Applying Effective Website Design Methodology

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Abstract

This paper describes the web design principles the designers applied when creating their personal websites. It discusses the criteria the designers used when making choices related to these principles as well as the feedback received during user testing. Also discussed are potential improvements to the site design.

Introduction

A lot has changed since the World Wide Web became mainstream in the mid to late 1990’s. [1] As the Web became mainstream, hosting sites like Yahoo! Geocities saw their usage increase dramatically. As web technologies developed, users began to register their own domain names and create their own websites. At this time, the focus was not on how well designed the site was, but on simply getting a site on the web and having it accessible for others. Products like Adobe’s Dreamweaver have allowed users to create websites without the need to learn HTML and other web technologies.

The introduction of MySpace, Facebook, and other social networking sites around 2003 has increased the number of people creating their own ‘space’ on the Web once again.

The increasing popularity of websites has led to a significant focus on web design. The cluttered, jumbled design of some Geocities’ pages is no longer accepted. Web users are demanding clear, neat and, easily navigated pages. Because users span age demographics, have varying ability levels, and live across the globe, the definition of a “good” website has new meaning.

Experienced users expect better web design than novice users; as the number of experienced Web users increases, the result is more of the potential users having these expectations. [2] There is an expectation that the sites will be eye-catching, easy to navigate, error free, and that they will work in any browser. Since web access has become available on numerous different platforms, there is now the expectation that websites will work properly on all platforms (eg. mobile phones, PDA’s, IPod’s etc).

Users do not have the desire to wait for web pages to load. If a page takes too long to load, they will simply go to another page for the information they desired. A study by Fiona Nah in 2004 showed that without feedback (progress bar, etc), the tolerable wait time for a non-working web page was between 5 to 8 seconds. [3]

The scope of this project required us to focus on the basics of web design. Goals included creating clean, easy to read websites that were easy to navigate. Considerations included
determining the site’s audience, having a consistent look and feel, text that can be easily scanned through by the reader, clear and uncluttered pages, and a website where all navigation aids, links and images work properly.

In determining website layout, content, and look and feel, the designers visited many websites. Websites such as World of Warcraft [4] and WomenGamers [5] were found to be too “busy” and cluttered for our needs. Other sites such as Jamie Blustein’s home page [6] were found to be more of a web page than a website and thus did not suit the purposes of the project.

**Website Design**

The focus of these websites was to showcase some of the owners’ interests in a simple, clear, user-friendly manner. Because these sites were required for a project, and the goal of the project was to focus on the design of the website, not the content, the audience was considered to be fairly limited. The audience would not be expecting highly engaging content, but would instead be concerned with the design principles as they were applied to the sites.

**Navigation**

It was decided to keep the navigation of the sites fairly simple. As can be seen in Figure 1 and Figure 2, the home page would link to all the main topics on the site. Further information on the topics for those pages was put on subpages as necessary.

![Figure 1](image1.png)  Site layout for Coranne’s website.

![Figure 2](image2.png)  Site Layout for Drew’s website.
For Coranne’s website, the home page contained a brief introduction of the site owner as well as an explanation of what could be found on each of the links. Only the archery page required subpages. The longest page in the website is the Styles of Archery page. To compensate for the length of this page, in-page links were used to take the reader to the description of a specific style.

For Drew’s website, the home page contained a photo of the site owner. It was decided to use subpages from both the Hobbies and Travel pages to logically segment the content.

Given the size of the website and the amount of content hosted on them, the website layouts worked well. Using these layouts helped keep page loading times to a minimum and decreased the amount of page scrolling users would have to do. Segmenting the content by topic allowed site users to view only the content that interested them.

**Look and Feel**

Both website designers chose to use a uniform colour scheme throughout their websites. The choice of colours for the website was done to make the site easy to read and yet still visually appealing. The designers also chose to use the same web page layout for their websites. Because the websites were to reflect the individual interests and tastes of the website designers, the colours chosen were quite different.

The light yellow background with dark red text used in Coranne’s website creates a good contrast between the text and background making the page easy to read while ensuring the site had a calm feel to it. Because some computer users have difficulty with black on white and white on black, it was decided to avoid these colours completely. The darker yellow behind the banner and menu areas was used to make these sections stand out from the main body area of the website. Doing so creates distinction between the areas without having to introduce a third colour, while helping to draw the eye to relevant areas on the page if a user is scanning through the page.

Drew’s website was originally designed using a combination of vibrant colours; however, the site designer felt this was too harsh and decided instead to use a more toned-down blue and orange background with white text. The use of complementary colours is recognized as an important aspect of art and visual design. [7]. The use of white text ensured sufficient contrast with the background making the text easier to read.

