Online Advertising: Hit Rates for Jumps from Banner Ads

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Sections:

Abstract

This article reports a content analysis of newspaper practice regarding targeting jump links to banner ads. By "targeting," the authors refer to the practice of matching the content of the banner ad to the content on the page to which the banner is linked.

Perhaps because of click-through measurement techniques, previous research conveys an assumption that a banner must always jump to the advertiser's home page.

This study extends prior research to examine the "hit" rate for jumps from banners to relevant content. Also, this is one of the first studies to record banners with no jump links and failures to connect to a jump page. Banner ads were coded for targeting banner ads to their jump links (hit; near miss; miss; no jump link; failed to connect).

A strong majority (88.6 percent) of all jumps from the banner ads coded were hits. In most cases, clicking on a banner ad resulted in landing on a new file, the jump page, with content related to the banner ad.

However, the researchers believe modifications to online advertising strategies are needed to improve the "information" connection between banner ad and jump page. And the researchers believe that the findings presented here may be applied to other studies of Web site content and design, navigability, and interactivity.

By investigating online newspapers, this pilot study breaks the short tradition of previous research that examines "Top 50" sites. The research reported here is one of the first studies of online newspaper advertising based on a systematic sample. And it is one of the first studies of online newspaper advertising that looks beyond the home page to examine all levels of the site.

Introduction

The purpose of this pilot study was to conduct a content analysis of the use of banner advertising in online newspapers. This article reports data and findings about targeting a banner ad to its jump link. By "targeting," the authors refer to the practice of matching the content of the banner ad to the content on the page to which the banner is linked.

Coders were assigned an information location task:[1] Find a classified ad for specific content in the online newspapers selected as a sample for this content analysis. Coders were instructed to code each banner ad, each "impression," encountered during this task.

An information location task that involves classified advertising was used because it allowed the researchers to examine banner use on home pages, on classifieds index pages, and on all levels within the classifieds site.

Literature Review

The literature review conducted for this study reveals an assumption by some researchers and practitioners that banner ads, seemingly by definition, are linked to related content.

Brown[2] states: "The main difference between a Web-based ad campaign and advertising in any other medium is that if an ad can grab viewers, there is an opportunity to lead them to more information."

In other words, if the content of the banner ad is compelling, then click-through is likely to occur.

Li3 states: "A viewer is not likely to click on a banner ad unless she is more interested in the banner ad than the Web page she is viewing. This is because the viewer knows if she clicks on a banner ad, she will be led to the banner ad's Web site."

Previous studies do not report data on 1) banners that have no jump link, 2) failed links in which a computer error occurs and the jump page is never reached, and 3) the success of targeting the jump to the banner.

This pilot study extends previous research to include these variables.

For the purpose of this study, measuring the success of targeting a jump page to the banner from which it is linked has been operationalized as a hit, near miss, or miss.

For example, a banner that says "Fly Air France to Paris for the 1998 World Cup" should jump to a page that gives specific information about Air France flights to Paris during the World Cup competition.

If the user lands on specific information that is targeted to the content of the banner ad, then the jump is coded as a "hit." However, if the jump leads to the home page of Air France and a subsequent search for World Cup special fares must be engaged, then that is coded as a "near miss." Finally, if the jump takes the user – who is now expecting to learn about Air France's service to Paris during the World Cup – to a site about airline safety or for a credit card company, then that is coded as "miss."

Perhaps it is time to question the assumption that a banner must be linked to another site. This pilot study also coded for banners that are not linked to anything.

With appropriate banner content and effective targeting to content on the page, banner ads may earn a reputation as complete, persuasive messages, even without a jump link.

Briggs and Hollisargue4 that banner advertising "works with or without the added benefit of click-through. The banner ad is a legitimate advertising vehicle in its own right."

To define banner ads for this article, the researchers consulted the literature. They found a variety of descriptions.

Bucy, Lang, Potter and Grabe[5] use the term "banner" to indicate the online equivalent of a newspaper's nameplate. To them, a "banner ad" is an ad placed within this nameplate, as opposed to an ad placed within the "body of the Web site."

Harvey[6] refers to a banner ad as "a diminutive advertising unit whose appearance within the visual field is approximately equal to the experience of seeing an outdoor billboard from a low flying plane."

According to McDonald[7], "conventional Web advertising has been a button or a banner asking the user to click here for more information. This is the interactive equivalent of the roadside sign."

