TARGET AUDIENCE'S PERCEPRION OF UNIVERSITIES' WEBSITES

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ABSTRACT

The growth of e-commerce has forced organizations to look into how they can attract people through their websites since that's the first stage of e-commerce. Many factors are involved in designing an attractive website such as easy to navigate and provide necessary information and high speed of downloading pages. People who go online have high expectations regardless of whether they are online for work or personal reasons. In the academic world, many colleges and universities use the Internet as a recruiting tool for students. These educational institutions know that parents and high school students use the Internet as an initial tool to shop around for the best college. The goal of these organizations needs to be presenting the academic programs and opportunities they can offer on their websites in the best way possible. A major concern of these educational institutions should be whether their websites are presenting their schools effectively in the eyes of their target audience. This study focused on determining what attributes of university websites the target audience are looking for when they are surfing the Internet.

Keywords: University website, design attributes, target audience, customer-centric

INTRODUCTION

Today, many organizations are engaged in e-commerce using the Internet in addition to the traditional methods of doing business. The high growth of e-commerce has been attributed to factors such as convenience, availability of vendor information, no pressure from sales people, and saving time (18). E-commerce's growth has been the driving force for studies investigating the determinants of an attractive and effective business website. Several studies point out that an attractive website for organizations involved in e-commerce will have numerous positive consequences such as increased sales (10). For example, Amazon has spent millions of dollars on building and maintaining their site and has been successful to capture and hold their customers' attention. Other e-retailers observing this success adopted the Amazon's website design (13). In another study conducted by Forester Research (9), it is shown that high-quality content, ease of use, speed and frequency of updating are the top four attributes to repeat visits.

Organization's management knows that for a company, an attractive online environment creates competitive advantage. Recently, management has shown interest in measuring the success of their companies' websites. This interest has led to the subject of what are the determinants of an effective business website and how can they be measured. However, there's a lack of genuine knowledge about what contributes to effective interactions with online customers. A research study describes designing a website as an iterative process in which designers create a high-level, less detailed (e.g., site map) representation of a site and progress to low-level, more detailed information of the site (13). A number of factors play crucial roles in developing a good business website. Several studies have investigated the characteristics of a good business website. One factor that all experts agree on is that a website needs to be customer-centric (7, 11), which means that the website must be designed to meet the needs of the target audience. In a recent study, International Venture Research, a market consultant for high-tech companies, investigated the determinants of an effective e-commerce website and pointed out that interacting with customers online is one of the important factors for e-retailers (6). The study showed that nearly half of the Fortune 100 companies fail to even respond to basic online inquiries. It was also shown that poor customer service and lack of responsiveness by the companies was one of the major problems.

The conclusion was that these large organizations lack the awareness that the Internet generations are the future customers and all it takes to lose customers is to disappoint them once.

In other studies, a number of the usability issues for e-commerce sites have been explored. For example, Tilson et al. (16) discussed major issues such as ineffective communication with shoppers, ineffective feedback given to the users, and lack of easy navigation tools throughout the website. The authors suggested that a good e-commerce website design must provide features such as support for the users' control with proactive assistance, simplicity that doesn't compromise usability for function, obviousness to make objects and their controls visible and intuitive, feedback to create a feeling of progress and achievement, accessibility to all objects at all time, and flexibility that allows users to customize. For practitioners, the implications for the website is articulated as "make it simple." Adopting minimalistic approach to the design of the home page with eye-catching but appropriate graphics and categories that draw web surfers further into the website appears to be more effective. However, the website design should not result in information overload. Rather, the goal should be quick access to desired information (13).

Having an inviting website that is easy to navigate and provides necessary information is vital to any organization. People who go online have high expectations regardless of whether they are online for work or personal reasons. As a result, an organization, whether it is a business firm or an educational institution, needs to be very careful about the image that is projected through its website. In the academic world, universities use the Internet as a tool for recruiting students. These educational institutions know that parents and high school students use the Internet as an initial tool to shop around for the best college. The goal of these organizations should be to present their academic programs, services, and opportunities they can offer through their websites effectively. A major concern of these educational institutions should be whether their websites are projecting their schools effectively. To address this concern, the initial step is to identify the features and elements of an effective university website. As it was mentioned earlier, an effective website is evaluated by whether it meets the expectations of its target audience (15).

Very few articles have addressed the features and elements of colleges and universities' websites. No empirical study has been done to substantiate whether the suggested characteristics mentioned in these articles truly targeted the audience effectively. Thus, this study is designed to address this issue and provide insights about the target audience of colleges and universities. This research identifies the features of an inviting university website considered to be important by students. The focus of the paper is to determine the features that students are looking for in a university website when they surf the Web. The objective of this study is to help educational institutions, to achieve their goals by designing an attractive and effective website to win students.