The font style was kept simple and the size standard throughout the pages of both websites. Using a common font style removed the need to provide alternate font options to the web browser for use when the desired font was unavailable. Keeping the size standard throughout the pages helped create a consistent look and feel throughout the site. The use of increased size and a bold font for headings makes it easier for the user to scan through a page looking for relevant information.
Keeping the colour scheme and page layout consistent throughout the websites is a visual reassurance to site users that while they have changed web pages, they are still on the same website. As can be seen in Figure 3 and Figure 4, the designers opted to use the same page layout; however, the use of colour gives makes the look and feel of the two sites very distinct.

**Image Hosting**

The designers chose the image hosting solution that was best for the individual website.

Coranne decided to host the photos for the travel gallery externally on Picasa. [8] Because of the often slow response times of the server hosting the website and the number of images used in the travel gallery, hosting the images on this server would frustrate users. It was decided to host the images externally. Because Picasa (provided by Google) is an ad free and user friendly image hosting service it was chosen to host the images.

Drew decided that the number of images on his travel pages were few enough to justify hosting them on the web server.

**User Testing**

User testing was done on the finished websites. Users were asked to rate the website on ease of navigation, visual appeal of the site, and clarity of the content. Each designer asked the users to perform two tasks. After the completion of these tasks the users rated the website using a Likert scale.

Coranne asked the users to complete two tasks. The first was to list the three styles of archery and the second was to list the three cities hosted in the travel gallery. All four users completed these tasks without difficulty.

As seen in Figure 7 the user feedback was quite positive with the lowest scores received for visual appeal. The reason for the visual appeal scores was the age span of the users sampled.
Both users who rated the visual appeal as neutral are fairly young and admit to wanting to see flashy websites, not simple ones. Both of the more mature users felt the website was “nice and clean”.

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<td>Clarity of Content</td>
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![Figure 7](image_url) User feedback for Coranne’s website.

Drew also asked his site’s users to complete two tasks. The first was to find the Rugby page and the second was to answer the question “What happened in Pala del Carmen?”. All five users were able to complete these tasks without difficulty.

As seen in Figure 8, the user feedback for Drew’s website was very positive. Of the five users providing feedback, three gave positive feedback for the navigation and visual appeal of the website while two users provided gave a semi-positive rating. All five users tested gave a positive rating to the clarity of the content.

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![Figure 8](image_url) User feedback for Drew’s website.

### Conclusion and Future Work

The overall feedback from the websites’ users was positive. The design principles applied to the websites resulted in users who were easily able to navigate the sites and find what they needed. It should be noted that the user groups for the two websites were not the same.

While the overall impression of Coranne’s website was positive, there were improvements that the users felt could be made. The photo gallery for the website opens in the same tab/window as the main site and because it is hosted externally, there is no link back to the main website. A future improvement to this would be to have the gallery open in a new tab/window. One oversight on the website was the lack of titles for the individual pages. Two members of her user group commented that this was the sole reason the site received only a semi-positive rating for navigation. One user commented that it would be preferable to have the navigation menu on the left unchanged between pages. In the current design, the option for the page the user is visiting is removed from the menu on that page. This user stated that he would instead prefer to see the text remain in the menu and just have it not be clickable.

The overall impression of Drew’s website was also positive. However, there were improvements the users felt he could make. One user noted there were some layout issues between pages. On some pages the sidebar extended almost to the bottom of the page, and on others it extended only part way down the page. This user also noted that the word “footer” needs to be removed from the bottom of the pages. It was pointed out by another user that there are occasional display issues (in Firefox version 2.0.0.20) that had the urls under the photos extending past the edge of the page and that Drew’s website also had the issue that the pages were untitled in the browser.
All of the user feedback for these websites could be easily implemented in the sites and should be taken into consideration in future website designs.

In addition to the feedback from the users, the website designers also felt there were additional changes that could be made to their websites. Drew would have liked to include flash animation to make his website more appealing. He also would have liked to embed some video content on his website. Drew believes future websites could be improved by a more thorough understanding of web technologies and how to apply them. Coranne would like to expand the content of the website. Instead of a brief overview of the topics, she would like to cover them more thoroughly. While satisfied with the colour choices for the website, she would also like to consider alternate ways for indicating a link has been viewed, as well as indicating which page the user is currently viewing. She would also like to redo the menu bar and consider a more effective solution for having clear menu choices for the user. This could include implementing Javascript to allow additional menu options to appear when the user hovers over a page that has subpages.

The websites as designed did an effective job of implementing appropriate web design principles. Users were confident in their ability to navigate the websites and easily able to locate the desired information. The web designers would definitely consider using a similar layout for websites of similar scope in the future.

References


Additional websites visited during the design phase of the authors’ sites: