

Jennifer C. Castaldo. Marketing Electronic Resources from the Academic Library Homepage. A Master's Paper for the M.S. in L.S. degree. April, 2008. 53 pages. Advisor: Diane Kelly.

The purposes of this study were to see how ARL libraries promote electronic resources from their homepages and to determine if advertising e-resources from the Duke University Libraries homepage increases use and/or interest in the selected resources. A content analysis of ARL library homepages was done to see how many advertise electronic resources and what these ads look like. The research then took a local look at Duke University Libraries in North Carolina to measure effectiveness of their e-resource homepage advertisements. Click-through and usage data were collected on the advertisements and the resources. Results indicate that more than half of the ARL libraries advertise electronic resources from their homepages and that they present these ads in similar manners. Results from the data collected at Duke Libraries did not show a direct relationship between clicks and increased usage of the resources, but high click-through numbers on the ads indicate that user interest in these resources was apparent.

Headings:

Internet- -College and University Libraries

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Marketing

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Association of Research Libraries

MARKETING ELECTRONIC RESOURCES FROM THE ACADEMIC LIBRARY
HOMEPAGE

by
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INTRODUCTION

Many businesses market products and services online to increase visibility and user awareness. The same is true with the resources in a library. It is essential that librarians and library administration promote and advertise their resources to patrons so that users know what resources are available to them, get the information that they need, and keep coming back for more. With all of the money spent each year on materials, especially on electronic resources, it is critical that librarians market and promote these resources to their users (Nevers 16). One way that academic libraries have been advertising e-resources is from the library homepage. In 2005, Svencionyte did a study where she found that thirty percent of special libraries in the United States and Europe contain self-advertising on their Web sites (200). Much research has been done in the business field on the value of Web advertising but very little has been done in the field of library science.

Web advertising has demonstrated that it succeeds. Many companies spend thousands of dollars each year to advertise online and organizations gain profits from hosting these advertisements (Bhat et al 68). According to the literature, online advertising comprises eleven percent of advertising in the United States and this value is projected to grow to a fifth of the total advertising market by the end of 2007 (Datamonitor 2007). Since it is already known that Web sites are a key way to advertise,

it would seem that this principle should then be taken and applied to marketing electronic resources from the library's homepage.

Academic libraries spend millions of dollars a year on electronic resources, yet many of them are underutilized and unknown to users (Williams 40). Libraries need to figure out a way to market these resources to their users so that their money is not only being well spent but also so that users are getting necessary resources that they need and perhaps did not know existed. Many of the Association of Research Library (ARL) libraries have created advertisements on their homepages to market electronic resources. In this study, these library homepages were investigated to identify how many of them contain advertisements for e-resources and to uncover similarities in the way these promotional advertisements are represented.

As a case study, the Duke University Libraries in North Carolina currently subscribe to over five hundred databases a year, but usage statistics show that most patrons consistently use the same resources. Many of the more specialized databases tend to be neglected, since they are not general and therefore do not appeal to the entire user population. This study also aimed to highlight some of these lesser-known databases from the Duke University Libraries' homepage to determine if the advertisements would increase usage or at least increase interest in the resources. By analyzing usage statistics, trends in usage become more apparent and librarians can see if use fluctuates over time. If certain resources are never being used, even after marketing efforts are put in place, they may be able to determine that there is not an eminent need for these materials and they may be eliminated.

The first objective of this study was to find out how many ARL libraries are currently using this tactic to promote their electronic resources and what their advertisements look like. By studying these advertisements with the content analysis method, common practices for promoting these resources were revealed. The second objective of this study was to determine if advertising electronic resources on the library homepage would increase use of the advertised databases. This was measured by the number of click-throughs from the homepage advertisements to each database description, as well as the number of times a day users selected these databases through the Duke University Libraries' Web site. By choosing some of the specialized and/or new databases that Duke University Libraries subscribes to and highlighting them from the library homepage, the researcher was able to determine if this method increased use or interest in these resources. The following two research questions guided this study: 1) How many ARL libraries have electronic resource advertisements on their homepages and what do these ads look like? 2) Does advertising electronic resources from the library homepage affect use and/or interest of these resources?

Many academic libraries spend millions of dollars a year on electronic resources, but often find it hard to discern whether or not they are all being utilized. This study is important because featuring electronic resources from the library homepage is a tactic that many academic libraries are currently using, even though little research has been done on it. Since electronic resources are relatively new, marketing them is presently under-researched. More research needs to be done in this area in order to establish best practices for libraries. Librarians, Web designers, administrators, and LIS researchers will be interested in the results of this study to see if implementing this method may be

beneficial at their institutions. Research on marketing library resources in general is lacking, so research in this area will always be valuable to librarians. This work not only contributes to library and information science research, but also to the fields of business, advertising, and Web design as well.

LITERATURE REVIEW

To research the problem of the current study, resources about marketing the library in general were examined, which led to specifically researching literature on marketing electronic resources in libraries. Then, business and advertising journals were looked at to determine some Web design practices and methods to evaluate online advertisements. Some of the following studies touch on marketing electronic resources in academic libraries, but no empirical studies were found that specifically focus on marketing these resources from the library homepage. This knowledge gap seems necessary to investigate because the researcher found that more than half of ARL libraries are currently using this method to promote e-resources.

Marketing Library Resources

Lee (2005) compiled an overview of library marketing resources for librarians. Her article gives a short introduction to library marketing, and the remainder is basically an annotated bibliography from where the researcher was directed to some noted library marketing resources and scholars. One such researcher is Suzanne Walters and in her book in 2004, she lays out different library marketing strategies and emphasizes the importance of knowing your “niche markets” and advertising directly to them. In a brief section, she even touches on the importance of the library homepage when she says that it “can serve as a strong advertising tool, inviting customers to your many services” (129).

Walters also makes some valuable points about keeping ads simple and knowing your intended audience. Her book on marketing library services greatly informs the present study because it is one of the few pieces of library marketing literature out there that mentions the impact of advertising from the library homepage.

One recurring theme in library marketing literature is that libraries need to take more initiative with their resources and create marketing plans to promote them (Wisniewski and Fichter 2007). In his research in 2002, Dillon posed the popular argument that library users today often confuse free information on the Web with subscription resources that the library purchases (117). Libraries now have to make a case for their resources and need to demonstrate to patrons how these tools fit into the bigger picture of our digital society. He made the distinct point that libraries need to effectively market the digital library as a whole, before embarking on projects that market specific electronic resources in isolation. His data and observations on marketing suggest that in order for marketing electronic resources to work, libraries need to develop a plan where the whole organization devotes its efforts to meet the needs of the customer, called a “marketing-aware organization” (120). For libraries, he called for an adaptation of this classic marketing plan, which is often used in large corporations where the entire organization works together to achieve its goals. In addition, he said that specialized user groups need to be targeted with resources that are tailored to meet their specific needs, while still maintaining the level of trust that they have with library services. He made the claim that since libraries already know their customer base and their needs that it will be easier to know which products and services to market to them. Dillon proposed “relationship marketing” (123), which places emphasis on providing on-going value to

the customer. Finally, he discussed some common difficulties with marketing library resources and suggested possible solutions.

Dillon stated that a library-wide digital marketing plan needs to be in place before promotion of specific resources can be achieved. Duke University Libraries is now in the process of revising their strategic marketing plan, which demonstrates that they have begun thinking of the big picture of marketing before putting in place a plan to market particular electronic resources. According to Dillon's research, this is the most effective way to proceed and it should help the current study by having that marketing plan already in place. Dillon also stated that resources need to be selected to meet specific needs before they are marketed. By focusing on specific aspects of certain specialized databases and by using language that directs advertisement to those particular user groups, it can be hoped that the populations that would use these resources are reached. He also briefly discussed the importance of evaluating marketing efforts with usage statistics, which is also a method that was used in the present study.

Once libraries have a marketing plan in place, they can begin to focus on selecting resources to promote to their user groups. However, how do libraries know which resources to highlight and how to best promote them? Kim (2006) discussed the important task for librarians of keeping usage statistics to justify library expenses and to help with the renewal process of subscription databases. She also mentioned the problem of making students aware of all of the electronic resources that are available to them. In her paper, she examined usage patterns to see if there were differences among user groups based on characteristics such as gender, location of network access, and participation in user instruction. In addition, she studied possible reasons for non-use of

databases by asking the users to answer open-ended questions. Kim used a Web-based survey targeted to undergraduates in education, psychology, and information science courses. Her final sample included 211 responses and she analyzed the results using descriptive and inferential statistics. Kim's results indicate that there was no relationship between database use and gender, but she found a significant difference in location of access. The respondents that accessed the campus network more frequently from home were more likely to use subject-specific databases than those who accessed from places other than home, indicating that remote accessibility is an important factor in subject-specific database use.

Kim's results demonstrate that more undergraduate researchers are accessing the library network from home than in person. Therefore, these students are not going into the library as often to see banners and displays advertising new electronic resources. Based on Kim's results, the undergraduate image of the library now seems to be a more of a virtual one, indicating that libraries need to bring the advertisements to their users. One way libraries can do this by placing these advertisements on the library's homepage, where users can virtually stay connected to new resources in the library and can access these resources remotely.

Similar to Kim's study, Van Epps' (2001) also looks at determining use of electronic databases but she notes that sometimes usage statistics are not enough. In her study she created a "quick re-direct Web-log to track the number of times a particular link is selected" (119), also known as collecting click-through data, with the *Analog* program. She explains that the necessity of using the method presently is due to the fact that prices for these materials are rising, budgets are dropping, and numbers will be

needed for informed decisions to be made on which resources stay and which are dropped. Van Epps discusses the main limitation of this method to be that the clicks do not prove actual use of the databases, but however, explains the importance of collecting this type of data to know which resources are underutilized and to find out which resources should be marketed.

Wilson (2004) discusses the lack of literature in this field with marketing electronic resources. She states that while users are primarily using search engines now, once they are made aware of library e-resources and grow to trust them, that they will be more likely to use them. The only way that users can be made aware is if librarians promote these resources. Wilson mentions that there are three aspects to successfully getting users to use these licensed resources: promoting them, making them easy to find on the library Web site, and providing seamless access to them. However, with all of her great marketing strategies, including bookmarks, newspaper ads, brochures and magnets, she neglects to address one of the most popular places to advertise and to draw users into the library: the homepage. Research demonstrates that more users are accessing the academic library from home rather than in person and it is therefore important that we bring these resources to the attention of our users where they are.

In a similar article, Wisniewski and Fichter (2007) mention that libraries have done a great job collecting electronic resources, but have not done such a good job of organizing them in a user friendly and easily accessible manner. They emphasize the need for libraries to market their resources aggressively and effectively. One example that they use of a bad way to market electronic resources is by doing a “database of the month,” which will be looked into further in the current study. They say that this method

of advertising fills users with “white noise,” and once they keep seeing things that are irrelevant to them, they will eventually tune out. Wisniewski and Fichter also discuss creating titles that will grab users’ attention, using graphics, and making sure that the ads promote benefits, not things (55).

Nevers (2007) also describes the importance of promoting electronic resources from the standpoint of a law library. Nevers explains methods that law libraries currently use to promote these resources, including print newsletters, formal training sessions, and advertising them in the library blog and from the library homepage, saying that “they are an excellent place to highlight new or important electronic resources, as well as to display links to blogs and newsletters that promote e-resources” (4). However, he then describes the inherent problem that many users will never visit the library homepage, so how do we reach these students? As the current study shows, many libraries are using their homepages to advertise electronic resources, but little research has been done to measure the effectiveness of this advertising technique.

Now that it is known that e-resources need to be promoted and that more students are accessing the library remotely, studies involving actual libraries that are using their homepages to advertise content can be explored. Svencionyte (2005) explored self and commercial advertising on library websites in Europe and the United States. She aimed to create a general understanding of Internet advertising on library Web sites and to establish some standards and best practices for advertising. She examined six hypotheses and the three that relate to the current study include: “1. the amount of advertising on library Web sites is not large, 2. libraries use both self and commercial advertising on their Web sites; however, their use of self-advertising is more frequent, and 3. products

and services advertised are the same in all libraries” (199). Svencionyte used a survey to capture data on internet advertising for special, public and national library Web sites. First, she used a detailed opening survey that was focused on special libraries to see if they used Internet advertising. The results of this initial survey indicate that thirty percent of the 192 special libraries surveyed use Internet advertising, which was enough to warrant more research. She then sent out a broader, second survey to 243 libraries in Europe and the United States. Her results indicate that the use of self and commercial advertising varies greatly by type of library, but overall self-advertising was used more frequently than commercial. Libraries from Europe and the United States both use advertising, but only 75 out of 243 (30.9 percent) have examples on their Web sites, which may be higher if this study was done again today. The types of self-advertising were consistent across all libraries that utilized it, including databases, library services, new books, articles, exhibitions, and events. She also found that banners and links were the most popular method of advertising on library Web sites at the time of her study.

The gap in Svencionyte’s study that is addressed in the current study is exploring how academic libraries, specifically, use self-promotion and advertising to market their electronic resources. She discussed special, public, and national libraries, but for some reason academic libraries were excluded from her research. In addition, it can be argued that currently banner advertising is no longer the most popular form of advertising and it may be beneficial to see what has replaced it.

Welch (2005) specifically examined how the academic library Web site may be used to market library resources and services for fundraising and public relations. She recognized the benefits of promoting from the library webpage but also discussed the risk

of other competing links and the placement of them on the page. In a survey conducted from December 2003 to January 2004, Welch selected 106 academic libraries that serve undergraduate populations and have Friends of the Library groups. In order to choose the libraries for her survey, she looked to the 2000 Carnegie Classification listing and selected schools from the three highest categories, while also trying to choose both public and private institutions and to include as many states as possible. When conducting the survey, she accessed the institutional and library homepages and analyzed the links found on the homepages in relation to the ARL primary and secondary goals of marketing. Her results indicate that only thirty percent of libraries have direct links to gifts or donations, but three-quarters of them link to library news and half link to information on exhibits and programs in the library. Based on her survey, Welch's conclusion was that with all of the other things competing on the library's homepage, perhaps there is not room as of now for marketing and promotional materials, which is perhaps something that may need to be reevaluated.

Although Welch's study mainly focused on using the homepage to increase fundraising in the library, her research suggests that the academic library homepage is indeed a marketing tool of paramount importance. Welch's research implies that the academic library homepage is a place where patrons go for information about the library and therefore, marketing should occur there. However, if the website is too busy, patrons may not notice the advertisements, which is something that needed to be considered in the present study.

Finally, Manda's (2005) study inspected libraries in Tanzania and their use of electronic resources. Manda began by explaining the PERI initiative in 2001 that

attempted to introduce full-text electronic journals to the academic community in Tanzania. His research question explored the rate of acceptance of these journals in academic and research institutions and he attempted to understand low usage statistics. Specifically, he wanted to see if the low usage was due to technical problems blocking usage, users not being made aware of the resources, or the resources not being seen as relevant to these users. The latter two areas inform the current study.

Manda's study was conducted in 2004 with ten research and academic institutions in Tanzania. Thirty-seven students and academic staff were purposefully chosen to participate in his study based on representativeness of the populations. Data were collected with face-to-face interviews and with questionnaires with an eighty-three percent response rate on the questionnaire. The electronic resources were marketed and promoted with the library homepage as the dominant method.

Manda's results demonstrate that many users are unaware of these resources (forty-two percent), and that many are dissatisfied with how the library is marketing them (sixty-eight percent). His data suggest that users most often find out about these resources from library workshops and are less likely to find out about them from the library's homepage. Manda stated that a drawback of this method could be that many students will not visit the library homepage unless they need to, which is something that was taken into consideration in the present study. This notion is something to consider since this seems to be a popular method used by ARL libraries, which perhaps indicates a need to develop other innovative marketing strategies for these resources.

Manda's study lays the foundation for future research in marketing electronic resources. This is the only article that was found that emphasized marketing electronic

resources from the library homepage as the dominant method of promotion. This study demonstrates that more research needs to be done in this area: Manda's study indicates that many people are not seeing these homepage advertisements, even though it is one of the most popular methods of promotion. Manda's study also suggests that the groups that marketing efforts target (undergraduates, faculty, etc.) will affect usage of specific resources. However, the main drawback of this study is that the sample size is incredibly specific and very low and it is unclear if these results could be generalized to a larger population.

Online Advertisements

In her book in 2004, Janoschka discusses the history of print advertising and how advertising transitioned into the online world. She examines different types of Web advertising formats and discusses techniques for measuring the effectiveness of online advertisements. The specific measurements that she notes are click-through rates, log-files and cookies. According to Janoschka, click-through rates (CTR) are widely used in measuring Web advertisements because they precisely measure effectiveness (79). The "number of clicks illustrates the ad's perception rate by users and their interest in the Web ad" (79). Log files document the access of each user automatically on the computer. Log files can record every user's request and can monitor their paths through a Web site by IP address. Janoschka makes the important point that IP addresses do not identify individual persons, just the computers used, which can mean different people in a public computing area like an academic library (80).

Bhat, Bevans and Sengupta (2005) explain different methods to measure the effectiveness of Web advertisements. They state that there has not been a comprehensive review of Web metrics published and that this book chapter fills this void in the literature (71). First, they mention the Internet Advertising Bureau (IAB)'s failed attempts at establishing standard guidelines for measuring Web usage. Then, they discuss different metrics for measuring user activity and user reaction.

The first metrics heading in the section on evaluating user activity at Web sites is entitled "Metrics for Evaluating Exposure or Popularity," which is what the present study hopes to capture. First, page requests/page views/page impressions are described meaning when a Web server counts the number of times a user's browser requests a page. Other metrics defined include top pages requested, peak activity, hits, visits and unique users/unique visitors. Unique users/visitors indicates the number of users advertisers are reaching with their message (78), which can be measured by registration, cookies, or IP addresses. In the user reaction section there is a similar piece on evaluating exposure or popularity. Bhat, Bevans and Sengupta mention ad requests/ad views/ad impressions, clicks, and click-through rate as three methods to measure effectiveness of user reaction to ads. Clicks are used in the present study because they give the advertiser knowledge that someone was interested in their ad by clicking on it (90). The authors conclude with a helpful table depicting Web advertisers' objectives and the metrics that address these objectives (93). This table is basically a pictorial summary of their chapter describing that different metrics are better suited for different projects and objectives and not one metric is better than others.

Chatterjee (2001) also examined methods to measure the effectiveness of online advertisements. With the information processing framework, he explored how users interact with various advertising formats on the internet and identified metrics that may demonstrate how effectively an ad is received. He mentioned that the inherent problem in solely collecting click-through data is that advertisers do not know the users' intentions. By describing and looking at ten ad formats that are most commonly used, Chatterjee developed a table that demonstrated the measurement unit to use when evaluating each format. For example, target ads are to be measured by number of unique visitors, number of clicks, time spent, and purchases. He then proposed a model for evaluating users' interactions with Web advertisements and developed another chart, which lists the ad formats and the processing stages that users go through when interacting with each ad type. Chatterjee explains the important role that users play in ad success by demonstrating that users are required to determine what the ad is about and decide if they want to click on it (214). He concluded describing different Web advertisement measurement tools that assess consumer response to ads, including log files, clickstream, tracking software downloads, filling out forms and answering surveys.

Chatterjee's study provides great background knowledge on the different methods of evaluating Web advertisements that are commonly used. His section on the size of the advertisement in relation to the amount of visual space that it occupies on a Web site greatly informs the present study. He explained that often smaller ads will get lost on the page because they are competing with other content (212), which is frequently problematic for information on many academic library homepages. The ads in the present study were relatively small and were located in the bottom left-hand corner of the

library's homepage. In addition, his study lends the idea that click-through data may not provide enough information and suggests that the researcher may want to consider pairing it with another method, such as a content analysis, like in the present study.

The three previous studies focused on different metrics to measure advertisement effectiveness. A study by Menon and Soman (2002) goes further and examines the psychology behind creating successful Web advertisements. Menon and Soman looked at curiosity in relation to successful Web advertising of new products. They proposed the notion that consumer curiosity is what leads them to click on the advertisements (3). Once a creative hook or a gap in knowledge is presented, the consumer may feel more compelled to click on the ad that presents the hook. However, the problem that Menon and Soman found is that since this form of advertising requires sufficient interest on the part of the user, click-through rates were often low. In order to alleviate this, Menon and Soman used an advertising style where curiosity-inducing ads appeared before product information ads, which is a method that was also utilized in the present study. Menon and Soman hypothesized that curiosity would be stronger when the knowledge gap is moderate and manageable and that generating more curiosity would result in "greater elaboration, greater information search, better learning of the information, and enhanced brand effect" (4). They also hypothesized that by generating curiosity towards a particular feature of the product they would direct information searching toward the feature, which would result in better learning about this feature.

Menon and Soman tested these hypotheses with two experiments. The first experiment, a 3 (knowledge gap) x 2 (curiosity trigger), tested the first hypothesis. In this experiment, 108 undergraduate students were shown three ads with three differing levels

of knowledge gaps, and four measures (curious, read, involve, store) were collected on nine-point scales. The results of this experiment indicate that a higher degree of curiosity occurs when the knowledge gap is moderate, since the mean curiosity score was highest for the cued-condition and lowest for the control condition. The second experiment measured the second and third hypotheses. Subjects composed of 131 undergraduates were asked to evaluate an online magazine. The magazine had four ads in it, one being the test ad and the other three being filler ads. From this experiment the researchers collected clickstream data, attitude and behavior data, and open-ended data. Their data suggest that subjects focused on the ads that evoked curiosity more than the ads that did not have a cued knowledge gap. Overall, Menon and Soman proposed that curiosity can “be harnessed to enhance customer motivation and learning” (11).

Summary

Promoting electronic resources from the library’s homepage is a growing trend in academic libraries, but little research has been done on it. However, research on advertising in general has been done and the methods of using usage statistics and collecting click-through data are two useful and accepted practices (Bhat et al 2005). Articles that examine effective Web advertising techniques note the importance of image placement, background color, and building user curiosity so they are inclined to click on the advertisement. Other research demonstrates that advertising from the library’s homepage may not be the most effective method for reaching all users. More research needs to be done on effective methods for promoting electronic resources in academic libraries, since so much money is being spent on these materials each year. In the present

study, marketing electronic resources from the library homepage was examined, and effectiveness of these advertisements was investigated with usage statistics and click-through data.

METHOD

For the present study, a dual methods approach was used. A content analysis was preformed to compare methods of advertising electronic resources from all 123 ARL homepages. This method was used to identify how many ARL libraries are using their homepages to promote electronic resources and also to provide an overview of current popular practices in showcasing these advertisements. The second method was to collect empirical data from Duke University Libraries' homepage about their electronic resource advertisements, which includes click-through data and usage statistics. The click-through data display how many users a day clicked on the advertisement while it was up on the homepage. The usage statistics, which were also collected daily, show how many users chose to go to each resource by deliberately clicking on it within the Duke Libraries' Web site.

ARL Advertisement Analysis

Content analysis is the study of recorded human communication (Babbie 314) and is a good method for comparing features of Web sites. The unit of analysis in this study is the ARL library homepage and the unit of observation is the advertisement for the electronic resource on the library homepage. The population for this study included all 123 ARL homepages, which were selected because often these research libraries are considered leaders in this field. A list of ARL Member Libraries

(<http://www.arl.org/arl/membership/members.shtml>) was accessed on February 18th 2008.

There are many variables that were compared in this study that relate to the appearance of the electronic resource advertisements. The term *electronic resource* can be conceptualized for the purposes of this study as an online resource that the library subscribes to, for instance, online databases, electronic journals and electronic books (e-books) that are not freely available to the public. An *advertisement* is defined as any text or graphics on the library homepage that promotes one of these resources, and *homepage* is defined as the starting or index page of the library's website.

The variables that were used to classify the units in this study were *distinguishability*, *style*, *location*, *hyperlinked* and if so, *where the link takes the user*. *Distinguishability* is defined as having a high contrast compared to the rest of the information on the page. The e-resource ads were measured as having high, medium or low contrast. To classify *style*, the researcher looked at the format of the ads. Ads were coded as having text and an image, text only, image only and other. The other category was used to classify ads that did not fall into any of the before mentioned categories. *Location* was determined by the quadrant location of the ad was located in. Each homepage was viewed as having four quadrants, with the possibility of the ads also being located in the center of the page or in more than one quadrant. Finally, if the ads were *hyperlinked* was noted and *where the link took the user* was also recorded. The ads linked to the resource being advertised, a description page for the resource or a login page for the university. In some cases, the links did not work, which was also noted. The titles of each advertisement were also recorded by the researcher in order to later compare

common methods. Appendix A of this proposal contains the codebook that was used to analyze the data from the homepages.

All of the coding was done by the researcher, in the same day, which was February 18th 2008. In addition, all of the ARL library homepages were viewed from the same computer, a Dell Inspiron 640m. Mozilla Firefox version 2.0.0.12 was the web browser used to view all of the homepages.

Duke University Libraries Homepage Advertisements

The second method for the current study was to collect data from the Duke University Libraries' homepage. Click-through data and usage statistics were collected daily, before, during, and after the life of the advertisement. Advertisements stayed on the homepage for approximately one week (five of the highlighted databases were not up for a full week, which is explained in the discussion), which is when the click-through data were collected. Usage data were collected two weeks before the advertisement, during the week of the advertisement, and two weeks after the advertisement came down.

Click-through data measure the number of times a user clicks on a link, which is an indicator of user interest in the ad (Janoschka 79). In this study, click-through data were gathered daily from the homepage on the title link of the advertisement. These data were saved daily by an internal data collection program, called *Sawmill*, which can only be viewed on campus and is limited to Duke Library staff. The researcher was able to access the data because she is a staff member. These data are important because they show the number of times a day users clicked on the advertisement, demonstrating if the users had an interest in the advertisement and wanted to know more about the featured

electronic resource. If no one ever clicks on these advertisements then it may be deduced that another method would be better suited for promotion of these resources.

Usage statistics were also collected on the number of times a day one of the advertised databases was clicked on from the Duke Libraries “Resource finder” Web site. Usage statistics can be defined as data demonstrating how many times something was used. The “Resource finder” is a part of the internal program, Metalib, for organizing Duke’s electronic resources. When a query for a database is typed into the search box on the library homepage, the user is seamlessly linked out to the “Resource Finder.” The number of times users clicked on these database titles within the “Resource finder” internal pages were collected. This also includes the links from description pages of the advertised resources because these were also linked through the Metalib server. Other ways that patrons can get to Duke Libraries’ electronic resources that were not monitored in this study include: finding articles in Google Scholar and clicking on the “Get it @ Duke” button, finding an article in an indexing database and clicking the link to the full-text database, and clicking on a database link from the library catalog.

