Few developments in recent history have experienced as rapid an evolution as the Internet. It has been suggested that the Internet will have a societal impact similar to that of electricity, but is developing far more rapidly (Brown 2000). Others have argued that the Internet is “the fastest growing communications medium in history” (Bell and Tang 1998, p. 1). To put the magnitude of the growth of the Internet into perspective, Bell and Tang (1998) cite a senior official of Internet giant Netscape, who noted that in the quest to reach 50 million users, it took radio 38 years, television 13 years, but just five years for the Internet. Yet, despite the rapid growth of this medium, surprisingly little is known about the perceptions and habits of Internet users (Maignan and Lukas 1997).

Research addressing use of the Internet, and particularly the most widely used application known as the World Wide Web (Sloane 1997), tends to revolve around business and commercial applications (e.g., Lu and Yeung 1998; White and Manning 1998). Indeed, little is known about the use of the Web in higher education, particularly by college-bound high school students. This is a bit surprising given that high school students’ use and access to the Internet is increasing (Gladeaux and Swail 1999) and the vast majority use the Internet to some degree in their college search process (Abrahamson 2000; Strauss 1998).

Studies that have addressed the use of the Web in higher education tend to focus on admissions, specifically on increased efficiency in processing student data (Frazier 2000; Kvavik and Handberg 2000), providing students with a greater level of information and communication (Hartman 1997; Hossler 1998), and understanding the characteristics of Web users (Perry, Perry, and Hosack-Curlin 1998; Poock forthcoming). Clearly lacking are empirical data to assist college and university admissions staff in developing effective Web pages based on the wants and needs of prospective students.

The purpose of this study, therefore, is to examine how college-bound high school students perceive college and university Web pages. Specifically, this study addresses three research questions: What elements of a college/university Web page do prospective students find engaging? What elements of a college/university Web page inhibit browsing by prospective students? What elements of a college/university Web page increase the likelihood of prospects submitting applications?

Background

Although the Web continues to evolve rapidly, it has received surprisingly little attention from academic researchers. In 1997, Day suggested that the scant amount of empirical research pertaining to the Internet is due to its newness. However, Day also suggested that another key reason for this scarcity is the nature of those who are involved in the development of this technology. That is, those who produce college Web sites tend to be on the cutting edge of the Web and seldom, if ever, take the time and effort to contemplate the implications of their work. Consequently, she argued that this leaves descriptions of the implications and effectiveness of the Internet to two schools of thought: the anecdotal (e.g., “I use loads of graphics and it works well”) or prescriptive (e.g., “don’t use more than three icons per page”), both of which are “equally unhelpful” (1997, p. 1).

Abels, White and Hahn (1997) also expressed similar thoughts. These authors suggested that the literature on the effectiveness of Web pages was limited to the personal experiences of designers, adapted from the established principles of print media, or...
based on the more specific computer interface design. Head (1997) also acknowledged this tendency to apply what has been learned from more established media. However, he noted that the true challenge is “figuring out what applies, what does not, and what requires new solutions” (p. 162).

Research addressing the challenge that Head notes above tends to focus on business and commercial applications. For example, Palmer and Griffith (1998) randomly selected 250 Web sites among Fortune 500 companies and studied the impact of the Web on organizations’ strategic marketing. Lu and Yeung (1998) proposed a comprehensive framework for developing effective commercial Web applications. Day (1997) offered a model for monitoring effective commercial Web sites based upon a traditional three-pronged process of communication: clear purpose, logical structure, and relevant conclusion. Meanwhile, White and Manning (1998) studied the Web sites of online food vendors, seeking a correlation between Web characteristics and increased sales.

While the impact of the Web on business has clearly been addressed in the literature, such attention is distinctly lacking when it comes to colleges and universities. Perhaps one reason for this disparity is the amorphous mission of higher education vis-à-vis business. That is, “for businesses, the objectives of having a Web site are fairly transparent; in higher education, however, a heterogeneous audience dictates that these goals are manifold and can become confused” (Middleton, McConnell, and Davidson 1999, p. 219). Indeed, Middleton, McConnell, and Davidson suggest that Web sites are critical for colleges and universities for three distinct reasons: communication, access to tools (i.e., databases, indices, directories, etc.), and—perhaps most importantly—promotion and marketing of the institution.

