

Web sites and positive user experiences

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May 7, 2008

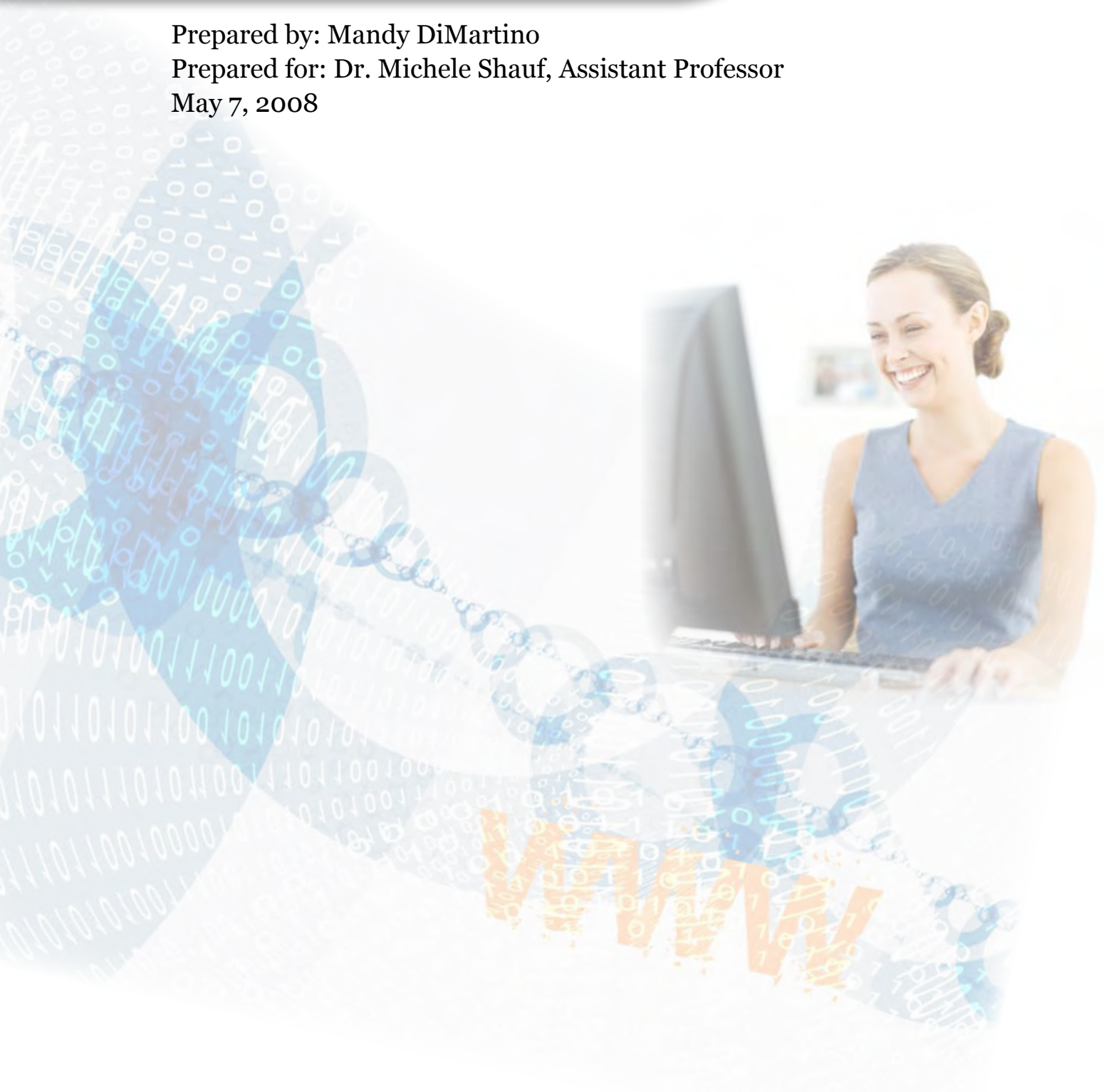


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Executive Summary

Although many organizations maintain a Web site, they often neglect the user's needs. They perform little, if any, research on their customers and just base their site on what they think users want. This doesn't work because the customers are individuals and the company must perform research to understand these individual needs. With content based on customer research and a proven site design, the company enhances the user experience and retains customers.