Data for this portion of the study were collected by using the program, *Apache*, which is a Web server software program that generates standard logs of everything that happens on the library Web site. Permission to collect the data was received from two information technology specialists that work at Duke University Libraries. They set up a re-direct script for these logs with *Analog* software and filtered the data needed for this study. They then set the system to run a daily report at 11:00 PM with this script and the resulting log files were sent by email to the researcher each evening. This method for collecting the data is appropriate because it is the only way that illustrates users that went

to the database by choice because only deliberate instances of going to the featured databases were counted and reported. With this specialized report, all of the instances where patrons found an article in another database or search engine and stumbled across the database being studied by chance have been left out because they do not inform the present study.

The sample for this portion of the study included ten electronic databases:

- Oxford Reference Online
- Early English Books Online
- Periodicals Archive Online
- America's Historical Newspapers
- Homeland Security Digital Library
- Ehraf-Collection of Ethnography
- Smithsonian Global Sound for Libraries
- Slavery Abolition and Social Justice, 1490-2007
- Shoah Foundation Visual History Archive
- DukeSpace Electronic Theses and Dissertations

These ten databases were chosen because they are subject-specific, specialized databases that have been underused and recommended by subject librarians for promotion. In addition, ISI Web of Knowledge was added into the study as a basis of comparison. This database was added because it is one of the most heavily used databases at Duke and statistics on use of this database were beneficial to collect to show if its use also increased with advertising.

The promotional advertisements for this study for these eleven databases were created by the researcher as part of her professional duties. The researcher created the promotional descriptions and a reference librarian edited them and sent them back to the researcher. Once that step was complete, the researcher sent the advertisements to the Head of Communications for a final edit and they were published them to the library homepage each week. On the library homepage in the bottom left corner in the “News and Events” feature box is where these advertisements appeared, which can be seen in Figure 1.

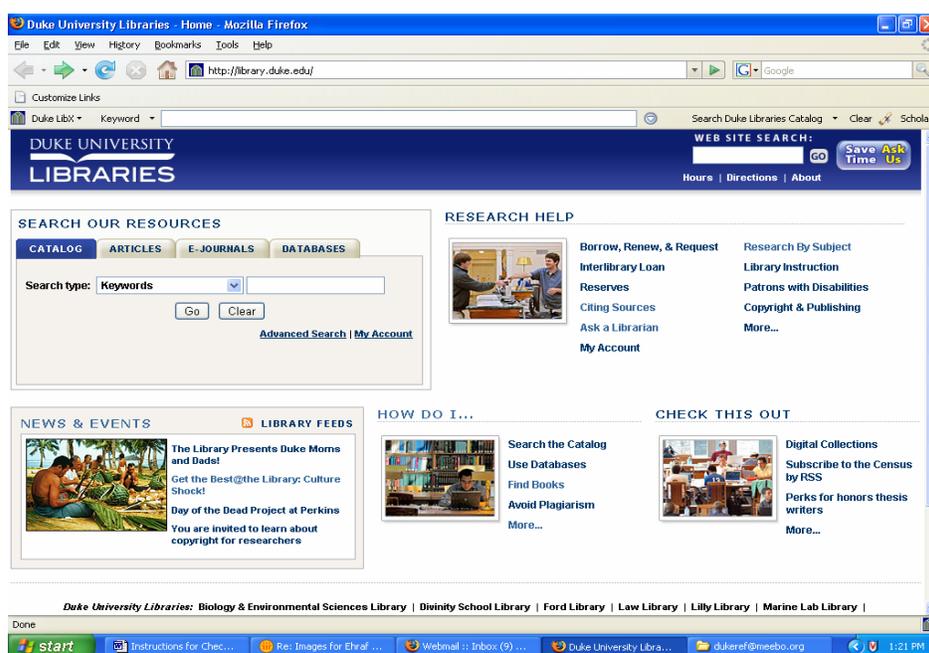


Figure 1: Ehraf Advertisement on Library Homepage: “Get the Best @ the Library: Culture Shock!”

Another example of one of these advertisements can be seen in Appendix B. A title linked to a description of the resource and photos were displayed each week to correspond with the advertisement. The titles always began with the tagline, “Get the Best @ the Library,” to provide consistency and to establish a pattern so that users would

soon know what to expect. Once a user clicked the title, they were taken to a secondary description page that was meant to give the user more information about each resource, which was also created by the researcher. An example of this for the same resource as above is shown Figure 2. Another example of a description page can be seen in Appendix C.

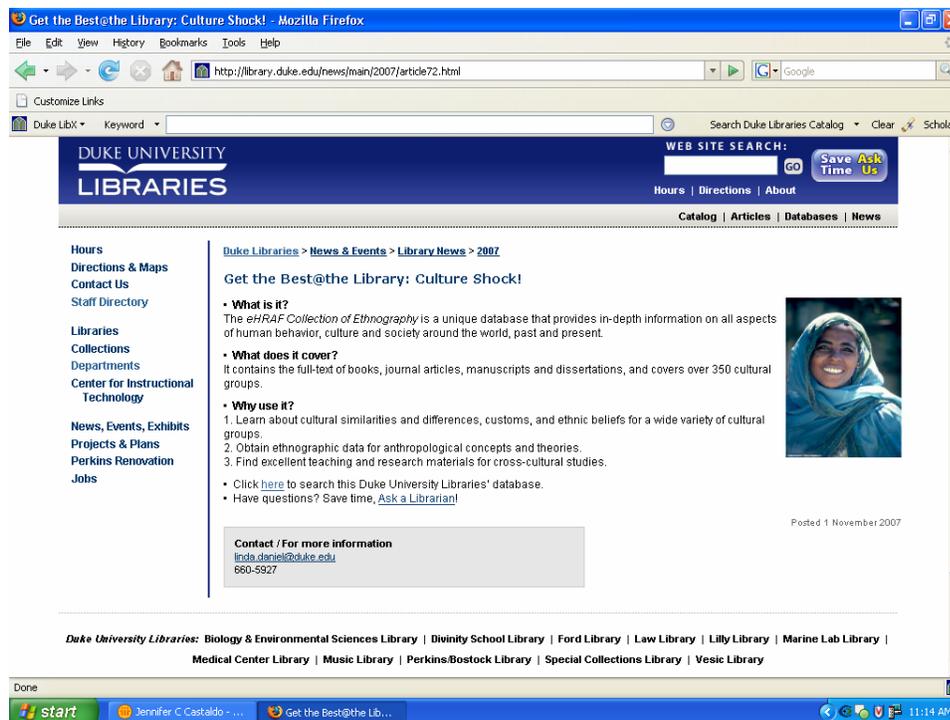


Figure 2: Ehref advertisement description page

RESULTS

The first method in this study examined all 123 ARL library homepages to see if they contained self-advertising of electronic resources and what these advertisements looked like. The researcher found that sixty-two of the homepages had ads and fifty-two did not. This leaves out nine homepages that were undetermined due to language and title issues. Two of these nine homepages were written in another language and therefore the researcher was unable to determine if ads existed on those pages. One of these nine homepages had an “appeal to save resources” due to budget constraints and the researcher did not choose to classify this as an ad to promote electronic resources. The remaining six homepages contained links to “trial databases,” which the researcher also chose to place in the undetermined category. A breakdown of the percentage of ARL libraries’ homepage ads can be viewed in Figure 3.

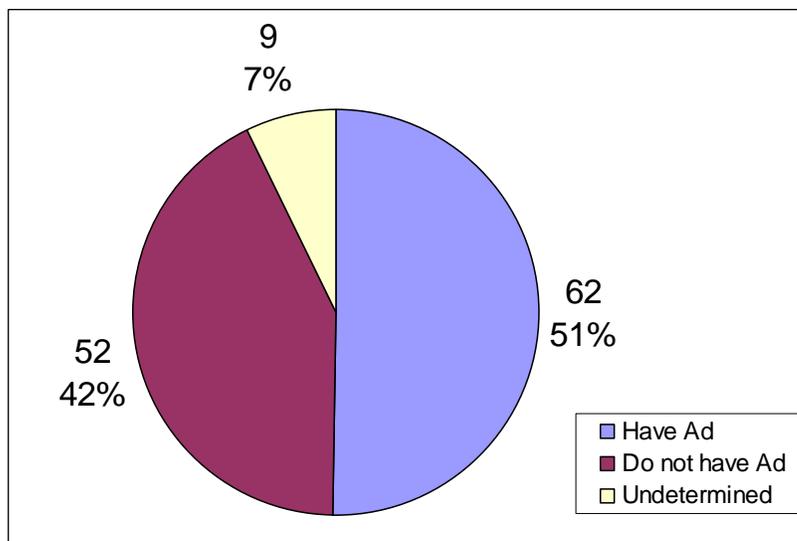


Figure 3: Do ARL Libraries Have Homepage Ads?

For the fifty-one percent of homepages that had ads promoting electronic resources, the researcher looked at different cosmetic variables about these ads including, *distinguishability, style, location, hyperlink*, and if linked, *where the link brings a user*. *Distinguishability* was measured by the contrast of the advertisement compared to the rest of the homepage and was rated a 1, 2, or 3 for high, medium, and low, respectively. The researcher found that the majority (63 %) of these ads had a low contrast and were undistinguishable compared to other information on the page, which is demonstrated in Figure 4.

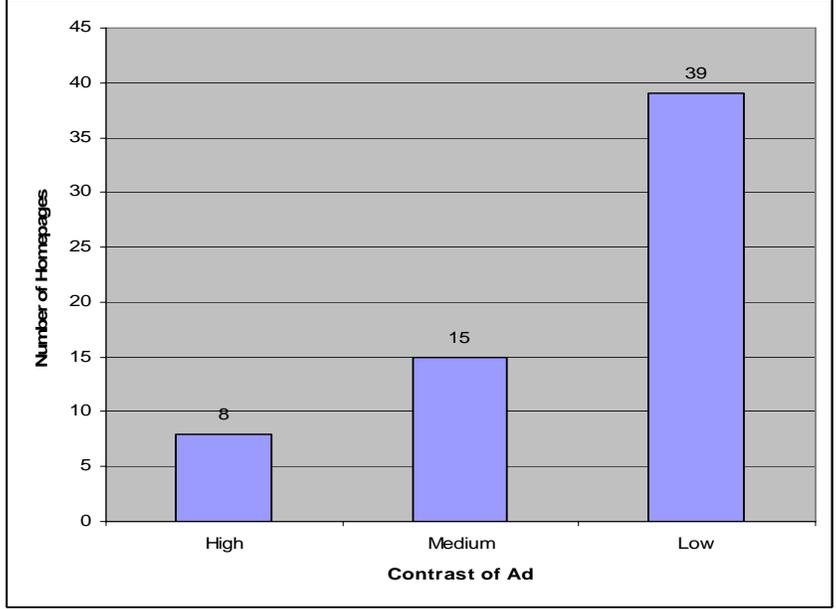


Figure 4: Distinguishability of Ads on Homepages

Next, the researcher documented the *style* of the ads as being text-only or having an image. The majority of the ads (63%) were text only, but many (27%) had both text and a corresponding image. Five of the ads (8%) were classified by the researcher as “other.” These five ads classified as “other” for *style* include: a dropdown box, an image slideshow, an ad that changes each time the page is visited or refreshed, and two homepages contained scrolling ads with images. Figure 5 displays the results.

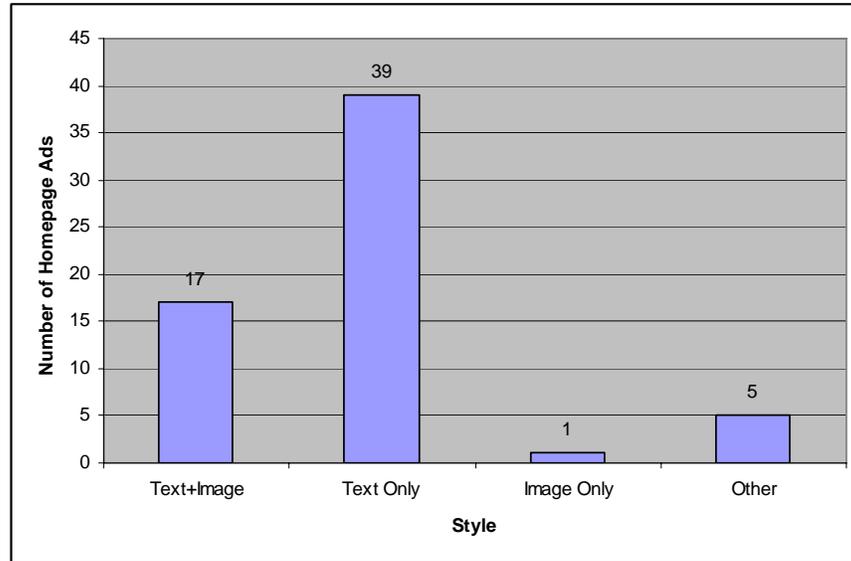


Figure 5: Style of the Homepage Ads

After style was examined, the researcher noted the *location* of these ads on the homepages. Homepages were broken down into four quadrants. Some ads were located in more than one quadrant and some were located in the center of the page. Results are displayed in Figure 6.

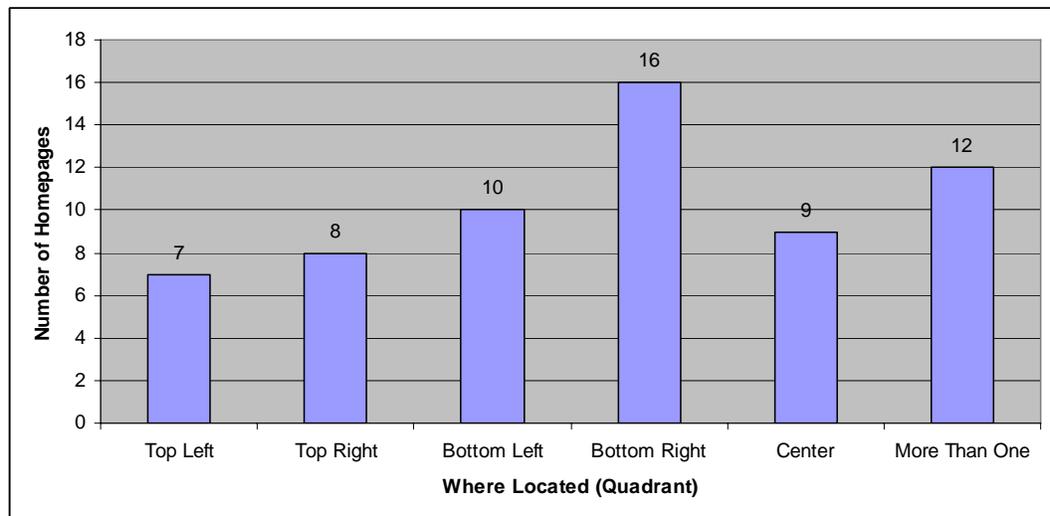


Figure 6: Location of Homepage Ads

Finally, the ads were analyzed to determine if they were *linked*. The researcher coded the ads that were linked and where they took the user to. All but one (sixty-one) of the ads were linked. The links were clicked on to determine *where they would take the user* and were separated into the following categories: takes directly to the resource, takes to another Webpage that describes the resource in more detail, takes to a login page for the university and the link is broken and takes the user nowhere. Three of the ads were linked in ways that took the user to different places each time and were not consistent, so the researcher chose to classify these three ad's links as "other." For example, some advertisements contained two hyperlinks. In one case, if the title was clicked on it took the user to a login page and if "see more" was clicked on it took the user to a description page. Results can be viewed in Figure 7.

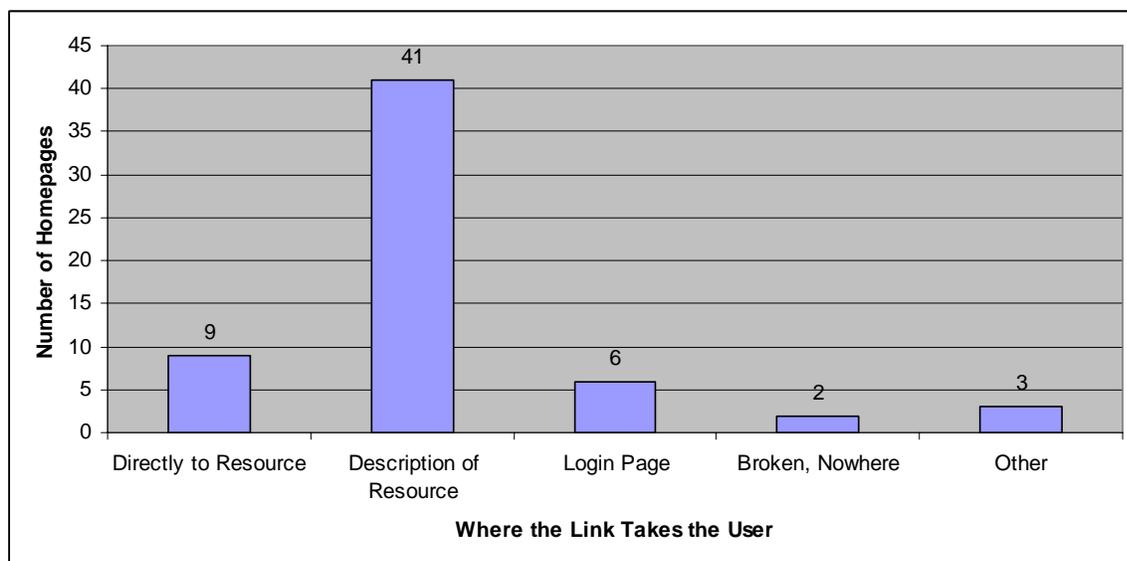


Figure 7: Where Linked Ads Take the User

The second part of this research took a local look at Duke University Libraries' homepage ads. In the first phase, the researcher collected data on how many times each ad was clicked during the week that it was displayed on the homepage. Figure 8 demonstrates a breakdown of each ad and how many clicks it received. The "raw" clicks stand for the actual number of times each ad was clicked on. The "unique" clicks stand for the number of unique IP addresses, or visitors that clicked on each ad. Most of the time unique clicks are deemed more accurate, but in this study the researcher felt that both needed to be depicted, which will be explained more in the discussion section.

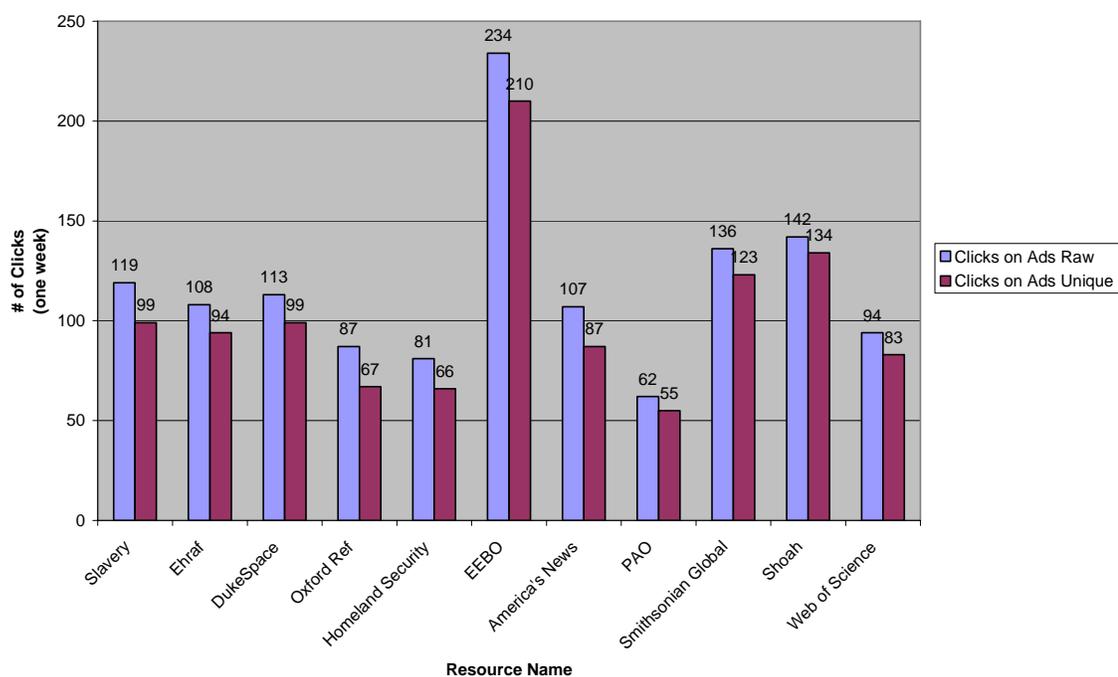


Figure 8: Number of Clicks on Ads by Resource

Usage statistics on how many times each resource was accessed through the library Web site were also collected two weeks before the ad went up, the week that the

ad was up, and two weeks after the ad came down. These data were collected to see if the most use occurred when the ad was up. Results are shown in Table 1 and Figure 9. For Figure 9, Web of Science needed to be removed due to scale issues, since it was accessed so much, which will be explained in the discussion.

	Database Before	Database During	Database After
Slavery	4	4	3
Ehraf	9	4	3
DukeSpace	18	46	9
Oxford Ref	26	12	16
Homeland	2	2	0
EEBO	36	14	19
America's News	29	20	33
PAO	4	0	15
Smithsonian Global Sound	0	9	3
Shoah	5	7	3
Web of Science	1224	878	1895

Table 1: Number of Usage Clicks by Resource

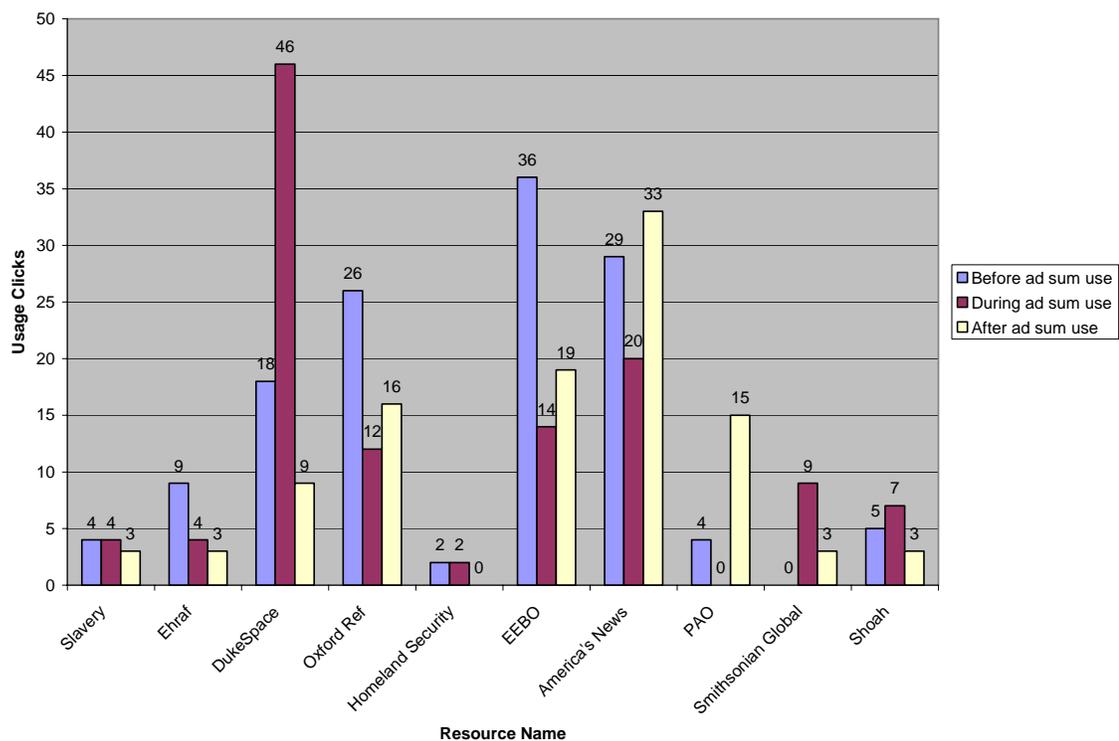


Figure 9: Number of Usage Clicks by Resource

Finally, usage statistics during the week the ad was up and clicks on ads were compared to see if there was a relationship between the number of clicks on the ads (user interest) with actual usage of the resource. Figure 10 demonstrates that an apparent relationship does not exist for the selected resources. Again, Web of Science needed to be removed for scale issues. Pearson's r correlation coefficient was calculated to be -0.136 , which indicates that there is not a linear relationship between the number of clicks on an advertisement and the use during the week the advertisement was on the homepage. In addition, this relationship was not statistically significant.

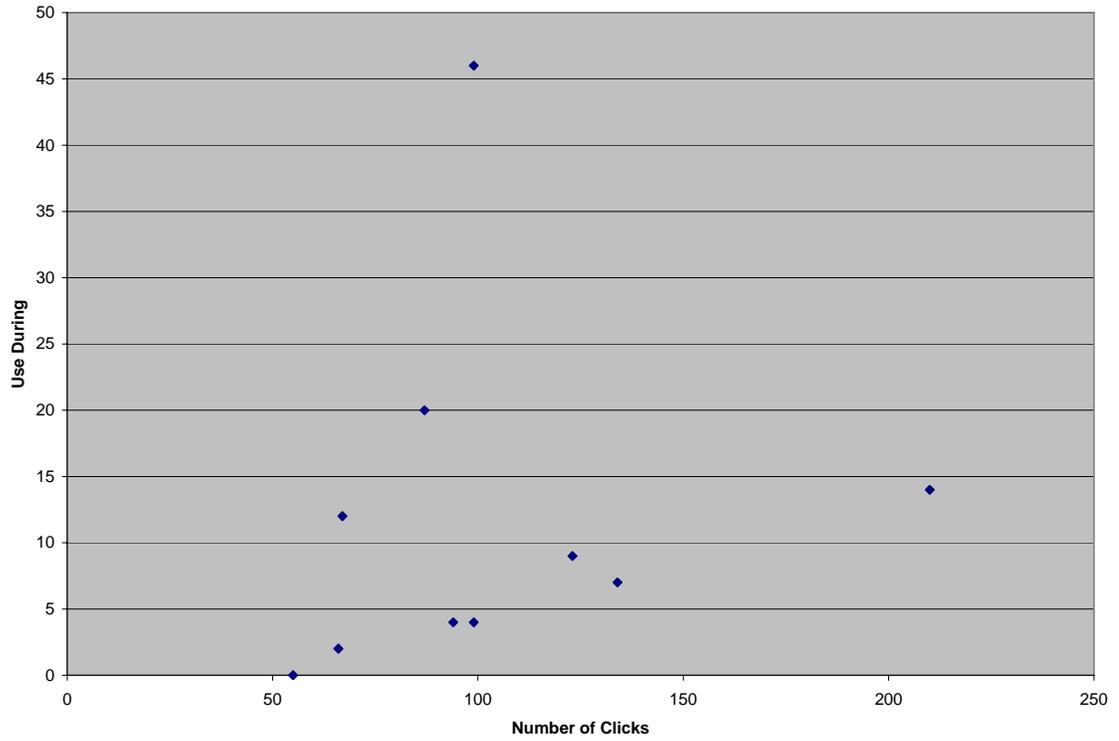


Figure 10: Comparison between Use During and Clicks on Ads

DISCUSSION

The first research question examined ARL Library homepages to see how many had ads promoting electronic resources on their sites and what they looked like. It was found that the majority (51%) of homepages looked at had an ad, which is a curious finding since the researcher could not find any case study research establishing this as a proven method. Why are so many libraries choosing to advertise electronic resources in this manner? Walters (2004) and Nevers (2007) both indicate that the library homepage is an excellent place to highlight electronic resources and it would be interesting to see another case study done to determine if this method actually works.

