensated quite modestly. If you pay eight testers \$40 each for a 90-minute test, your \$320 cost will be much lower than the thousands of dollars that

¹² Nielsen, *op.cit.*

an outside company would charge to conduct your usability test. In some cases you might offer a meal at your restaurant, a pass for your resort pool, or a gift card in exchange for serving as a tester.

Another option for recruiting testers is to partner with your local college program in hospitality management. As in the study described above, even when they may not fit the target profile exactly, students can identify significant website problems and make actionable suggestions. One website usability study recruited students and rewarded them with \$10 gift certificates for the campus bookstore.¹³ An advantage of using hospitality students as testers is that they will be motivated by a professional interest in the questions you are seeking to answer about your website.

Step 5: Conduct the test.

Have the testers read the scenario and questions and then ask for any clarifications before they start. Then leave them alone.

Step 6: Analyze results.

Findings can be entered into a spreadsheet or database program for analysis. No advanced statistical analysis is needed for usability methodology.

Step 7: Take action.

As the Cornell study shows, no matter what the overall evaluation results are, a well done usability study will yield actionable suggestions for how to improve the website. Some can be implemented without major changes to the website. For instance, more information, photos, or documents can be added. However, some suggested changes, such as a more logical overall structure or easier navigation, will require technical assistance. Most usability studies also identify what parts of the website are working well, so compliments to those responsible will be in order, too.

Conclusion

Usability testing is underused in the hospitality industry, not only for websites but also for procedure manuals, training materials, policy statements, investor communications, and other electronic and print documents. Yet most hospitality managers are able to conduct their own usability tests with just a moderate amount of effort and at a relatively low cost. The benefits will multiply as more people find your website or other communications clear, easy to use, professional, and persuasive. ■

¹³ Laura Manzari and Jeremiah Trinidad-Christensen, "User-Centered Design of a Web Site for Library and Information Science Students: Heuristic Evaluation and Usability Testing," *Information Technology & Libraries*, Vol. 25, No. 3 (2006), pp. 163-169.

Seven content and organization standards that make websites more usable

Research about how people use websites reveals that these content and organization standards are most relevant and most supported with evidence:

- (1) *Create a positive first impression.* On the homepage communicate the site's value and purpose, show all the major options, and limit the length so no scrolling is needed. On each landing page, customize the content to appeal to the type of user who reached your site by clicking through a particular linked site.
- (2) *Tell a compelling story.* Connect ideas throughout the website by writing in an engaging voice and demonstrating that you understand users' points of view. Unify the site with a coherent theme, metaphor, or concept. Coordinate text and graphics as story elements.
- (3) *Organize logically from the user's point of view.* Group related information. Layer information to meet different users' needs; consider segmenting by purposes, questions, action sequences, products and services, or types of users. Avoid "pogosticking," that is, making users backtrack repeatedly to connect related details.
- (4) *Plant signposts.* Use descriptive page titles, category labels, and headings throughout to help users find and assimilate ideas quickly. Put key ideas towards the top of pages and sections. Organize pathway and gallery pages logically from the user's perspective.
- (5) *Make links clear.* Use substantive link labels to direct users to related content. Make the link labels and destination page names match. Include text, not just graphics for links. Give consistent cues to indicate what is clickable. Add verbs to links that denote actions. Differentiate links visited from links not yet visited.
- (6) *Complement text with graphics.* Choose images, video, audio, and animation that are meaningful to users, who often prefer different graphic elements than do designers. Avoid images overlaid with text. Avoid graphics that slow downloading time.
- (7) *Write clearly and concisely.* Make action sequences clear, avoid jargon that users won't understand, define acronyms and abbreviations, and prefer active verbs.



“In addition to the world’s leading faculty and hospitality management content, **Cornell’s General Managers Program** has allowed us the opportunity to surround ourselves with international peers where the networking opportunities alone **open your eyes to new ideas** and challenges.”

Kerry Jayne Watson

Group Operations Manager

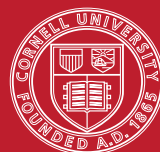
Inverloch Castle Management International, Scotland

Gain the *leading edge* in hospitality management.

Cornell University’s General Managers Program (GMP)

The GMP is an intensive, operations-level education experience designed to help hospitality professionals hone their tactical leadership skills and develop the strategic vision to pioneer unparalleled success. Join us and gain an invaluable connection to the industry’s most influential network of elite hoteliers.

