Is There a Relationship Between the Effective Use of Design Principles and The Perceived Trustworthiness of a Website?

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Is There a Relationship Between the Effective Use of Design Principles and The Perceived Trustworthiness of a Website?

by Iliana Loera for Professor Jerry Waite, Ed.D. • University of Houston

Introduction

One problem that online merchants face is the widespread distrust consumers have in their credibility (Everard & Galleta, 2006). In today’s world, online businesses must tackle the difficult task of engaging people so that consumers will believe in them (Everard & Galleta, 2006). For many, the go-to source for information about a business—and perhaps the only source—is the firm’s website. In fact, some companies may be so small that, perhaps, the only way people find out about them—and the products or services they provide—is through the Internet. So, it is important for businesses to have websites that consumers can trust.

The intent of this study was to answer the question, “Is there a relationship between the effective use of design principles and the perceived trustworthiness of a website?” Or, is simply providing the necessary information (such as phone number, e-mail, purpose, and products/services available) on a website, without consideration of design principles, all that really matters?

To be trustworthy means to be reliable—businesses must do what they say they are going to do. Trustworthiness also refers to the perceived accuracy and goodness of the source (Everard and Galleta, 2006). In a culture that has serious trust issues, it can be hard for customers to discern what is reliable and what is not. This begs the question: “Why should a customer deem a business trustworthy or honest in comparison to other businesses that offer the same goods or services?”

Since websites are ubiquitous and are becoming necessities for virtually all companies, businesses should seek ways of generating trust in the minds of visitors to their sites. Can the overall look and feel of a site help in this regard? If so, how? And, which principles of design are the most important when generating trust?

When considering whether or not a relationship exists between the use of graphic design principles and the perceived trustworthiness of a website, one ought to think about the basics: color, texture, typography, imagery, and layout/composition. For example, there are literally thousands of color palettes that can be chosen. Could certain combinations help people view a site as more trustworthy? The same can be said about the typefaces used on a site. Do well chosen and implemented typefaces increase a site’s trustworthiness?

When people view a website for the first time, its graphic design may help or hinder impression formation. Everard and Galleta (2006) state that impression formation is the manner in which information presented serves to form users’ perceptions of a website. It is necessary for online businesses to make a lasting and credible first impression if they want to attract and retain customers. Thus, an understanding of if and how graphic design impacts impression formation is important.

Literature Review

The design of a website can either positively or negatively affect the trust-building process in Business-to-Consumer (B2C) websites (O’Donnell, 2002). There are many reasons why an online shopper can become skeptical or distrustful of online merchants. It is important, therefore, that the design of a website avoid causing skepticism among viewers and, instead, foster trust.

Trustworthiness has been described as something that may instill trust in someone; it can form a basis for trust (Serva, Benamati & Fuller, 2005). In terms of this study, it is important to understand what trustworthiness means. There are many dimensions to trust, but in the online context, it can be related back to trust in the general sense. If an online merchant seeks trust in its customers, it must first look to appear trustworthy.

Brengman and Karimov (2012) explain that trust is something that builds over time. When shopping online, a viewer may make a purchase based on a website’s initial and overall appearance of trustworthiness, not because the consumer already knows the business and its reputation. For this reason, online merchants do not want customers who visit their websites for the first time to become skeptical. Indeed, a website’s first impression is critical to building long term trust by a consumer in a merchant.

First impressions happen very quickly. Ash (2012) found that design is the number one factor in perceived trustworthiness. Not only is it important to consider trustworthiness, but also it is important to understand that trustworthiness is greatly affected by first impressions.
The first impressions of online shoppers from one culture may be different than those from other cultures. Across cultures, the perception of trustworthiness in websites varies. For example, people in some nations may see some graphic design elements as being appropriate while those in other nations may find the same design elements inappropriate (Cyr, Bonanni, Bowes & Isever 2005). Thus, it is important to note that this study considered only the perceived trustworthiness of online businesses within the website landscape in the United States of America.

Cai & Xu (2011) noted that having an aesthetically pleasing website is becoming increasingly important for businesses due to the fact that those businesses are competing for online shoppers. Graphic design elements play a role in whether or not a customer will enjoy viewing a website. A well-designed site should create an enjoyable experience, which may, in turn, motivate a customer’s initial purchase and affect his or her return to the site. In addition, if B2C websites are competing for customers, they need to examine how trustworthy their online environment appears to customers.

Hall and Anna (2003) point out that people have positive or negative emotional responses when viewing websites. A positive emotional reaction can lead to a sense of trustworthiness.

Another aspect to take into account is the importance of the website’s home page. The home page is critical to retaining a customer when the site is viewed for the first time (Turpin, 2014). This relates directly to trustworthiness. Home pages are essential in drawing visitors into a website. If the home page is poorly designed and executed, the likelihood of someone making an initial purchase and returning at a later date may be severely diminished.