I found two helpful experience design models to guide an organization in the strategy behind Web site design. The first model, the *User Experience Honeycomb*, by Morville (2004) provides seven components - desirable, useful, usable, findable, credible, accessible, and valuable - that make up an experience design Web site. To help achieve a balance of these components, an organization can follow Garrett's (2002) *Elements of User Experience* model. This model's five levels - strategy, scope, structure, skeleton, and surface - build on each other to create a positive user experience.

All organizations need to understand their audience to create a successful user experience Web site. Through research and a customer task analysis, an organization discovers the users, their traits, and their environmental circumstances. When addressing multiple audiences, the organization should understand which features of the Web site each audience type uses, and then create those features for that audience. The audience analysis continues with the *interactive design cycle* after the Web site is active. This allows the organization to analyze and edit the Web site until it meets or exceeds measurable objectives.

Research tells the organization what content to include a Web site, but to make the site usable, they must also organize the content effectively. With proper navigation, action buttons, breadcrumbs, quick-loading pages, comprehensive default view, and properly sized text, the web site design provides a positive user experience.

E-commerce organizations must also consider additional Web site design components. The site should display a brand identity, provide e-mail subscriptions, enact a privacy policy, and allow users to edit their preferences. During the check-out process, the organization should refrain from asking more information than necessary, show the secure connection, and provide a link to the privacy policy. Once the user places an order, they should receive a confirmation email with an order summary and delivery estimate.

Two examples of positive experience design Web sites are MTV.com, for their newly simplistic design, and Flickr for their commitment to understanding users. Facebook, however, gives an example of a positive user experience turned negative when they launched a new tool without properly evaluating it with their audience.

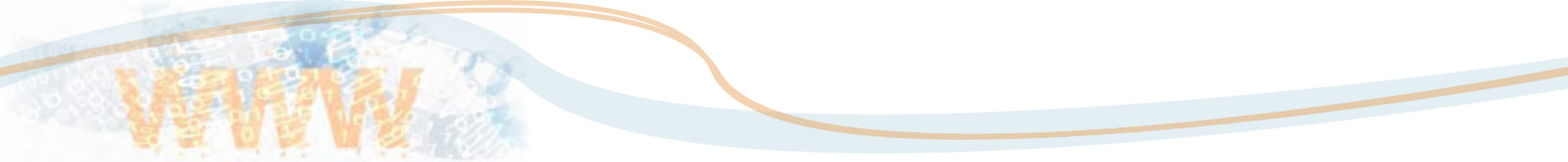
Introduction

Often Web site users endure convoluted text, bad navigation, slow-loading graphics, and many other negative experiences that not only upset them, but also make them want to never return. When a Web site user struggles to find what they need, they feel like they did something wrong even when the problem is the Web site design (Garrett, 2002). In this report I detail attributes of positive Web site experiences and the methods used to achieve these experiences.

When a user can't locate a product or doesn't understand the site navigation, they simply abandon the site to seek the information on a competitor's Web site (Van Duyne, Landay, & Hong, 2007). The user may also never return to the site and note not to deal with the organization or its Web site again. In this case, an organization would be better off with no Web site than an ineffective one (Garrett, 2002).

Garrett (2002) says that the problems with these Web sites begin because organizations often perform inadequate, if any, customer research and testing. Without considering the user, organizations create content that fit their needs. Some organizations claim that they know their users and don't need to research. While other organizations simply lack the money to do formal research, so they opt out all together (Garrett, 2003).

User-centered Web sites take many hours to create, but provide an invaluable benefit: a competitive edge (Garrett, 2003). These well-planned sites create a relaxing and enjoyable experience for the user where all their needs are



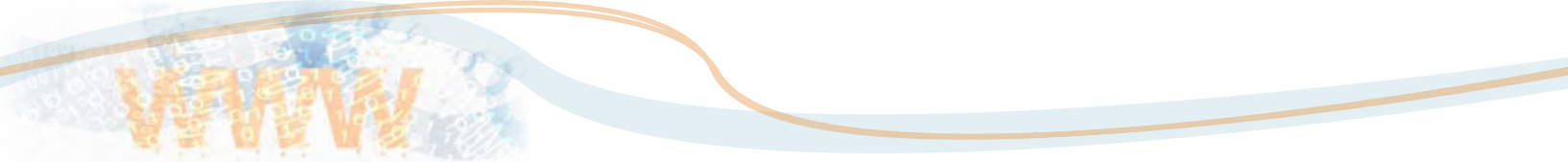
anticipated and planned for, like a pampered vacation.

On a properly designed Web site, the user finds the information they came for quickly and easily. A Web site designed to enhance the user experience addresses the user's issues, meets their expectations, and answers their questions. With such an effortless experience, the user comes back again to the site, and may even recommend it to friends.

To create a Web site with a positive user experience, an organization should follow the steps of Garrett's (2002) *Elements of User Experience* model, which addresses the seven aspects of Morville's (2004) *User Experience Honeycomb*. Through these models, an organization will find their users' needs and meet them effectively. Then the organization can focus on a usable Web site structure while keeping their users' capabilities in mind. If the organization runs an e-commerce Web site, they must also create a safe environment for the user to enter and store personal information.

Although a web "experience" may sound like something spectacular, often it simply means that the user successfully completed a task without frustration, and maybe had fun doing it, too. This report explains the strategy behind how anyone, whether a multi-million dollar organization or a local boy scout troop, can create a Web site with a positive user experience for their audience. It also reviews pitfalls that cause negative user experiences.

I compiled the information for this report from articles and books written by experts in user experience design. Because I only had three weeks to complete the



report, I did not perform primary research. This report does not explain how to design a Web site; it explains how to create an effective Web site design strategy to address the needs of the intended audience.

In the next section, I detail the findings of my research. After the findings, I give conclusions and a references page.

Findings

I have broken the findings section down into five sub-sections - user experience models, Web site content, usable Web site design features, e-commerce design features, and user experience design examples.

User Experience Models

Morville's (2004) *User Experience Honeycomb* (figure 1) contains seven parts to a user experience - useful, desirable, accessible, credible, findable, usable, and valuable. An organization must address all these aspects of design to create a successful Web site (Morville, 2004).

These aspects must work individually (a cell) and with each other (honeycomb) to hold together a site. Although these aspects work together, often a designer must choose one to prevail over another (Morville, 2004). For instance, an English to Spanish translation site may be useful, but not necessarily desirable. A Web site's design should include all the honeycomb's aspects while highlighting some over others to enhance the user experience. The organization will discover which aspects to highlight by performing audience research.