And Arens[8] defines banner ad as "a little billboard that spreads across the top or bottom of the Web page. When users click their mouse pointer on the banner, it sends them to the advertiser's site or a buffer page."

For the purpose of this study, the researchers have applied a definition found online: A banner ad is "a graphic or image used for advertising on the Internet." This image is often a "gif" (Graphic Interchange Format) file, although other forms of banners, such as HTML-based interactive or plain-text banners are coming into use.[9]

Technically, a banner ad may be any size. However the Internet Advertising Bureau (http://www.iab.net) promotes the use of its seven standard sizes: full banner (480 x 60 pixels); half banner (234 x 60); full banner with vertical navigation bar (392 x 72); vertical banner (120 x 240); square button (125 x 125); button #1 (120 x 90); button #2 (120 x 60); micro button (88 x 31).

This study did not investigate file format or size of banner ads. However, banner ads of non-standard size were not coded.

An online reader may expect all banner ads to be linked to relevant information. This study attempted to gather evidence that supports this expectation.

Research Questions

Based on this literature review, four research questions were formed:

* R1. How many online newspapers use banner ads at all?
* R2. Of all "pages" viewed, how many include at least one banner ad?
* R3. Of the banner ads seen, how many are targeted to their jump links?
* R4. What is the breakdown of targeted jumps by level of information hierarchy, or location within the "click" structure of the site?

Method

The purpose of this pilot study was to conduct a content analysis that examines the current practice of banner advertising in online newspapers. This research article reports data about targeting banner ads to their jump links (hit; near miss; miss; no jump link; failed connection).

Coders were instructed to record a "hit" for a banner that, when clicked on, jumped to a site related directly to the content of the banner. For example, one ad announced special rates for international telephone calls. The name of the long distance company was included in the banner. When the jump link was activated (otherwise known as click-through), a new file loaded that presented long distance rates per minute for a long list of countries. The expectation created by the banner ad itself was satisfied by the file to which the banner ad jumped.

A "near miss" would have been recorded if that same banner for special rates on international phone calls had jumped to the home page of the long distance company. Coders were instructed to record a "near miss" if the jump landed on a related page that forced the user to search for content that would satisfy the expectation created by the banner.

"Miss" was recorded for jumps that took the user to a place that may cause a "How did I get here?!" reaction. If the international phone rates banner had jumped to a credit union site, for example, a miss would have been recorded.

Because the researchers believe in the power of the banner ad itself, they wondered if banners that have no jump link would be found. A coding option for "no jump link" was included to record such instances.

And a "failed connection" coding option was included to record any instances in which the banner was linked to a site that simply did not load for some reason.

Content analysis was chosen because it is an appropriate methodology for establishing baseline data that demonstrates current advertising practice in the profession. Online newspaper sites from across the United States were used for data collection. All data were collected during one week in September 1998.

For this pilot study, two coders were assigned an information location task: Find a classified ad for a specific product (such as a used BMW) in the online newspapers selected as a sample for this content analysis. This allowed data collection from all levels of the classifieds site.

Coders were instructed to code each banner ad encountered along the way during this task.

After pre-testing four sites, the coding instrument was finalized. Pre-test data were not included in the data analysis.

The coders used identical computers, browser software, and Internet connection: an Intergraph TD-22 computer (an IBM clone) with 48-MB RAM and Pentium II processor; an Intergraph 17sd69 monitor (17-inch color); Microsoft Internet Explorer 4 browser software; and a direct connection to a T-1 fiber optic line.

Sample

For this pilot study, a systematic sample was obtained from Editor & Publisher's online listings of newspapers in the United States.10 Only daily, general interest newspapers published in the United States were considered. The Editor & Publisher site listed 790.

Fifty sites were selected for coding by dividing 790 by 50, which is 16. A random numbers table was used to establish a starting point. From there, every 16th daily, general interest paper was selected for coding. Four extra sites were selected "just in case."

Time allowed more sites to be coded. Another 20 sites were selected using the same procedure. A random numbers table was used to select a new starting point. This time, every 39th site was selected.

To report intercoder reliability, the researchers selected an additional seven sites, or about 10 percent of the original sample. The same procedure was used to select these sites. For this sample of seven, every 113th daily, general interest newspaper site was selected.