The researcher also found that many research libraries used similar titles for these advertisements. The most commonly found titles include: Featured Resource, Library News, New Electronic Resources, News, Spotlight..., and What's New. Are these titles being used the most frequently because they are already common practice? Have other libraries looked at each others' homepages to see what others are already doing? The researcher did not find any literature that specifically states what to call these ads but based on these similar results it can be assumed that libraries are looking to comparable institutions when deciding what to title their ads.

The majority (63%) of the ads found for electronic resources were indistinguishable from other information on the page. The researcher found that she had to look at many pages for a while to find these ads because they did not immediately

stand out. With all of the information that libraries need to convey on their homepages today, it is no wonder that some of this information tends to get lost on a cluttered page when users experience “ad blindness” (Chatterjee 212). Online advertising messages must use smaller images and must communicate in fewer words in order to get the attention of the user today (Janoschka 74). However, someone obviously has to decide which information to highlight and which to diminish. Why is some information preferred over highlighting electronic resources? It would be interesting to do another study on electronic resource ads with an indistinguishable ad and a distinguishable ad to see if there is a difference in click-throughs.

There were only eight ads that the researcher deemed as having a high contrast or *distinguishability*. We can then begin to explore what makes an ad distinguishable and aspire to replicate this. In this study, the ads that were identified as being most distinguishable shared the following qualities in common:

- 100% of them had an image: 75% of them contained text and an image
- 75% of them were either located in the center of the page or in more than one quadrant
- Seven out of eight of them were linked

It seems based on these results that the most distinguishable ads contained images and were large enough to either be in the center of the page or in more than one quadrant. Previous research in Web advertising concurs that popular ads are “primarily text and picture based” (Janoschka 48) and it would make sense that the larger the ad and the more centrally-located it is on a page, the more it will be seen. However, when looking at Figure 6 for the location of the ads, there was not a specific location that stood out

among the rest as the most popular place to advertise electronic resources. Perhaps, this is because libraries need to place these ads where they have space on the page and are not as concerned with Web advertising best practices and conceivably more research needs to be done on marketing from library homepages.

As mentioned in the methods section, some ads were up for less than a week. This is because at first the Head of Communications thought that having them up for an entire week might bore students, but then changed her mind. The ads that were not up for the full week include:

- Slavery Abolition and Social Justice, 1490-2007 (5 days)
- DukeSpace Electronic Theses and Dissertations (6 days)
- Oxford Reference Online (6 ½ days)
- Ehraf-Collection of Ethnography (6 ½ days)
- Smithsonian Global Sound for Libraries (6 ½ days)

It is interesting to note that even though DukeSpace was only up for six days that it had the highest use (46 users) during this period. Even though these time periods are inconsistent, the researcher does not believe that these shortened time periods affected click numbers to the point of data contamination. One exception is that Periodicals Archive Online was up for the full week, but the *Sawmill* server was down for two days when click-throughs could not be collected, which may account for it having the lowest number of clicks.

Raw and unique clicks were both taken into account when analyzing the results of this study. The raw clicks are the number of times the advertisement's title was clicked. Unique clicks are the number of unique IP addresses, or visitors that clicked on these

titles. It is important to have both numbers represented in this study. Usually unique clicks would be more accurate because they identify unique visitors to the ads.

Therefore, if a librarian was using one of these databases in teaching a class and clicked on it five times, only one of these clicks would count. However, in the case of a library with public machines, these unique clicks can actually stand for different people using the same machine. Also, it may not be that irrelevant if the same person clicked twice. Their interest was peaked and this number may be interesting to know.

The researcher was surprised that Early English Books Online (EEBO) was clicked on the most by far and that Web of Science was clicked on the least, with their usage patterns being completely reversed. Perhaps users already have a following with Web of Science and did not need to click on the ad to find out more about it. In this case, timing did not even have anything to do with decreased clicks because Web of Science was up from January 21st-28th, which is considered a normal week during the semester and should not account for low use. However, the picture displayed next to the Web of Science advertisement was a spider's web, which was one of the least distinguishable photos and could have accounted for the low number of clicks. It is interesting that almost all of the resources were clicked on about 100 times per week, but EEBO was clicked over 200 times. Is there something about this database that drew users to read this ad over others? This ad was up from December 10-17th, which was during some of finals week, so this may be a possible reason for increased views. However, Homeland Security Digital Library was up at the beginning of finals week (December 3rd-10th) and this had one of the least amount of clicks.

Periodicals Archive Online had the least amount of both use and clicks. As mentioned above, the low number of clicks may be due to the two missing days of data. Also, this advertisement was up during the week of Christmas break, December 24th-31st, and it can be assumed that much research was not being done during this week, which may account for the non-existent usage during this time period.

One objective of this study was to see if the most use occurred during the week that the ads were up but as Figure 10 demonstrates, this did not occur. The computation of Pearson's r demonstrates that there is no correlation between the number of clicks on an ad and usage of the databases. However, perhaps it is not all that surprising that the most use did not occur during the week that the ad was up because the databases highlighted were specialized resources. Many users will not have use for these resources during the exact week that the ads were on the homepage. However, they may have read the ads and gained an awareness that these resources exist for future research, which would not immediately increase usage. Dukespace may have seen immediate use because it is a database that contains electronic theses and dissertations by Duke students and they probably wanted to check if their papers were in there, indicating a case where an immediate need or interest was provoked. Also, the title may have caught their eyes because perhaps they thought it was something like MySpace.

Limitations

This study also has some limitations. First, the electronic resource advertisements analyzed in the content analysis portion were collected at one point in time, which may change quickly, since content analysis is limited to the existence of previously recorded

communication. For example, the researcher viewed all of the ARL homepages in February, but perhaps fifteen have added advertisements by March, which this study would have then missed. Also, validity is hard to ensure in content analysis because information that already exists will be analyzed and the measurements for the study may not sufficiently cover the variables and concepts that the researcher will be drawing conclusions about (Babbie 327). For example, there could be variations on what different readers may deem “*distinguishable*.” These definitions may be flawed and inconsistent with what other readers may think. Also, the researcher did not check intercoder reliability, which can sometimes indicate a bias in the results

There are also some limitations to solely collecting click-through and usage data. First, by only gathering data for a five week period, it was hard to determine actual trends in usage. These measures may have “face validity” (Babbie 144), meaning these may seem like reasonable measures but they may not accurately measure the proposed variables. In addition, by only choosing eleven specific databases and by focusing on Duke University Libraries’, the ability to generalize this study becomes severely limited. Also, some of the pictures displayed next to the advertisements created by the researcher may have been considered less exciting than others, which could have accounted for decreased clicks. Finally, these numbers do not have user intentions behind them and users may have clicked on the advertisements accidentally.

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CONCLUSION

With all of the money being spent each year by academic libraries on electronic resources, librarians need to make sure that these resources are being utilized. One way that ARL libraries are increasing awareness of these resources is by marketing them from the library homepage. Many of these ads are similar, yet the researcher could not find any existing research demonstrating that this technique is worthwhile. After collecting data about the Duke University Libraries' advertisements in clicks and usage statistics, it can be concluded that even though these advertisements did not directly increase use of the databases, user interest was peaked because clicks were high. This interest may lead to an increased awareness of electronic resources as well as awareness of services that the library provides in general.

The implications of this study are that the findings could contribute to a better understanding of advertising on the library homepage and also to library marketing tactics of electronic resources in general. Since more than half of ARL libraries are using this method to promote electronic resources and are displaying these ads in similar manners, more research should be done on the effectiveness of this method of promotion. The practical value of this research was to see if attempts at advertising on the homepage increase use or awareness of certain electronic resources to the library's patrons. Since usage of the highlighted databases did not increase directly, perhaps this particular

electronic resource marketing effort will need to be modified or this may be a signal to discontinue those resources.

This study provides many opportunities for future research. The researcher could keep collecting data from the Duke University Libraries' homepage and see if usage increases in the future with the databases that were highlighted originally in this study. It was already found that user interest was apparent by clicks, but now that users have shown interest, future research could determine if usage eventually increases over time. Perhaps another institution could conduct a similar project with a longer duration of study. The researcher could also extend this study by continuing to place ads on the homepage each week while taking care to choose e-resources in different subjects and see if this plays a role in clicks. Also, a study can be done where clicks on e-resource homepage ads are compared to clicks on other things on the homepage to see it is the content or location that really matters to users. In addition, all of the variables coded in the content analysis can be varied to possibly establish best practices in advertising electronic resources.