The importance of the use of the Internet for promotion and marketing by colleges and universities becomes readily apparent when examining the technology habits of preteens and teens who will be of college-going age in the near future. Citing a study by a private marketing firm, Stoner (1998) indicated that 4.5 million preteens and teens would be using the Web by 2002. Indeed, high school students are already using the Web in the college selection process. Strauss (1998) studied the use of the Web in the college selection process and found that the majority of respondents had access to—and utilized—the Web in some capacity during their college search process. While Strauss found that the Web is being used in the college choice process, he also noted that current students continue to rely heavily on more traditional forms of information.

Evidence suggests that high school students will rely more and more on the Web for information about colleges and universities (Abrahamson 2000). As a result, colleges and universities need to adapt their recruitment strategies to be consistent with the opportunities of the Internet. Perhaps stated more succinctly, college and university Web pages should be designed to meet the individual needs of prospective students (Williams 2000).

**Characteristics of Effective Web Sites**

While there is a clear need for colleges and universities to understand how prospective students use the Web in the selection process, little empirical data exist in this area. Indeed, as Middleton, McConnell and Davidson suggest, “efforts to date have been built largely on enthusiasm and ‘best guesses’” (1999, p. 219). As noted above, much of the research on the use of the Web for marketing purposes has focused on the business sector. However, there is clearly a benefit to colleges and universities in understanding the fundamentals of an effective promotional Web design.

Table 1 summarizes the findings from earlier research on the effectiveness of Web sites. Although the information is self-explanatory, there are four points that warrant attention. First, this table clearly indicates the importance of content. Given that the Web site is a form of communication, this is understandable. Second, the importance associated with how this content is organized is well documented. Clearly, access to the content is for naught if a user cannot easily retrieve the information. Third, and somewhat expected given the business/marketing focus of the research, the focus on the needs of the target audience received much support. Undoubtedly, the choice of content and its organization is dependent on the desired user(s).

<table>
<thead>
<tr>
<th>Table 1: Summary of Findings from Earlier Research on Characteristics of Effective Web Sites</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Characteristic</strong></td>
</tr>
<tr>
<td><strong>Content</strong></td>
</tr>
<tr>
<td><strong>Enjoyable Experience</strong></td>
</tr>
<tr>
<td><strong>Organization of Site</strong></td>
</tr>
<tr>
<td><strong>Limited Impact of Graphics</strong></td>
</tr>
<tr>
<td><strong>Uniqueness of Site</strong></td>
</tr>
<tr>
<td><strong>Focus on Target Audience</strong></td>
</tr>
<tr>
<td><strong>Speed of Connection</strong></td>
</tr>
</tbody>
</table>

Finally, and somewhat surprising, is that graphics are apparently not very important when compared to other features of the Web site. Moreover, “glitz” over substance may actually detract from the usefulness of a Web site.

Remarkably, how to best utilize the Web in higher education remains somewhat vexing. Indeed, “the question of how best to exploit the www in higher education remains problematic. It is becoming accepted that it is somehow important, but defining this importance and what to do about it is not well understood”
(Middleton, McConnell and Davidson 1999, p. 219). Understanding who develops the Web pages on college campuses best supports this point. Given the importance of the Web, one would expect a great deal of research into the Web habits of college-bound high school students, followed by the development of the actual Web sites by professionals who incorporate the research findings as part of an overall marketing strategy. Unfortunately, those who develop these Web pages tend to be self-taught employees (Kiernan 1999) or students who are given little supervision (Stoner 1998).

For colleges and universities to fully exploit the promotional and marketing aspects of the Web, the application of this technology must be based on empirical data from the target audience. This study addresses this very issue.

**Methodology**

Participants in this study were college-bound junior and senior students from four high schools in North Carolina and Michigan (three public and one private). A total of 35 students participated (27 male, 28 female) representing various racial groups (73 percent White, 21 percent African American, 4 percent Latino, and 2 percent Asian). Convenience samples were used, as participants were members of student groups who participated in exchange for a modest financial donation to their respective organizations. All data were collected in spring 2000.

This study used both quantitative and qualitative methodologies. A survey addressing students’ opinions of Web sites utilized a five-point Likert scale and followed a format suggested by Fink (1995) and Fowler (1995). Participants also had the opportunity to list the information they expected to find when visiting a college/university home page.