The next section presents the development of the research question. Thereafter, designing a website and research methodology are presented. Finally, some recommendations are made to help educational institutions in the development and design of their websites.

RESEARCH QUESTION

Educational institutions were among the first organizations to develop websites (16). In earlier days, their objective was to simply have a presence on the Internet. Now, many colleges and universities attempt to include a strong content combined with information about the school and their educational resources (16). According to Lynch and Horton (6), there are two parts in planning a website: 1) determine the goals and resources needed to achieve them, and 2) specify the target audience, site details, technology needed, and an assessment of the results. Thus, first, developers need to determine what the organization wants to accomplish on the web. For example, does it want to increase student recruitment or provide a teaching

resource for lectures? Next, they must think about the audience and their requirements. A university website has two types of audiences (14). The primary audiences are academic and general staff and students, the secondary audience comes from general public and other educational institutions.

A well-designed website should accommodate a range of users' skills and interests. Ironically, those very users are the people least likely to be present and involved when the site is designed and built (7). There is ample evidence to suggest that more and more educational institutions are using the Internet as a tool to recruit students (15). Colleges and universities are trying to meet students' expectations by designing interesting and inviting websites to attract them. But a study done by a marketing firm focusing on student recruitment showed that colleges have failed to meet students' college search requirements; rather their websites are geared for the campus community. The study concluded that colleges have been passive sources of information and need to increase their communication with students. Steele (15) explained that currently, students must go through many pages of information to find what a school has to offer. He warns the universities that students will not be patient with schools' websites since the latest statistics show that each month, 17.3 million kids and teens use the Internet and spend only 8 seconds viewing a website to determine whether it contains what they are interested in.

Today's students are media savvy and have adapted to the current media-saturated environment by learning how to scan through massive amounts of information quickly and filter the ones they are searching for. In a marketing research done on behalf of various colleges and universities, 15,000 college-bound high school students were surveyed (15). The results showed a clear trend of increasing usage of the Internet among this segment of the population, which was not unexpected. However, the interesting conclusion was that the higher achieving students use the Internet more than their peers to search for a college. Over 75% of all students indicated that college sites either "greatly increased" or "somewhat increased" their interests. Thus, the focus of this study is on students, prospective and current college students. The research question in this study is: What are the expectations of students of a typical university website? To answer this question, it is necessary to truly understand the target audience's needs and meet them. Ultimately, colleges and universities can improve their websites and increase recruitment of prospective students. Therefore, the objective of this research project is to collect information from students on university website and analyze them to develop an understanding of target audience's perspective and help colleges and universities in their recruiting efforts.

DESIGNING A WEB SITE FOR USABILITY

As mentioned earlier, after the goal and the audience for an organization's website have been determined, the next step for developers is to implement the site (7). For example, designers consider the technical requirements and the tools needed for development. Building a website is not a one-time project with static content, rather an ongoing process which needs long-term editorial and technical management. Many organizations are trying to determine how viewers react to their websites and what attracts them. Experts believe that it is the content that brings users to a website (3). They suggest that a more valuable, dynamic, and updated content can attract more viewers. But, the difficulty is that many website designers have little knowledge of user interface design and usability engineering (7 and 2), therefore wasting users' time and causing unnecessary traffic on the Internet. In the following section, a summary of the elements for a good website design that have been identified in the literature will be reviewed. As a general rule, in designing a website the goal of developers should be to minimize the amount of information that must be kept in short-term memory of users due to the limitations in the human brain, a well-known principle by cognitive psychologists (4 and 5). A typical user will not spend time reading long passages of text onscreen; therefore, the long text needs to be divided into discrete chunks of information in a logical way using the hierarchy to structure relationship among chunks. This needs to be done carefully to make sure that content camouflage is avoided. This means that the message should not be buried deep in the

hierarchy of a site's structure, rather be two clicks away (15). Less critical information should be put at the bottom of the page, and a text-only option needs to be offered for people who are using a slow network connection or are impatient (12). Experts caution designers about the slow network connection of the majority of the users and suggest allowing a loading time of 7-10 seconds for a page (2, 7, 11, and 15).

As developers plan the structure of a site, they need to keep in mind that many people have difficulties as they browse through a website (navigational problem). They get lost within the structure. Research shows that as many as 58% of users will make two or more navigational errors while searching for information, and 66.8% stated that they have trouble finding the information they are looking for (1). The basic navigation links should be present consistently on every page in the same location. A logical and successful website organization matches the users' expectations and will allow them to make predictions about where to find information (2, 7, 12, and 15). Measures of flexibility need to be embedded into a site to let visitors use their past experience from familiar pages for unfamiliar ones. Misleading website structures could result in frustrated users.

One of the experts who has published many articles on designing a good website is Jakob Nielsen (8). He suggested several usability heuristics for measuring effective websites and warned developers about design pitfalls such as using bleeding-edge technology, scrolling text and graphics, complex URL, lack of navigation support, and outdated information on the websites. In a recent study, designing an effective academic library website was explored and a check list was developed based on the usability heuristics of Nielsen and other experts (12). The check list in that research is used as a guide for this present study.

RESEARCH METHODOLOGY AND DATA ANALYSIS

The check list that was developed by Raward (11) was selected (with some modification) as a basis for this study because it seemed to be the most relevant and was based on credible previous studies. A preliminary list of a website's elements was developed, which was composed of four major categories. This provided a benchmark for developing the final instrument. The first step in developing the preliminary instrument was to collect information from students about their expectations from a college website. A sample of students (n = 27), in their second and third year of college, were involved as subjects in this study. Students first read different articles about attributes and features of website design. After reviewing the literature, they were asked to propose features that they thought should be on a university website and weren't included in the reviewed literature. Several website attributes were submitted by students, which were added to the preliminary list of features. This procedure produced 77 website attributes and was used as the preliminary instrument for determining which features were important to students. A 5-point Likert scale was used to rate the importance of a website's attributes (5 = highly important and 1 = not important at all). The preliminary tool was administered to 27 students. They were asked to rate the website attributes individually. For each website attribute the average rating was computed, based on students' ratings. The data were analyzed and any website feature that was rated below 3 (average importance = 3) was interpreted as not being important to students and eliminated from the list. A total of 9 items were deleted from the preliminary instrument. The rest of the attributes (those rated average importance and above) consisted of 68 items that were important features of a university website from the students' perspective.

This final list of features constituted the final instrument for evaluating the university websites. Table 1 shows the final instrument that will be used in the future to evaluate university websites as the second part of this research project. The final instrument consisted of 68 website attributes that were organized under four categories: 1) Finding the information, 2) Understanding the information, 3) Supporting user tasks, and 4) Presenting the information. There were 13 subcategories among the 4 major categories.

A. FINDING THE INFORMATION	38. Presentation moves from simple to complex.
Content	39. Presentation is limited to appropriate and
1. University logo is on each page.	necessary topics.
2. Staff contact for the page 1s included.	40. Presentation is in correct sequence.
3. It is possible to get feedback and ask questions.	Style and Text
4. Phone, fax, email, and postal address are included on	41. Style is consistent throughout the site.
each page.	42. Paragraphs and sentences are used correctly.
5. It is possible to get help.	43. Present tense predominates.
6. Services are clearly stated.	44. Readability level is acceptable.
7. Purpose statement provided.	45. Text is simple, concise, and clear.
8. Acronyms are avoided where possible.	46. New terms are highlighted and defined when
9. Capitalization, spelling, and punctuation are correct.	first used.
Index	47. First occurrences of abbreviations are followed
10. Index is included.	by spelled out words.
11. Entries are in alphabetical order.	48. Level of technical terms is appropriate to the
12. Second and third level entries included.	audience.
Site Map	
13. Site map is included.	C. SUPPORTING USER TASKS
14. Links to site map are correct.	Interactive Tasks
Headings (Choose one page at random)	49. Reply forms are shorter than one page.
15. Headings within page are labeled correctly.	50. Forms are easy to follow.
16 Headings are brief and informative	51 Frequently Asked Questions (FAQ) is included
17 Headings stand out on the page	52. FAO is provided at a task level
18 At least one heading exist on every page	53 Help screens are included at a task level
19. Headings accurately reflect task or information	55. Holp sereens are mended at a task level.
Search (Choose a topic for your search)	D PRESENTING THE INFORMATION
20 A search tool is included on the site	Display and Download Speed
20. The topic was easy to find	54. Home page displays within no more than one
21. The topic was easy to find. 22. A user can find an answer within 10 seconds	second
22. A user can find an answer within 10 seconds.	55. There is advance notice before downloading
23. The date of the last undeted is included	Large files
24. The last updated data is on every page	56 The pages display on an average sized screen
24. The last updated date is on every page.	50. The pages usplay on different browsers
25. The new information is indicated on the page.	Diaghility A pages
20. There is what sinew page on the site.	58. The page provides a text equivalent for every
27. Links to outside are reliable	so. The page provides a text equivalent for every
28. Links to outside are remaine.	1011-lext element.
29. Resources are current.	59. The page meets at least Bobby Priority 1
30. Links to other resources are suitable.	Standards for accessionity.
	Navigation
B. UNDERSTANDING THE INFORMATION	60. Clear Navigation tools are included.
Organization of the Site	61. There is Navigation back to nome page.
31. Headings are user friendly.	62. There is Navigation up and down within a page.
32. Headings are intuitive.	Format
33. Heading levels are appropriate to level of details.	63. Format is consistent throughout the site.
34. Headings are task based.	64. Figures and tables are aligned correctly.
35. Structure of lists is consistent.	65. White space is used effectively.
36. Each paragraph has main idea.	66. Information is presented in readable blocks.
37. Presentation moves from general to specific.	67. Sentences are complete within web screen.
	68. Pages are printable with an average size paper.