Some studies have been done on the trustworthiness of websites based on what users already knew about a business (Atrey et al, 2011). In these cases, the examination of a website’s trustworthiness was not based upon the initial impression of a new potential customer, but, instead, focused on the websites of businesses the tested users already knew. Therefore, the viewer’s impression of a site’s trustworthiness could have been affected by previous knowledge. For the purpose of this research, websites for companies that are not likely to be known by the participants were studied. This was designed to prevent bias due to pre-existing knowledge and, thus, focused on how design impacts the perceived trustworthiness of companies when potential customers first encounter the firm for the first time through its website.

Another study considered B2C websites from the perspective of experienced web designers. For these designers, navigation was among the most important aspect of a website (Tan, Tung & Xu, 2009). Such ease of use is one of the most important things a website must incorporate. Nonetheless, this finding is based on designers’ preferences and not necessarily those of online shoppers. For this reason, participants chosen for this study were not professional web designers.

Methodology

The objective of this study was to find out whether each of a chosen group of existing B2C websites was perceived as trustworthy by potential consumers. This was accomplished by selecting five existing websites that sell nutritional supplements, rating each site’s graphic design, asking participants to judge the trustworthiness of each of the sites, and then comparing the perceived level of trustworthiness to the site’s graphic design rating.

The specific steps followed to complete the study were:

- Defined the term “trustworthiness” in the business sense: “something that forms the basis for trust” (Serva, Benamati & Fuller, 2005);
- Investigated the best practices of website design;
- Created a Website Rating Rubric, based on the best practices of website design, to rate the overall graphic design of websites (Figure 1);
- Narrowed the scope of websites to be evaluated to companies that sell similar things (the health supplement market segment was chosen);
- Searched the web for vendors of health supplements;
- Chose five websites that, based upon an initial inspection, either portrayed or didn’t portray elements of good design (Figures 2-6);
- Evaluated each website using the Website Rating Rubric;
- Created a survey to ask participants which of the five chosen websites appears most trustworthy and why;
- Posted the survey to SurveyMonkey;
- Advertised the availability of the study and encouraged people to participate;
- Gathered responses from participants;
<table>
<thead>
<tr>
<th>Criterion</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>Score</th>
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<tbody>
<tr>
<td><strong>Color</strong></td>
<td>The website creates a sense of harmony between the colors used. Uses temperature and chromatic value and saturation. Is the color palette limited? How many colors are used?</td>
<td>General understanding of color and color theory is exhibited. Not all colors create a sense of harmony or cohesiveness. Not enough colors are being used.</td>
<td>There appears to be no color scheme. Colors look to be just thrown together. There does not appear to be any intent in the colors chosen.</td>
<td>Very little to no texture is being used. No &quot;feeling&quot; is being conveyed.</td>
<td></td>
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<td><strong>Texture</strong></td>
<td>The site make appropriate use of texture. There is feeling and intent to the texture. Point, line, shape, volume and depth are used carefully and accurately.</td>
<td>There is texture being used, but the intent is not clear or not being used accurately enough.</td>
<td></td>
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<tr>
<td><strong>Typeface</strong></td>
<td>Fonts that match the theme and intent are used properly. The disparities between font sizes, length, alignment and spacing are very well managed.</td>
<td>Some fonts are being used well and matches the theme. Some fonts do not make sense within the site. There are some alignment, length or spacing issues. There is a slight legibility problem.</td>
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<td><strong>Imagery</strong></td>
<td>The imagery being used is entirely relevant to the theme and purpose of website. Images are of high resolution and are well proportioned. The images are presented in a professional and creative manner, and are very visually appealing.</td>
<td>In general, the images appear relevant. Not all images are used accurately and with intent. Some images look like they were just placed to take up space, and images are too small or pixelated.</td>
<td>Images are all low resolution. They are not visually appealing. Clipart is being used. Presentation of the images are poor.</td>
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<td><strong>Layout and Compo</strong></td>
<td>The entire web site is completely balanced. The use of unity/proximity/repetition is well incorporated and not overused. Elements of emphasis, placement, continuance, and/or contrast is used properly. The overall layout is consistent with either left, right or three column. Whether minimalistic or expansive in footers, the use of space is right and appealing to the viewer.</td>
<td>Balance is being exhibited on some pages but not all of them. There is a lack of consistency in the layout and composition. There are elements that are appealing, but some elements are lacking.</td>
<td>There appears to be no balance within the website. Little to no layout or composition elements are being used. The layout is not visually appealing.</td>
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**Figure 1**

This chart was created to 'grade' the websites that would be chosen for the survey.
Results
Using the Website Rating Rubric created for this study (Figure 1), the five websites were assessed by the researcher. On a scale from 1–25 points, Supplement Warehouse received 7 points, Nutraplanet 9, Mass Nutrition 12, Natrol 18, and Muscletech 20 (Figure 7). A total of 41 respondents participated in the survey portion of this study. Of these, about 65% had never heard of the companies the websites represented. However, about ⅓ of the participants had previous knowledge of the companies (Figure 8). Therefore, this pre-existing knowledge could have resulted in bias (see the discussion of Atrey et al. (2011) in the Literature Review).