This brings the total to 81 sites selected for coding: 54 from the first selection, 20 more sites, and seven additional sites used for both the data set and intercoder reliability.

Each researcher coded sites independently. One researcher looked at 35 sites. The other researcher looked at 39 sites.

Exclusions: Three newspaper sites were no longer online and could not be coded. One newspaper required paid subscription for entry into the site. It was not coded. One site was not coded because it was "under construction." One other site was excluded from the data set because of bad data caused by failure of large portions of the site to load. The site loaded text, but all the images were seen as "broken" gifs. Therefore, it could not be determined whether or not the site included banner ads.

Results and Findings

The researchers intended to document current banner advertising practices for online newspapers in the United States by examining targeting jump pages to the banners from which they are linked. For this pilot study, descriptive statistics are reported.

This study coded 75 online newspapers using content analysis. The total number of "pages," or files accessed, was 280. This is an average of 3.73 pages per online newspaper.

The total number of banner ads coded was 449.

Of the 75 online newspapers coded: No banner ads were found on ten (13 percent); no classified ads were found on five (7 percent); and two (3 percent) had neither banners nor classifieds.

Of the 280 pages coded: 166 (59 percent) included at least one banner ad; 112 (40 percent) had no banner ads; and 2 (1 percent) ads failed to load onto the page.

Fifty-seven (76 percent) of the home pages coded did include at least one banner ad.

To establish a measure of intercoder reliability, an additional seven sites (10 percent) of the original sample were coded by both researchers. At approximately the same time, the same ads on the same edition of the same online newspaper were coded independently by each researcher. An independent researcher calculated scores for intercoder reliability.

Completed coding sheets were given to an independent researcher who tallied agreement and computed Scott's Pi Index scores for each variable. Scott's Pi accounts not only for agreement but also for probability of disagreement. Scott's Pi requires reporting level of agreement for each variable, so no overall "percent of agreement" is provided. See Table 1.

R1: How many of the newspapers coded in this study use banner ads at all?

Sixty-five (87 percent) of this sample of online newspapers included at least one banner ad.

Note: Some sites had classified advertising but no banner ad.

R2: Of all the "pages" viewed (each file accessed, including the home page), how many included at least one banner ad?

Of the 280 pages coded: 166 (59 percent) included at least one banner ad. See Figure 1.

R3. Of the banner ads seen, how many are targeted to their jump links?

Most (N=398, 88.6 percent) jumps were targeted to their jump links. Twenty-four (5.4 percent) "near misses" were recorded. Nine (2.0 percent) jumps were coded as "miss." Six (1.3 percent) banners had

no jump link, and 12 (2.7 percent) jumps failed to connect. See Figure 2.

R4. What is the breakdown of targeted jumps by level of information hierarchy, or location within the "click" structure of the site?

A high hit rate for jumps from banner ads was found across most levels of the information hierarchy. Basically, the graph in Figure 3 shows a flat line for percentages of hit for jumps from banner by location in the information hierarchy, or "click level" within the site.

See Table 2 for results related to this research question. Note: Some of the percentages do not add up (across) to 100 because of rounding.

The third click is the point at which many of searches for BMW classified ads were completed.

Discussion

This study has provided evidence of a high hit rate for targeting jumps to the banner ads from which they link in online newspapers.

Perhaps the coding instrument was partially responsible for this finding.

With the options of hit, near miss, miss, no jump link and failed connection, every banner with a general or ambiguous message was coded as a hit, unless there was no link or the connection failed.11 If click-through is the goal, then banner ads that do little to create expectation or anticipation in the user may be highly effective. In other words, advertisers "can't go wrong" if their audience cannot be

disappointed by the jump page simply because no information was provided on which to base expectations of content on the jump site.

As mentioned in the literature review, some academics and professionals assume that a banner ad serves simply as an entry point to the advertiser's Web site. Often, the jump lands on a home page rather than a page designed specifically to complement the content of the banner ad.

Future research will examine the relationship between specificity of banner ad content and hit rate for jump page. The third click is the point at which many of searches for BMW classified ads were completed.

Graham defines "the three click rule" as a basic principle of interactive design: "Users will find the document much easier to navigate through if they understand where they are within the layers of interactivitiy. ... Moving backward or forward through more than three screens increases the chance that the user will lose track of where they are within the document."12

Although they do not use the term "three click rule," Robinson and Kaye state:13"Users should be able to easily navigate a Web site. All pages should link back to the home page and content should never be more than three clicks away."