Table 2 represents the average ratings of the subcategories within the major categories in the questionnaire. As shown in the table, the highest rated subcategories are Headings, Search, Organization of the site, and the Format.

8 8 8	
Contents	4.3
Index	4
Site Map	3
Headings	5
Search	5
Currency & Accuracy of Information	4
Organization of site	5
Style & Text	4.3
Interactive Tasks	3
Download Speed	4.4
Disability Access	3
Navigation	4
Format	5

 Table 2. Average Ratings of Subcategories

The data analysis revealed that there are several attributes rated highest by students. These attributes are shown in Table 3.

Table 3. Highest rated website attributes

Website element	Rating
University logo is on each page	4.7
It is possible to get help	5
Capitalization, spelling, and punctuation are correct	4.8
Heading within page are labeled	4.7
Headings are brief and informative	4.7
At least one heading exist on every page	5
Headings accurately reflect task or information	5
A search tool is included on the site	4.8
The topic was easy to find	4.9
Headings are user friendly	5
Each paragraph has main idea	4.9
Paragraphs and sentences are used correctly	4.6
Home page displays within no more than one second	4.8
Figures and tables are aligned correctly	4.6
Information is presented in readable blocks	5
Sentences are complete within web screen	4.7
Pages are printable with an average size paper	4.8

In designing a university website, developers need to take these website features into consideration since they seem to be very important to students. Among these highest attributes, are a few that are rated very high (perfect rating of 5): "It is possible to get help," "At least one heading exist on every page," Headings accurately reflect task or information," "Headings are user-friendly," and "Information is presented in readable blocks." It is interesting to note that four out of six highest rated features are under the first category, "Finding the information." Overall, this category was rated higher than others. This supports the fact that was pointed out in the literature that students don't want to waste any more time than necessary on a website and expect to find information they are looking for very quickly.

Table 4. Lowest rated website attributes	
Website element	Rating
The date of the last updated is included	2.7
The last updated date is on every page	2.3
The new information is indicated	2.9

Furthermore, "search tool is included," "The topic was easy to find," "Each paragraph has main idea," "Home page displays within no more than one second," and "Pages are printable with an average size paper" are website attributes allowing a user to find information fast and not get lost in the structure of a site, were among high rated website features also (4.8, 4.9, 4.9, 4.9, 4.8, and 4.8 respectively).

Table 4 shows the four website features rated lowest in importance. Interestingly, among the low rated attributes were related to the updating a website page and the new information.

CONCLUSION

To understand what website attributes are important from the students' perspectives, the developers should involve this segment of the population in the process of developing university websites. Students are one of the primary audiences of higher education institutions websites. Regrettably, in reality, at the time of website development the very audiences for which the site is being developed are absent. The designers develop the site according to their perceptions of what the target audiences' expectations.

It is suggested (1, 2, 6, and 8, 13) that a set of common guidelines can be achieved in which there would be consistent design and navigation facilities to improve the users' experience with the websites in a way that will not suppress creativity and distinctiveness. This would ensure a pleasant experience, easy access to information, and a time-saving experience for the users. Also, this may minimize the time and effort to access information on similarly laid out websites. Ultimately, these would improve the quality of university websites and bring greater benefits to the higher education institutions.

In addition, to assess the success of a website, organizations can take measures to evaluate their presence on the web. Web server software can provide information about website's visitors. Quantitative data can be obtained from the server log and analyzed to evaluate the success of a website. These logs can reveal the most popular pages visited, the browsers people used, and the geographic regions the visitors are located (7). Finally, this study attempted to reveal the actual expectations of students from educational institutions' websites so colleges and universities can meet the target audiences' needs and improve their online recruitment.

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