Future research could also take this study a step further and attempt to obtain information from all of the ARL libraries with e-resource ads by conducting a survey in order to get their usage statistics to see if these ads increased usage at their institutions. Also, future research could focus on other possible methods for promoting electronic resources, such as university-wide marketing plans, advertising on university buses, giving out flyers, and promotion through other online avenues besides the homepage. Finally, users can be surveyed or interviewed to see if actual interest and/or awareness is generated by ads. User reactions to advertisements could also be analyzed to see if users

notice them on the library homepage with all of the other competing content, in order to determine if continuing to produce advertisements is a worthwhile venture.

Works Cited

- Association of Research Libraries. "Member Libraries." Last modified October 3, 2007. Accessed February 18, 2008. <http://www.arl.org/arl/membership/members.shtml>.
- Babbie, Earl. The Practice of Social Research. 10th ed. California: Thomson Learning, 2004.
- Bhat, Subodh, Michael Bevans, and Sanjit Sengupta. "A Survey of Measures Evaluating Advertising Effectiveness Based on Users' Web Activity." Advertising, Promotion, and New Media. Ed. Marla R. Stafford and Ronald J. Faber. New York: M.E. Sharpe, 2005. 68-99.
- Chatterjee, Patrali. "Beyond CPMs and Clickthroughs: Understanding Consumer Interaction with Web Advertising." Internet Marketing Research: Theory and Practice. Ed. Ook Lee. London: Idea Group Publishing, 2001. 209-217.
- Datamonitor.com. "Advertising in the United States: Industry Profile." Advertising Industry Profile: United States. October 2007: 1-28. Accessed from Business Source Complete, November 12, 2007.
- Dillon, Dennis. "Strategic Marketing of Electronic Resources." The Acquisitions Librarian. 28 (2002): 117-134.
- Janoschka, Anja. Web Advertising: New Forms of Communication on the Internet. Philadelphia: John Benjamins Publishing Company, 2004.

- Kim, Jong-Ae. "Capturing Metrics for Undergraduate Uses of Subscription Databases." Online. 30.3 (2006): 32-39. Academic Search Premier. EBSCOhost. U of North Carolina Lib., Chapel Hill. 22 Sept. 2006 www.onlinemag.net.
- Lee, Deborah O. "Marketing Resources for the Busy Librarian." College & Undergraduate Libraries. 12.1/2 (2005): 81-91.
- Manda, Paul A. "Electronic Resource Usage in Academic and Research Institutions in Tanzania." Information Development. 21.4 (2005): 269-282.
- Menon Satya, and Dilip Soman. "Managing the Power of Curiosity for Effective Web Advertising Strategies." Journal of Advertising. 31.3 (Fall 2002): 1-13.
- Nevers, Shawn G. "Promote Your Electronic Resources: How to get more bang for your e-resource buck." AALL Spectrum. 11.6 (April 2007): 4-5, 16.
- Svencionyte, Vitalija. "Advertising on Library Websites: Comparing Library Websites in Europe and the USA." Libri. 55.4 (2005): 198-205.
- Van Epps, Amy S. "When Vendor Statistics Are Not Enough: Determining Use of Electronic Databases." Science & Technology Libraries. 21.1/2 (2001): 119-226.
- Walters, Suzanne. Library Marketing that Works! New York: Neal Schuman Publishers Inc., 2004.
- Welch, Jeanie M. "The Electronic Welcome Mat: The Academic Library Website as a Marketing and Public Relations Tool." The Journal of Academic Librarianship. 31.1 (2005): 225-228.
- Williams, Lesley. "Making 'E' Visible." Library Journal. 131.11 (2006): 40-43.
- Wilson, Paula A. "Take it to the Street." Netconnect. 00 (July 2004): 12-15.

Wisniewski, Jeff and Darlene Fichter. "Electronic Resources Won't Sell Themselves:
Marketing Tips." ONLINE. 31.1 (Jan-Feb 2007): 54-57.

APPENDICIES

Appendix A: Code Book

Unit of data collection: Each ARL library homepage. Only the main library homepage will be examined.

Name of the library: List name of each ARL library homepage visited.

Does it have an advertisement for an electronic resource?: Indicate whether or not the library homepage has a self-advertisement for an electronic resource. A self advertisement is defined as an ad promoting a library resource. An electronic resource is defined in this study as a library resource that is available online. Some examples include: e-books, databases, e-journals, etc. If no, choose number two and move on to the next website.

1. Yes
2. No
3. Unable to determine.

What is the ad titled?: List the title of the ad.

Is the ad distinguishable?: Distinguishable in this study will be defined as being noticeable, meaning having a contrast to other things on the page; standing out.

1. High
2. Medium
3. Low

Style: Does the advertisement have an image related to and attached to the advertisement or is it text only?

1. Text + Image
2. Text only
3. Image only
4. Other

Where is it located?: Where is the advertisement located on the library homepage?

1. Top left quadrant
2. Top right quadrant
3. Bottom left quadrant
4. Bottom right quadrant
5. Advertisement is in the center of the page
6. Advertisement is located in more than one quadrant

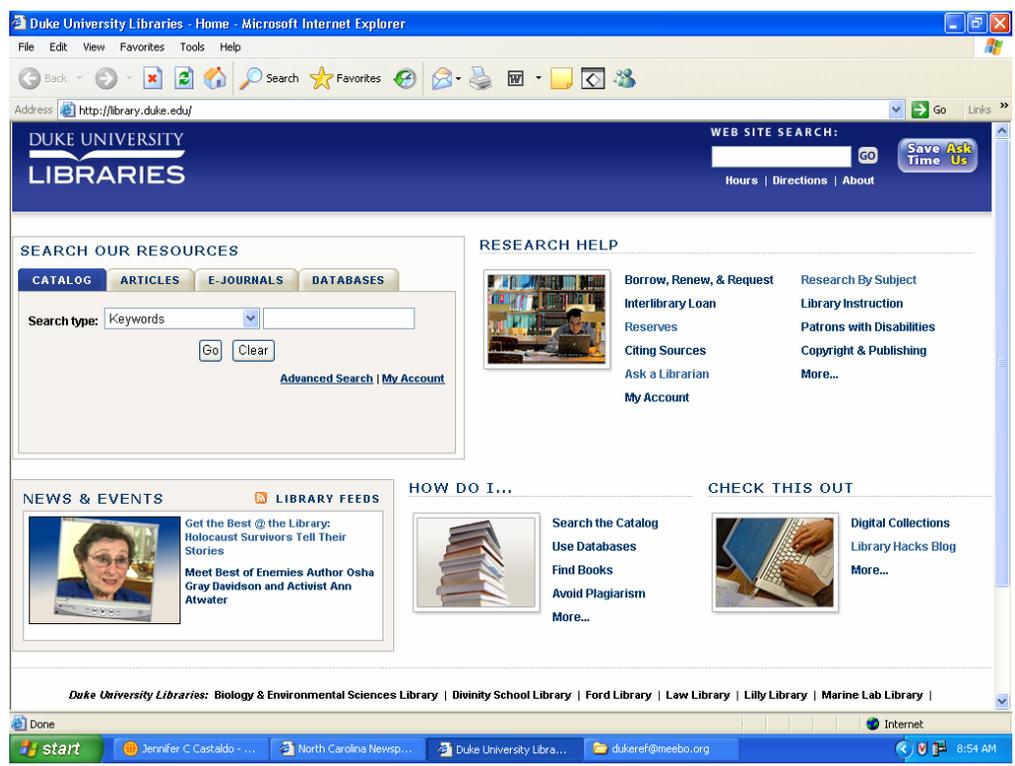
Is the ad hyperlinked?: Can you click on the advertisement to take you to another website? If no, then go on to the next website.

1. Yes
2. No

Where does the link take you?: After you click on the link, what happens?

1. Takes me to the advertised resource.
2. Takes me to another library webpage that describes the resource in more detail.
3. To a login page for the university.
4. The link is broken and does not take me anywhere.

Appendix B: Duke Libraries Homepage with Advertisement: Shoah



“Get the Best @ the Library: Holocaust Survivors Tell Their Stories”

Appendix C: Sample Secondary Database Description Page : Shoah

Get the Best @ the Library: Holocaust Survivors Tell Their Stories - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Refresh Print

Address <http://library.duke.edu/news/main/2007/article63.html> Go Links

DUKE UNIVERSITY LIBRARIES WEB SITE SEARCH: GO Save Time Ask Us

Hours | Directions | About

Catalog | Articles | Databases | News

Hours
Directions & Maps
Contact Us
Staff Directory

Libraries
Collections
Departments
Center for Instructional Technology

News, Events, Exhibits
Projects & Plans
Perkins Renovation
Jobs

[Duke Libraries](#) > [News & Events](#) > [Library News](#) > [2007](#)

Get the Best @ the Library: Holocaust Survivors Tell Their Stories

- **What is it?**
The Shoah Foundation Visual History Archive is a remarkable database that lets you view full-length digital videos of Holocaust survivors and witnesses.
- **What does it cover?** Over 50,000 video testimonies.



- **Why use it?**
 1. Find extraordinary primary source material to use in your research.
 2. Hear interviews taken in 56 countries, in 32 languages!
 3. Study firsthand accounts, see personal photographs, and hear stories from family members.
- Click [here](#) to search this Duke University Libraries' database.
- Have questions? Save time, [Ask a Librarian!](#)

Posted 9 October 2007

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