Data for this study were also gathered through focus groups using a modification of a process offered by Krueger (1994). These focus groups generally occurred in high school computer labs where the students had immediate access to the Internet. Each focus group consisted of three elements. First, students were asked open-ended questions about their Web habits and opinions regarding college/university home pages. Items addressed focused on content, distinctiveness of sites, ease of navigation, focus on target audience, impact of graphics, site architecture, and speed of connection/download.

Second, students were collectively asked to view specific university home pages and offer their opinions regarding content, design, etc. The participants were led through various links, such as admissions criteria, how to apply, and program offerings. Participants were then re-asked their opinion on content, design, etc.

Third, students were given Web addresses for specific universities and asked to find specific information. For example, one student was asked to find the cost of in-state tuition at North Carolina State University, while another was asked to see if the University of North Carolina at Wilmington had a women’s varsity tennis team. These tasks were timed in a non-competitive format, and students were immediately debriefed.

**Findings**

As noted earlier in Table 1, the findings in the literature can be grouped into eight distinct categories: content, site architecture, navigation, connection speed, enjoyable experience, target audience, distinctiveness of site, and graphics. The following findings parallel that format.

**CONTENT**

Content is clearly the most important element of a Web page, with 97 percent of the participants rating it as important or very important (Table 2). Content of Web pages was clustered into two different categories: admission content and environmental content. Admission content consists of elements such as admissions criteria, application process, cost, financial aid, etc. Environmental content consists of elements such as the physical appearance of campus, what the students look like, clubs/activities that are available, etc.

When respondents were asked to indicate what they expected to find on a college or university Web page, elements related to both admission content and environmental content were expected (see Table 3 on the following page). For example, when examining items related to admission content, 24 percent of the students expected information on course offerings, 22 percent expected information on admissions, and 20 percent expected details on available majors and minors. Similar examples can be found for environmental content, where 38 percent of the students expected information on athletics, 24 percent expected information on extracurricular activities, and 20 percent expected information on the campus social life.

Despite the clear patterns that emerged within both admission and environmental content areas, there was also a large number of elements that had surprisingly low frequency. That is, when asked what they expected in a college Web site, respondents identified 60 pieces of information, many of which were cited by only one or two respondents. Thus, there appears to be a number of factors that are expected by relatively few students.

**Table 2: The Importance of Various College/University Web Characteristics**

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Content</th>
<th>Organization/architecture</th>
<th>Friendliness</th>
<th>Graphics (major emphasis)</th>
<th>Graphics (minor emphasis)</th>
<th>Distinctiveness</th>
<th>Organization by target audience (applicants, alumni, etc.)</th>
<th>Organization by functional topic (admissions, athletics, etc.)</th>
<th>Download speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Importance [n (%)]</td>
<td>VU</td>
<td>Un</td>
<td>NS</td>
<td>Im</td>
<td>VI</td>
<td></td>
<td>VU</td>
<td></td>
<td>VU</td>
</tr>
<tr>
<td></td>
<td>1 (2)</td>
<td>1 (2)</td>
<td>—</td>
<td>12 (22)</td>
<td>15 (27)</td>
<td></td>
<td>1 (2)</td>
<td></td>
<td>1 (2)</td>
</tr>
<tr>
<td>Content</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Organization/architecture</td>
<td>1 (2)</td>
<td>1 (2)</td>
<td>1 (2)</td>
<td>23 (42)</td>
<td>29 (53)</td>
<td></td>
<td>1 (2)</td>
<td></td>
<td>25 (46)</td>
</tr>
<tr>
<td>Friendliness</td>
<td>1 (2)</td>
<td>13 (24)</td>
<td>1 (2)</td>
<td>25 (46)</td>
<td>15 (27)</td>
<td></td>
<td>1 (2)</td>
<td></td>
<td>18 (33)</td>
</tr>
<tr>
<td>Graphics (major emphasis)</td>
<td>1 (2)</td>
<td>18 (33)</td>
<td>9 (16)</td>
<td>21 (38)</td>
<td>6 (11)</td>
<td></td>
<td>1 (2)</td>
<td></td>
<td>18 (33)</td>
</tr>
<tr>
<td>Graphics (minor emphasis)</td>
<td>1 (2)</td>
<td>13 (24)</td>
<td>18 (33)</td>
<td>18 (33)</td>
<td>4 (7)</td>
<td></td>
<td></td>
<td></td>
<td>8 (15)</td>
</tr>
<tr>
<td>Distinctiveness</td>
<td>1 (2)</td>
<td>18 (33)</td>
<td>8 (15)</td>
<td>21 (38)</td>
<td>6 (11)</td>
<td></td>
<td></td>
<td></td>
<td>32 (58)</td>
</tr>
<tr>
<td>Organization by target audience</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>VU</td>
<td></td>
<td>10 (20)</td>
</tr>
<tr>
<td>(applicants, alumni, etc.)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organization by functional topic</td>
<td>1 (2)</td>
<td>5 (9)</td>
<td>3 (6)</td>
<td>25 (46)</td>
<td>21 (38)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(admissions, athletics, etc.)</td>
<td></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Download speed</td>
<td>1 (2)</td>
<td>3 (6)</td>
<td>3 (6)</td>
<td>19 (35)</td>
<td>29 (53)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1 VU=very unimportant; Un=unimportant; NS=not sure; Im=important; VI=very important.
SITE ARCHITECTURE/ORGANIZATION