The three click rule is the result of early investigations of navigation, or "wayfinding, " within hypertext environments.

The perfect (100 percent) hit rate for jumps at the six-click level should be viewed with caution. Only two ads were found at this level; both jumps were targeted to the banner ads to which they linked. Also, few sites required six levels to locate specific content. If more six-click sites had been found, the percentage probably would have diminished.

Aside from apathy and ignorance, one possible rationale for designing a site that ignores the three-click rule involves click-through measurement. In an information location task, such as the search for a BMW classified ad, users are highly motivated to reach their goals. In principle, they should continue to click-through until those goals have been reached. Poor site design is one way to inflate click-through rates.

On the other hand, adding "extraneous" levels to the information hierarchy to boost click-through provides the opportunity to place more ads.

But according to the trend reported in this pilot study, the percentage of jump pages targeted to banner ads should have remained "flat." Few banner ads were found after the fourth, fifth and sixth clicks.

Despite the high hit rate revealed by this pilot study, the researchers feel that online advertisers could do more to target jump pages to banner ads. Avoid landing on a home page; develop a creative strategy that treats the banner and jump page as a closely-knit unit; present jump pages specifically designed to take advantage of the anticipation brought about by an effective banner. From the jump page, a link to the advertiser's home page or other related information within the advertiser's site would be appropriate.

Limitations of This Study and Recommendations for Future Research

As is the nature of a pilot study, the researchers worked with an unrefined coding instrument. They will continue to develop a more sensitive measurement tool to be used specifically for content analysis of online advertising.

In addition, the researchers will apply principles of information design to interactive strategies in order to explore some effects of linking a jump site to a banner ad.

An information location task was used in this pilot study as a way to examine online advertising beyond the home page. The researchers believe this is a strength of their research and a meaningful contribution to the literature.

Sample size used was relatively low. This is a common limitation in pilot studies. Of the almost 800 daily, general interest newspapers found on the Editor & Publisher Web site, 81 were coded. Low sample size and diminution of the number of ads after the third click affected the researchers' plan to use inferential statistics for data analysis.

No inferential statistics could be reported with certainty. Chi Squares and correlations were attempted, but low cell sizes (N<5) rendered these statistics powerless. For future studies of this kind, researchers should consider larger sample sizes to obtain larger numbers per cell.

The researchers recommend involving more than two coders for studies like this. Only two coders participated in the content analysis.

A sample stratified by circulation, as an indicator of relative size of the newspaper organization, was considered, yet rejected. In the researchers' opinion, the World Wide Web allows all content providers the opportunity to be perceived as "big," first-rate operations.

Among the newspapers that were selected by the sampling process were: Baltimore Sun, Chicago Sun-Times, New York Times, St. Petersburg Times, Hays (Kansas) Daily News, Southeast Missourian (Cape Girardeau), Summit Daily News (Frisco, Colo.), Kalispell (Montana) Daily Inter Lake, Biddeford (Maine) Journal, Ridgecrest (California) Daily Independent, and The Garden Island (Lihue, Hawaii).

Conclusion

This article has reported a content analysis of newspaper practice regarding targeting jump links to banner ads. By "targeting," the authors refer to the practice of matching the content of the banner ad to the content on the page to which the banner is linked.

By investigating online newspapers, this pilot study breaks the short tradition of previous research that examines "Top 50" sites. The research reported here is one of the first studies of online newspaper advertising based on a systematic sample. And it is one of the first studies of online newspaper advertising that looks beyond the home page to examine all levels of the site.

Perhaps inspired by the development of click-through measurement techniques, previous researchers have conveyed an assumption that a banner always must jump to the advertiser's home page.

This study has extended prior research to examine the "hit" rate for jumps from banners to relevant content. Also, this was one of the first studies to record banners with no jump links and failures to connect to a jump page. Banner ads were coded for targeting banner ads to their jump links (hit; near miss; miss; no jump link; failed to connect).

A strong majority (88.6 percent) of all jumps from the banner ads coded were hits. In most cases, clicking on a banner ad resulted in landing on a new file, the jump page, with content related to the banner ad. However, the researchers believe modifications to online advertising strategies are needed to improve the "information" connection between banner ad and jump page.

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