Figure 1
Morville's User Experience Honeycomb

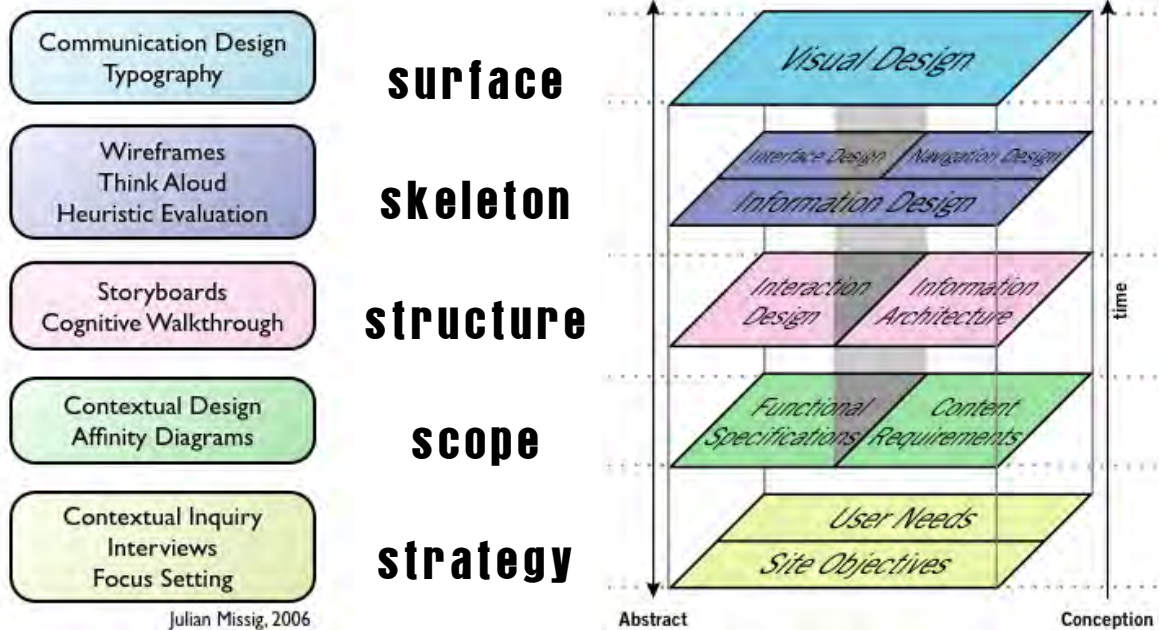


Figure 2
Garrett's Elements of User Experience

Morville's (2004) *User Experience Honeycomb* model (figure 1) provides seven attributes that make a successful user experience, and Garrett's (2002) *Elements of User Experience* model (figure 2) explains the steps to achieve those attributes. In this model, an organization starts the Web site on the strategy level, where they determine the user's needs and organization's objectives. Then the following three levels - scope, structure, and skeleton - provide the framework for the site. The site culminates at the surface level, the site as the user sees it (Garrett, 2002). When an organization contemplates and researches each step in Garrett's model, they will also address the aspects of Morville's honeycomb.

As an organization works through the five levels of Garrett's (2002) *Elements of User Experience* model, they should make all lower level decisions adjustable, even when on another level. For instance, when the designer starts working on the skeleton level in navigation design, they may discover the navigation won't

work properly without reconsidering a decision in the content requirements on the scope level. Organizations should never make any design decision permanent, as that could make the entire Web site unstable (Garrett, 2002).

Garrett (2002) says, “Thoughtful, deliberate design decisions will cost you time in the short term, but they will save you much more time in the long term.”

Garrett (2002) compares web design to a marathon race, where the designer paces himself to complete a goal: a great Web site with a positive user experience. Although this approach may seem like a lot of work, an organization that employs its recommended steps will see results.

Web site content

Garrett (2002) notes that at the beginning of the internet age, organizations created Web sites simply to say they had one, without giving much thought to the users. As technology progressed, they expanded their sites by adding more information, which just made the site more difficult to navigate and find information (Garrett, 2002). Organizations must research their users to find what information they need, and then tailor the Web site content.

Garrett (2002) says, “...the single most important thing most Web sites can offer to their users is content that those users will find valuable.” Van Duyne et al. (2007) note that often an organization decides on content without research because they feel they know the users. However, when an organization performs research, they often discover that the users want different things than the organization. An organization must perform audience research and task analysis before they make any other Web site decision. (Van Duyne et al., 2007). Audience research and task analysis is part of the first level, strategy, of Garrett’s (2002)

Elements of User Experience model.

Through proactive focus groups or user observations, the organization should find the audience's age, education, technological capabilities, environmental factors, and why they visit the site. All these factors can affect how the user sees and uses a Web site (Van Duyne et al., 2007). For instance, a user at the airport may access a weather site on their cell phone. The user's phone has a small screen and a slow connection. If the organization anticipates this user's situation, the user will have a positive experience and get the information they need.

To uncover the user's needs, Van Duyne et al. (2007) recommend conducting a task analysis by cataloging what users do on the organization's Web site. With this information, the organization can see where the users have trouble. Then the organization can create solutions to provide a positive user experience (Van Duyne et al., 2007).

Garrett (2002) notes that often Web sites serve multiple audiences. This doesn't present a dilemma if the organization determines which audience uses which feature. Then they can create each feature to address a particular audience (Garrett, 2002). For example, a fire safety Web site may have games for children, household safety information for adults, and a sign-up for a fire safety program for a school. The organization can properly address these audiences - children, parents, and teachers - because they only visit specific parts of the Web site.

With the audience information in hand, the organization can move on to the scope level of Garrett's (2002) *Elements of User Experience* model. Once the

organization completes the Web site and it receives its first visitors, they should begin Van Duyne et al.'s (2007) *interactive design cycle*. The organization continues this process of designing and evaluating, shown in figure 3, until they meet or surpass their objectives. However, the organization must set measurable evaluation objectives such as an increase in repeat customers or fewer user errors (Van Duyne et al., 2007).

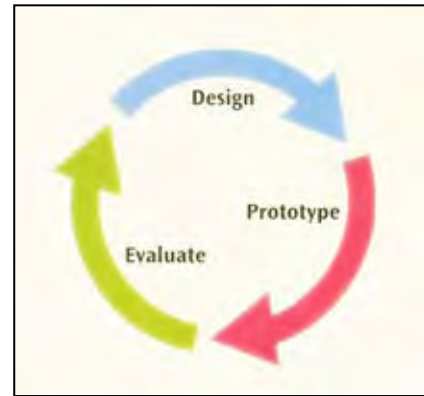


Figure 3
Interactive design cycle

Usable Web site design features

Morville (2007) says, “Users want to find it, use it, and move on. The best experience is invisible.” Van Duyne et al. (2007) recommend organizations design their sites to include the following seven Web site features to make navigation easier.

Homepage The gateway to a Web site, the homepage, must have the best possible presentation. Users often abandon sites with so-so homepages, but a well thought out and organized homepage encourages the user to continue into other parts of the Web site (Van Duyne et al., 2007).

Van Duyne et al. (2007) found that an effective homepage must:

- Create a positive impression
- Identify the organization and its purpose
- Provide navigation
- Link to interesting subjects
- Have an option to personalize

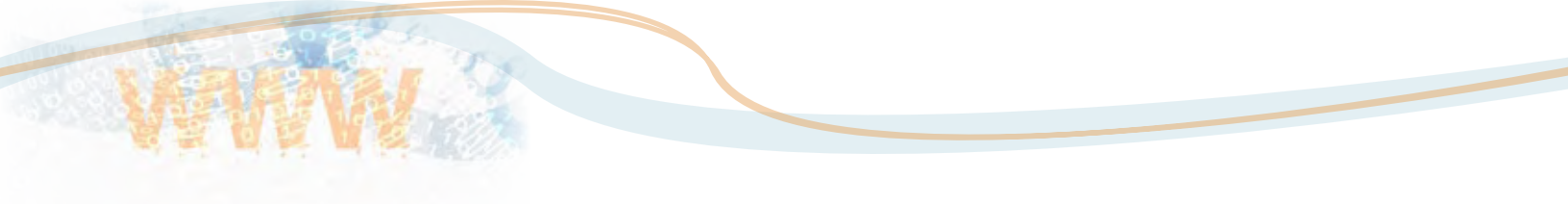
Navigation An organized and well-planned navigation make for a better user experience. If pages provide links to other pages with a similar topic, the user will click less to complete their task. Users also like sites with consistent navigation bars. A consistent design ensures that no matter which page they encounter, they understand the navigation (Van Duyne et al., 2007).

Action buttons Users like shadowed pictures that look raised, called action buttons. The user knows something happens if they click on it. A non-raised button may look just like another picture, and the user may become confused. Web sites should include action buttons to help users complete the task, like checking out a shopping cart (Van Duyne et al., 2007).

Breadcrumbs Clickable links called breadcrumbs provide a map showing the user's location on the site, and where they were. This helps the user get back to a page quickly. With breadcrumbs, like Hansel and Gretel, users can find their way home (Van Duyne et al., 2007).

Quick-loading pages Although a Web site may provide great information and easy navigation, slow-loading pages may still turn off the user. Impatient users may abandon the site because large files such as videos and plug-ins load too slowly. Designers should minimize large files for quicker loading pages (Van Duyne et al., 2007).

Design Users don't scroll to see navigation or menus on page designs that provide all the pertinent information within the screen view. An organization should include other less important information underneath the default view,



where users look less often (Van Duyne et al., 2007).

Text Users must easily identify the page's purpose by the text. To help the user, the designer should arrange the text in a hierarchy, with the most important information in largest font and most prominent location. The less significant information goes underneath in smaller font. However, the designer should keep the length to a minimum, as people tend to read less on monitors than on printed materials. Concise sentences, bulleted lists, and printable views also provide greater readability (Van Duyne et al., 2007).

E-commerce design features

Some Web sites simply provide information for users, but Web sites that sell products have separate user experience design issues to consider. Van Duyne et al. (2007) emphasize that a Web site must be credible for users to trust it; especially e-commerce where users give out personal information such as addresses and credit card numbers.

Van Duyne et al. (2007) found that Web sites should:

- Create a brand identity
- Provide e-mail subscriptions
- Enact a privacy policy
- Provide a secure connection
- Allow users to edit their preferences

These features build the user's trust on any Web site, but an e-commerce site will also receive increased revenue (Van Duyne et al., 2007).