The way a Web site is organized is almost as important as the content that is provided. That is, 95 percent of the survey respondents rated site architecture as important or very important (see Table 2). Indeed, the most effective sites were viewed as “visually intuitive.” The information on these sites was readily identifiable, with little interpretation required by the students. Focus group results suggest that sites with highly identifiable links in easy to find formats were well received. Sites with links in no organized manner (often viewed as “overly busy” or “artsy” by students) and graphics that were both dominant and the focal point of the Web page (and thus making links the secondary focal point) were poorly received.

Equally important is that Web pages organized by target groups were more effective than those organized by function topic. Links grouped by target group (e.g., “for prospective students”) made the sites much easier to use than pages with links grouped by function (e.g., “admissions,” “academics,” “research,” etc.). Although the survey results indicate that function is of more value than target group, the students reversed their views once they saw the differences on actual Web pages.

Finally, terminology that is familiar to the students greatly enhanced the organization of the site. It was easier for students to find needed information if they knew what the links meant. Most apparent were the various nomenclatures for academic majors. Sites that used “academic programs,” “departments,” and “schools and colleges” tended to be confusing to the students since this was unfamiliar language. Once it was explained that these terms generally meant “academic major,” the organization of the site became much clearer.

EASE OF NAVIGATION

Closely related to site architecture/organization is ease of navigation. That is, despite how well a site is organized, how easy is it to maneuver through the Web site? During the timed searches that occurred during the focus groups, the average time to locate the specified information was 3 minutes and 45 seconds, with a range of 15 seconds to 8 minutes (the maximum time allowed). Indeed, three students could not locate the information within the eight-minute time limit, and many others took well over five minutes.

Four findings were related to ease of navigation. First, there was a surprising lack of accommodation for slow modems. The majority of students had slow speed access from their computers at home (67 percent) and only about half had high speed access from their high schools. This contrasted greatly with many college/university Web pages that required high speed access to quickly download the graphics embedded on the Web pages.

Second, students voiced frustration when they needed to drill deeper than three levels to obtain the information. Fewer levels with more information per level appeared far more effective. Additionally, rollovers (the information obtained in that link appears when the cursor touches the link) greatly enhanced the time to find information. This allowed students to find the requested information without blindly entering numerous links.

Third, the “search” feature was popular, especially for students with a greater familiarity with the Internet. However, this
rarely produced useful information. For example, when searching for a major in communication technology, one student found numerous Web pages by a technology class, the Office of Communications (an administrative office), and various technology clubs, but no information on whether or not that major existed at the university.

Finally, and perhaps most importantly, students appreciated easy and intuitive access to the application. Conversely, students expressed a high level of frustration when they could not find either an online application or an application to download and print. Indeed, applications that were buried several levels into the home page, or that took a long time to access with a slow modem, greatly increased the likelihood that students would be frustrated and terminate their search.

SPEED OF CONNECTIONS/DOWNLOAD
Participants were keenly sensitive to the speed with which they could access Web pages or download information, as 88 percent rated this as important or very important. When asked what would cause them to terminate their connection with a Web page, most participants indicated that the primary reasons would be slow connection/download speed. The participants were aware that waiting was an inherent element of being online. They indicated that sites where browsers had the option of bypassing elaborate (slow-loading) graphics or viewing the pages in text-only format, made the Web site more user-friendly, increased the effectiveness of the site, and reduced the likelihood of terminating the connection before the information was retrieved.