Learn more at hotelschool.cornell.edu/execed/gmp13



Cornell University
School of Hotel Administration

Cornell Center for Hospitality Research Publication Index

www.chr.cornell.edu

Cornell Hospitality Quarterly

<http://cq.sagepub.com/>

2013 Reports

Vol. 13 No. 7 Social Media Use in the Restaurant Industry: A Work in Progress, by Abigail Needles and Gary M. Thompson, Ph.D.

Vol. 13 No. 6 Common Global and Local Drivers of RevPAR in Asian Cities, by Crocker Liu, Ph.D., Pamela Moulton, Ph.D., and Dan Quan, Ph.D.

Vol. 13 No. 5 Network Exploitation Capability: Model Validation, by Gabriele Piccoli, Ph.D., William J. Carroll, Ph.D., and Paolo Torchio

Vol. 13, No. 4 Attitudes of Chinese Outbound Travelers: The Hotel Industry Welcomes a Growing Market, by Peng Liu, Ph.D., Qingqing Lin, Lingqiang Zhou, Ph.D., and Raj Chandnani

Vol. 13, No. 3 The Target Market Misapprehension: Lessons from Restaurant Duplication of Purchase Data, Michael Lynn, Ph.D.

Vol. 13 No. 2 Compendium 2013

Vol. 13 No. 1 2012 Annual Report

2013 Industry Tools

Vol. 4, No. 1 The Options Matrix Tool (OMT): A Strategic Decision-making Tool to Evaluate Decision Alternatives, by Cathy A. Enz, Ph.D., and Gary M. Thompson

2013 Industry Perspectives

Vol. 3, No. 1 Using Research to Determine the ROI of Product Enhancements: A Best Western Case Study, by Rick Garlick, Ph.D., and Joyce Schlentner

2013 Proceedings

Vol. 5 No. 6 Challenges in Contemporary Hospitality Branding, by Chekitan S. Dev, Ph.D.

Vol. 5 No. 5 Emerging Trends in Restaurant Ownership and Management, by Benjamin Lawrence, Ph.D.

Vol. 5 No. 4 2012 Cornell Hospitality Research Summit: Toward Sustainable Hotel and Restaurant Operations, by Glenn Withiam

Vol. 5 No. 3 2012 Cornell Hospitality Research Summit: Hotel and Restaurant Strategy, Key Elements for Success, by Glenn Withiam

Vol. 5 No. 2 2012 Cornell Hospitality Research Summit: Building Service Excellence for Customer Satisfaction, by Glenn Withiam

Vol. 5 No. 1 2012 Cornell Hospitality Research Summit: Critical Issues for Industry and Educators, by Glenn Withiam

2012 Reports

Vol. 12 No. 16 Restaurant Daily Deals: The Operator Experience, by Joyce Wu, Sheryl E. Kimes, Ph.D., and Utpal Dholakia, Ph.D.

Vol. 12 No. 15 The Impact of Social Media on Lodging Performance, by Chris K. Anderson, Ph.D.

Vol. 12 No. 14 HR Branding How Human Resources Can Learn from Product and Service Branding to Improve Attraction, Selection, and Retention, by Derrick Kim and Michael Sturman, Ph.D.

Vol. 12 No. 13 Service Scripting and Authenticity: Insights for the Hospitality Industry, by Liana Victorino, Ph.D., Alexander Bolinger, Ph.D., and Rohit Verma, Ph.D.

Vol. 12 No. 12 Determining Materiality in Hotel Carbon Footprinting: What Counts and What Does Not, by Eric Ricaurte

Vol. 12 No. 11 Earnings Announcements in the Hospitality Industry: Do You Hear What I Say?, Pamela Moulton, Ph.D., and Di Wu

Vol. 12 No. 10 Optimizing Hotel Pricing: A New Approach to Hotel Reservations, by Peng Liu, Ph.D.

Vol. 12 No. 9 The Contagion Effect: Understanding the Impact of Changes in Individual and Work-unit Satisfaction on Hospitality Industry Turnover, by Timothy Hinkin, Ph.D., Brooks Holtom, Ph.D., and Dong Liu, Ph.D.

Vol. 12 No. 8 Saving the Bed from the Fed, Levon Goukasian, Ph.D., and Qingzhong Ma, Ph.D.

Vol. 12 No. 7 The Ithaca Beer Company: A Case Study of the Application of the McKinsey 7-S Framework, by J. Bruce Tracey, Ph.D., and Brendon Blood

Cornell Center for Hospitality Research
537 Statler Hall
Ithaca, NY 14853
USA
607-255-9780
www.chr.cornell.edu