Some shoppers become overwhelmed when a Web site offers many products. To use this to the organization's advantage, Van Duyne et al. (2007) recommend offering product recommendations. These recommendations can be as simple as a small write up on the product, or allowing customers to write reviews. When users visit a product page, provide links to accessories for that product and similar products (Van Duyne et al., 2007).

Van Duyne et al. (2007) say, "The ability to find and buy products online is one of the most compelling reasons to use the web..." Although compelling, users may quickly become wary of Web sites that don't provide sufficient answers, search tools, and security.

Van Duyne et al. (2007) say that the checkout page should provide all possible answers to any order questions. One such question may be, "When will my order arrive?" With all questions answered, the user can proceed confidently.

Van Duyne et al. (2007) also stress not to ask too much information from the customer too soon. The customer finds this comforting and trusts the site as a legitimate organization. In the same vein, the Web site should include a clear privacy policy on storing personal information and distributing customers' email addresses, and also provide and advertise a secure connection (Van Duyne et al, 2007).

Van Duyne et al. (2007) recommend the company sends an email with the following after checking out:

- Order review
- Thumbnail photos of items
- Delivery estimate
- Confirmation email

Van Duyne et al. (2007) recognize Amazon.com's checkout process as exemplary. They give delivery choices, information, and still provide a quick checkout. Organizations with e-commerce sites like Amazon.com must understand and meet the needs of their users because to gain a positive user experience and, most importantly, revenue.

User experience design examples

Much work goes into a positive Web site user experience; however, most users don't appreciate how hard simplicity is to create. MTV's and Flickr's Web sites provide good examples of how deliberately crafted Web sites appeal to users; while Facebook provides an example of how insufficient research can ruin a good reputation.

MauroNewMedia (n.d.) reviewed the new MTV.com. MTV's removed their FLASH Web site in 2007, and created a new simple HTML site. The Web site became easier to navigate, which provides a positive user experience. Although the new site made little immediate impact, this Web site will have far-reaching implications in the industry over the next few years. As for MTV.com, users will stay with them for information and new users may even appear from competitors' sites (MauroNewMedia, n.d.).

Merholz (2007) recounts a pioneer organization in user experience design: Flickr. This Web site began in 2004, allowing users to unload their digital camera memory cards onto their databases where users could share and make prints. As technology progressed, they revamped their photo toolset to include tagging, groups, and other features. Flickr continues their success because they understand they must evolve to continue to please the user. Flickr even proclaims their user-centered approach on their “about us” page (Merholz, 2007).

MauroNewMedia (n.d.) also reviewed Facebook and its new Beacon feature. Before Beacon’s launch in 2007, Facebook provided a simple and positive user experience to many users. After the launch, Facebook now provides an excellent example of a poorly researched tool which presented loyal users with a negative user experience. The Beacon feature follows and records the user’s internet usage and posts it to their Facebook account. To make matters worse, Facebook made users search around to disable this new feature. MauroNewMedia concluded that this misstep cost Facebook the user’s trust; some users may even join a different networking site (MauroNewMedia, n.d.).

Organizations can learn much from other Web sites and their past successes and failures. By reviewing these and other Web site user experience examples, organizations will understand what their Web site should try to achieve and what they want to avoid.

Conclusions

The term “user experience design” may conjure images of FLASH sites and movie clips, but often the most simplistic Web sites provide the most positive experience. A Web site must be easy to navigate, organized, and give information relevant to the audience.

Organizations must not guess or assume the needs of the users; the content and technology used on a Web site must be based on user research and testing such as focus groups. Through this research, which is the first step on Garrett’s (2002) *Elements of User Experience* model, the organization can begin crafting an effective Web site.

After proper research, the organization continues with a user centered Web site design by implementing usable Web site design features such as action buttons, breadcrumbs, and quick-loading pages. Through these features, the user can find content quickly.

E-commerce sites must focus on privacy policy and security issues. Users want to feel their private information is safe while shopping online. E-commerce sites should also provide the customer with order information in a confirmation email.

The Web sites with positive user experiences, such as MTV.com and Flickr, provide excellent experience design models.

Organizations may find a user experience design Web site very time consuming, but the end results of satisfied customers will increase the number of Web site users.

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