FOCUS ON TARGET AUDIENCE
More than three-fourths of the participants (78 percent) felt that it was important or very important for a Web site to focus on their needs. Perhaps this is best expressed in the words of one participant who, when viewing a university home page that prominently displayed the picture of its retiring president, stated, “Why is there a picture of an old white guy?” Participants were generally unaware of other constituencies of a university (alumni, faculty, donors, etc.), and therefore viewed any information not directly specific to them as superfluous. However, Web pages that students felt went too far in appealing to them—generally characterized by numerous images, extravagant designs, vivid colors, quickly changing images—were both difficult to use and appeared unprofessional. The vast majority of the participants felt that an unprofessional Web page indicated a lower quality institution.

DISTINCTIVENESS OF SITE
This was not a critical factor for students, with only 49 percent of the participants rating it either important or very important. In general, the participants felt that few Web pages appeared similar, thus making distinctiveness an inherent attribute. Surprisingly, however, participants’ perception of distinctiveness was generally limited to physical appearance and ignored other distinctive elements such as unique content, site architecture, etc.

IMPORTANCE OF GRAPHICS
Graphic images, or pictures, used for their own sake rather than to enhance the organization of content were not well received. Less than half of the students (49 percent) rated this element as important or very important. Indeed, two key themes emerged with regard to graphics. First, pictures worked best to communicate environmental content. Participants felt strongly that pictures should assist the prospective student in determining what the campus looks like, what the students are like, what student clubs and activities are available, etc. That is, they should help the prospective student answer the question, “Will I fit in?” Pictures that didn’t address this point were viewed as gratuitous at best or detrimental at worst by creating unnecessary downloads and wasted time.

Second, participants felt that when Web pages address environmental content, a general mix of 70 percent text and 30 percent graphics was optimal. While the participants valued the information in text, they also stressed that the graphics provided information unavailable in text and were willing to put up with some slow download speed to access this information.

Implications and Discussion
The aforementioned findings support a number of implications for the strategic development and design of college and university Web pages. These implications are grouped by research question (RQ).

RQ 1: What elements of a college/university Web page do prospective students find engaging?
An overriding conclusion is that high school students tend to be seasoned Web explorers and the more effective Web sites are designed around a strategic plan. Overall, Web sites should have an organization (or site architecture) that is logical, easy to follow, and has a focus on the prospective student in mind. Web sites should be visually intuitive, making the architecture of the site instantly understandable.

Clearly, colleges and universities have myriad constituent groups, including alumni, current students and faculty, donors, and, of course, prospective students. The most efficient and effective method for providing information to prospective students is organizing the home page according to these constituent groups or target audiences. That is, home pages that have links grouped by “prospective students,” “current students,” etc., tend to greatly enhance the architecture as compared to groupings by function category (“admissions,” “athletics,” “administration,” etc.).

Grouping the links on the home page by target groups also allows for the appropriate use of audience-specific terminology. That is, high school students may not be familiar with college or university terminology. Links grouped by target audience allow the Web designers to use terminology with which the high school student is more familiar (e.g., academic major) rather than “program,” “department,” or “college or school.” Simply using the term “major” and ensuring the architecture lists majors alphabetically—thus avoiding any grouping by department or school—greatly enhances prospective students’ ability to understand the architecture of the site.
An equally compelling implication relating to this is the use of graphics. As with the overall purpose of the Web site, graphics should be used strategically, not casually. Pictures enhance environmental content but are often detrimental to admission content. Factual information such as admissions criteria, costs, and application deadline do not require pictures. However, pictures and other graphics best help prospective students know if they fit in. A practical rule-of-thumb is 70 percent text/30 percent graphics when addressing environmental content.

RQ 2: What elements of a college/university Web page inhibit browsing by prospective students?

- **Slow Downloads.** There are factors that can actually inhibit browsing by prospective students. The greatest villain here is slow download and connection speed and the amount of time associated with that process. A simple solution is to design Web pages so as to accommodate various modem speeds, thus giving users the option to use text-only screens, bypass elaborate graphics, etc. In short, people who develop Web pages should expect low speed connections but also accommodate higher speed access.

