

One-Page Summary of Banner Blindness

Problem

- Banner Blindness is one of the common usability problems that refers to the ability of users completely ignore areas on webpages that they think will contain ads (Krug, 2014).
 - o It was originated from the phenomenon that some companies displaying advertisements on their cooperative webpages, usually in some certain areas such as in the four corners, to attract consumers to be interested in their brand and service.
- Banner blindness is an ineffective way of distributing advertisements. About 44% of the money spent on ads is wasted by remain unviewed by the website visitors. Some studies have shown that up to 93% of ads were unviewed (O'Donnell & Cramer, 2015).

Solution

- Two changes can be changed to boost the effectiveness of banner ads: 1) relocating the ads to more noticeable areas on the webpage; 2) animating the ads.
 - o Relocating the ads has a huge impact of users viewing the ads. Most people are used to read from left to right and up to bottom if no distraction or other prominent contents are showing on the page (Krug, 2014). Relocating the ads to the upper-right corner or within the path that users are used to read can increase their notice thus boost effectiveness (Resnick & Albert, 2014).
 - o An animated ad on a low-complexity website can provide a promising means of attracting users' attention and enhancing their memory of the content (Bayles & Chaparro, 2001).
- Implementing both features can alleviate the impact of banner blindness by relocating the placement and adding animation to catch more attention of the users, therefore raise the effectiveness of promoting merchandise or brands.

Basic Research

- Relocating the placement of the ads can directly and effectively determine if users are able to see the content. Cao et al., (2019) suggested that users usually follow a certain path of browsing the webpage. A lot of the ads were ineffective because they didn't appear in the path, thus make the users ignoring them.
- A moderate animation can improve an ad's effectiveness (Goldstein et al., 2014), positively influence its recognition rates (Yoo & Kim, 2005) attract users' attention, and enhance memory (Bayles & Chaparro, 2001).

Evaluation

- A research experiment will be conducted to test the ideal format of presenting the advertisement on the website in terms of placement and animation.
- The two IVs are placement (top vs. low) and animation (static vs. low vs. moderate vs. rapid). The DVs are users' ability to recall the content of the ad and the click-through rates. A factorial ANOVA will be conducted to analysis the data.

References:

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Banner Blindness on Webpages

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Introduction

Over the past 15 years, there has been a shift from advertising on traditional mainstream media platforms such as TV and radio to advertising on the Internet as the usage of online services has become more popular (US Online and Traditional Media, 2018). One of the prominent ways of distributing advertisements on the internet is through displaying banner ads on webpages. Companies display ads on their cooperative websites, usually in a specific area, such as in the four corners of the webpage, to attract consumers to be interested in their brand and service. However, researcher (Benway, 1998, as cited in Bayles & Chaparro, 2001) investigated the effectiveness of banner ads and concluded that website visitors seem to avoid reading the banners a lot of the time even when the ads were large, brightly colored, and high-contrast images. Banner blindness, which has become one of the common usability problems, refers to the ability of users to completely ignore areas on webpages that they think might contain ads (Krug, 2014). Data has shown that about 44% of the money spent on ads is wasted by remaining unviewed by the website visitors (O'Donnell & Cramer, 2015). The problem has grown into an ineffective way of distributing advertisements and promoting brands and services to the consumers.

Problem

Many websites choose to display their cooperative companies' advertisements to earn partnership fees and promoted listings fees, especially websites with small businesses on the back that need funding and sponsorship to maintain services. A recent example I have seen with banner ads is AT&T promoting its new phone and wireless plans on a dictionary-based website called Thesarus.com. A full-width banner was placed on the bottom of the webpage with a static

image of the latest phone plan and a headline followed by brief descriptions. Due to the length of the webpage, it is hard for the consumers to discover the existence of this ad, let alone pay attention to its content. With a static image, website visitors are unlikely to be interested in reading the promoted product because it does not stand out from the rest of the content on this page. Resulted from both reasons, AT&T can hardly get an effective promotion to attract more potential customers who match their target.

Solution

Customers are more likely to ignore the areas on a webpage that they think might contain ads (Krug, 2014). Two factors can be changed to boost the effectiveness of banner ads: 1) relocating the ads to more noticeable areas on the webpage; 2) animating the ads. In many cultures, users follow a certain path of reading a webpage, usually start from top to bottom and left to right (Buscher et al., 2009, as cited in Cao et al., 2019). Ads placed in the path area are easier to be noticed by the users, therefore attract more click-through rates to the website (Cao et al., 2019). In particular, ads that are placed on the top-right corner have the strongest effectiveness on catching visitors' attention, due to the fact that users are more likely to address content on the top of the page (Resnick & Albert, 2014). In addition, to make the banner ads more noticeable, adding animation is another effective way of attracting user attention. Although a rapidly animated banner advertisement could backfire and leads to negative emotional reaction, a moderate animation improves an ad's effectiveness (Goldstein et al., 2014), positively influences the recognition rates (Yoo & Kim, 2005), attracts users' attention and enhances memory (Bayles & Chaparro, 2001). Given that changing the location and animation format of an advertisement can help attracting more attention from the users, therefore raising the effectiveness of promoting merchandise or brands, advertisers such as AT&T should consider

relocating their advertisement within the area of users' reading path and adding a moderate animation.

Research

As stated above, location and animation can lead to a greater effectiveness of advertisements that are placed on webpages. Location determines if website visitors can successfully see the ads. For example, where AT&T placed their ad on the bottom of the Thesaurus.com requires users to scroll all the way to the bottom to be able to see it. Cao et al., (2018) conducted a study that investigated how the ad location influences users' attention by using eye tracking to measure the participants' search time, total fixation duration and the location of the first fixation. They concluded that readers tend to address content on the top of the page and their attention will diminish as they read towards the bottom. In addition, users are more likely to focus on some areas on a webpage, such as their first fixation is usually on the center of the screen (Pan et al., 2007, as cited in Cao et al., 2018). Ads that are placed on the center area and on the top of the page are more noticeable compare with those in other locations (Cao et al., 2019). Resnick and Albert (2014) have also addressed the impact of placing ads on the top of the page. Similar to the previous methodology, they conducted another eye-tracking experiment to track where do users often spend most of the time on reading. They concluded that, users not only tend to read the top of a page, but also particularly attend to the top-right corner in a goal-directed task. Ads that are placed on the upper-right corner have gained the strongest effectiveness compare to anywhere else. Therefore, advertisers should consider placing their banner ads on the top-right corner rather than the bottom of the page.

Animation of banners has also been found to contribute to attracting user attention and enhancing recall and recognition (Bayles & Chaparro, 2001). In their study, Bayles and Chaparro

(2001) investigated recall and recognition of animated and static online banner ads. They had five independent variables: 1) amount of recall for the static and animated banner ads; 2) the accuracy of recall for both the static and animated banners; 3) the total number of correctly recognized ads; 4) the total number of correctly recognized ads as animated or static, and 5) the order of ad recognition. The outcome variable was the click-through rates, as one of the direct measurements of user behavior. This measure does not take into account how well the users may recall or recognize the content of an ad. They concluded that the amount of recall was higher for animated ads than for static ads. In other words, participants were able to recall the number of animated banners they viewed more accurately than static banners. The content of animated banners was also recalled more accurately than static banners. Therefore, the result suggests that the use of animation enhances user memory of banner ads. In 2014, Goldstein et al., followed-up with a study focusing on the effectiveness of animated banner ads with a more detailed conclusion that a moderate animation enhances the performance of the ad. However, too much animation can backfire and leads to more negative emotions toward the advertiser. In a comparison with all different levels of animation, the rapidly animated banner ad was the most annoying type of ad. It stimulated users' intention of abandoning the website by disturbing their task completion time, thus leading to a slightly lower accuracy on the reading comprehension ability measure (Goldstein et al., 2014). As a result, advertisers such as AT&T will need to consider relocating their ads to the center or the top area of a webpage with a moderate animation to increase effectiveness thus attracting more potential customers.

Evaluation

To test the most effective format of displaying banner ads on webpages, a research experiment will be conducted in regard to location and animation. To test the effectiveness of the

advertisements, all participants will be recruited without knowing the purpose of this study is to test their memory of recalling the content of an ad in order to avoid pre-exposure and biases. The two IVs (independent variables) are placement (top vs. low) and animation (static vs. low vs. moderate vs. rapid). The outcome variables are their ability to recall the content of the ad and the click-through rates as they are the representation of the effectiveness of an advertisement and user behaviors (Bayles & Chaparro, 2001). A click-through ratio will be calculated by dividing the number of click-throughs by the total number of times an ad appears (Bayles & Chaparro, 2001). Both variables should be able to reflect user behaviors in some extent as a guideline for the researchers to suggest.

In this study, all participants will be asked to browse a webpage that contains at least one banner ad. This study will be a between-groups experiment where participants are randomly assigned to one of the following conditions: 1) ads placed on the top of a webpage with a static image; 2) ads placed on the top of a webpage with a low animation; 3) ads placed on the top of a webpage with a moderate animation; 4) ads placed on the top of a webpage with a rapid animation; 5) ads placed on the bottom of a webpage with a static image; 6) ads placed on the bottom of a webpage with a low animation; 7) ads placed on the bottom of a webpage with a moderate animation; 8) ads placed on the bottom of a webpage with a rapid animation. As this study aims to examine the most effective format of displaying banner ads on a webpage, users' ability to recall the ads and their click-through rates will be measured. A third-party platform such as unbounce.com might be introduced to help collecting the click-through rates. At the end of the study, researchers will be asking participants to recall the content and brand of the advertisers by choosing the correct one from a series of choices.

The study result will be analyzed with a 2 (placement: top vs. low) x 4 (animation: static vs. low vs. moderate vs. rapid) factorial ANOVA. Researchers will be comparing users' ability to recall the ads and the click-through rates across all eight conditions. The mean of users' ability to recall and the click-through ratio will be calculated and organized in a 2 x 4 table. A factorial ANOVA will be introduced to test if there is a statistically significant difference between the eight conditions. Assuming there is a significant difference, a Post Hoc test will be then used to determine the best condition(s) among the eight.

The results of this study, particularly the combination of placement and animation, can be used as a suggestion for the advertisers. Two outcome variables, users' ability to recall the ads and the click-through rates, were examined to reflect the effectiveness of banner ads. Banner blindness, as one of the common usability problems, should be reduced because it brings minimal benefits in distributing the featuring merchandise and attracting more potential customers. User experience designers and advertisers should be considering multiple factors before displaying ads on the webpage as it might stimulate negative impressions and unpleasant browsing experiences for the web visitors. A more effective and organized way of displaying the ads should be implement for the future.

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