The results showed that the majority of people thought that Natrol (with 52.5% of the votes) and Muscletech...
Is There a Relationship Between the Effective Use of Design Principles and the Perceived Trustworthiness of a Website?

With 35% of the votes, the most trustworthy companies were Natrol and Muscletech (Figure 9). Supplement Warehouse received not a single vote. In addition, when asked to rank which design principle was the most important in order to evoke a sense of trustworthiness in its customers, participants chose layout/composition color, and imagery as the top three most important elements (Figure 10). Content came in fourth place as the most important element to consider. Texture received the least amount of votes.

Participants were also asked to choose which company they would most likely purchase from, and most people chose Natrol (with 58.97% of the votes) and Muscletech (with 30.77% of the votes) (Figure 11). Natrol actually received a higher percentage of “purchase” votes as compared to the votes it received in trustworthiness. Supplement Warehouse received only 3% of the votes.

Those who would purchase from a company other than the company they chose as most trustworthy were asked to explain why. From the answers, it appears that those who would purchase from Supplement Warehouse chose them because the company had ‘deals’ on their website.

The majority of the respondents were unaware of the companies or websites studied, but about 1/3 had heard of one or more firms. This could have led to bias.

Did you know about any of the health supplements companies listed above before you began this survey?
seemed to trust Natrol’s layout and color design. Fewer people considered content, typeface, or texture as important graphic design elements.

Although content is really what consumers need when they visit a website, it is not the only thing people notice. In fact, content may not even be the first thing people observe nor the only thing they retain when visiting a website. If the results of this study are any indication, design elements are noticed and digested before content is. So, a visually appealing website is likely to be more effective in evoking a sense of trust and to make a good first impression than a poorly designed site that provides lots of content in a haphazard or unappealing way. Poor or inaccurate content can result in a lack of trustworthiness, but so can poor design. In particular, a poor and untrustworthy design could repel viewers even before they read the available content.

The overall conclusion is that though trust in a company is created over time, design does play a huge role in the impression of trustworthiness in the minds of consumers. So, it is extremely important that B2C websites be aesthetically pleasing so as to boost a customer’s trust and make a good first impression.

As mentioned in the literature review, trust, in the business sense, is something that builds over the long-term. However, trust is also something that can destroyed instantly. The survey participants viewed the websites momentarily and in those few moments they were able to decide whether or not to trust each of the five companies. This can spell either big losses or gains for the website’s owner.

Lastly, but not surprisingly, appearing trustworthy leads to a likelihood of people making a purchase. However, it does not guarantee it because there are other factors to take into account. As shown in the results, some people thought they would rather purchase from a particular company because it had better deals or better prices. Nonetheless, people are most likely to purchase from a company that appears trustworthy and businesses with trustworthy websites are likely to fare better than a company that disregards design and relies solely on cheap pricing or special deals.

Recommendations

If this line of research were to be continued, it is recommended that several professional web designers score each website with the Website Rating Rubric rather than just one person. This would allow the Rubric to be vali-
dated and would also provide a better overall assessment of each studied website. One person evaluating each of the websites can lead to bias. Adding further evaluators would provide for a checks and balances system. Also, increasing the number of survey responses is extremely important. A population of 100 participants or more would add validity to the results.

Nowadays, there appears to be a shift to more white space as well as the use of white backgrounds on websites. This could have played a role in the way the participants viewed the studied websites. The website that was chosen as most reliable in this study has plenty of white space and has a background that appears white. So, it would be interesting to see if white space and white backgrounds have a big role to play in the appearance of trustworthiness and why.

In addition, it is also important to notice that more and more websites are adding seals of approval from various trade and governmental associations. For this reason, it would be interesting to compare websites that have seals of approval with those that do not to see how effective such endorsements are in garnering customer trust.

Also, finding a way to eliminate preconceived bias is important. This study was unable to account for those participants who had previous experience with some of the studied companies. So, some bias could have occurred. Thus, finding a way to eliminate such bias could greatly improve results.

Finally, the grading rubric (Likert Chart) that was created for this study is a first step toward creating an important and necessary tool to evaluate websites. However, the chart needs to be perfected; it would be appropriate to have industry professionals evaluate the chart itself so that the rubric is as accurate as possible in its descriptions.

References


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Write articles for educators, students, graduates, industry representatives, and others interested in graphic arts, graphic communications, graphic design, commercial art, communications technology, visual communications, printing, photography, desktop publishing, or media arts. Present implications for the audience in the article.

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- Use the default Word styles only. Our designer has set up the page layout program styles to correspond to those style names.
  - Heading 1
  - Heading 2
  - Heading 3
  - Normal

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- Send all artwork files and hard copies of these files with your submission.

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- Scan line drawings at 800 ppi resolution.
- Screen captures should be as large as possible.
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  - Graphics may be larger than these dimensions, but must not be smaller.

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