- **Elaborate Graphics and Pictures.** Related to the above is the overuse of graphics and pictures, and the delay in accessing them. Participants understood that waiting for graphics and pictures is an inherent part of using the Web. However, students tend to get frustrated quickly when elaborate graphics cause an inordinate amount of wait time, or the site in general does not accommodate slower modems and results in a great deal of short-term waiting.

- **Not Providing Desired Content.** While the time delay associated with slow modems and elaborate graphics and pictures can be annoying, it pales in comparison to the frustration associated with failing to find desired information. Indeed, the highest level of frustration occurred when students searched for information without being able to locate it.

- **Ineffective Search Functions.** Students who are more experienced computer users often use the search function as a way to speed-up their browsing. Unfortunately, ineffective search functions not only inhibit acquiring desired information, but also can increase the level of frustration, which leads to a premature termination of the connection.

- **Excessive Levels of Information.** Many Web pages have numerous levels, oftentimes requiring students to go through more than five links. Once a student passes three levels, the feeling of searching is replaced with the feeling of hunting for an unknown ending point. Fewer levels, with more information per level, are far more effective. Related to this is requiring students to use the “back” button to return to major junctions on the Web site. Taking the time to hunt through several levels, only to spend an equal amount of time retracing the same steps, requires unnecessary time and could easily be avoided by a link that connects directly to a major junction.

RQ 3: What elements of a college/university Web page increase the likelihood of prospects submitting applications?

As colleges and universities seek to increase the likelihood that students browsing the Web will apply for admission, there are clear steps that can be taken to increase the likelihood of achieving that desired end. These include the following:

- First, make the application easy to find and access. Locating the application (either to download or to apply online) is difficult on some institutions’ home pages. One university requires prospective students to drill down seven levels, and even then the directions are unclear. The ability to access the application should be either on the home page, or within the first link under “for prospective students.” In brief, finding the application should be the easiest part of the application process.

- Second, design prospect portions of Web sites with a strategic purpose. The Web site is a tool for prospective students, and the burden falls upon the colleges and universities to develop an effective and useful tool. A strategic purpose includes a visually intuitive site architecture, limiting graphics to the enhancement of environmental content, accommodating slower modem speeds, and perhaps most importantly, providing clear and easy access to admission content.

- Third, include information that is tailored to individual applicants, even though it may only be important to a few people. This may, at first glance, appear counterintuitive, and it is problematic when using print materials where space is limited and postal rates are costly. However, the Internet offers institutions the unique opportunity to address the needs and interests of individual applicants, as space and mailing costs are no longer barriers. For example, few applicants may be interested in kayaking, but including information on local recreational activities is relatively inexpensive, consumes fairly little time, and yet may have a large impact on applicants who highly value outdoor activities. This message is perhaps best expressed by one admissions professional who argues that college and university Web sites “that can serve each visitor individually will be the key to establishing and maintaining relationships with students in the digital realm” (Williams 2000, p. 18).

- Fourth, spend the resources necessary to engage in market research. These findings can apply to all Web sites, but market research will identify other factors unique to individual colleges or universities. Results of market research should be woven into the fabric of an overall recruitment strategy and not simply developed in a vacuum.

**Limitations**

While the findings and implications may be helpful to individuals who develop college and university Web pages, there are inherent limitations in this study that should be noted. First, this study used self-selected convenience samples. Therefore, generalizability is limited. Second, this study used a relatively small sample size. While the size of the sample is appropriate for the qualitative nature of the focus groups, it prohibited the application of all but descriptive statistics for the quantitative survey. Finally, this study examined student opinion only. This results in greater insight into effective Web development, but does not offer specific causal connections.
Recommendations for Future Research
This study was exploratory in nature and took a first step into an area lacking empirical research. However, there are other areas of research that deserve attention. Most readily apparent is the importance of replicating this study with students from other parts of the country. Greater geographic representation may yield different results. Similarly, developing a comprehensive survey based on the findings of this study would enable researchers to utilize a greater number of participants. Additionally, the role of parents in the college search process is well documented, but it would be useful to understand parents’ use of the Internet, specifically in their children’s college selection process. Finally, it would be useful to understand the impact of information that is not in the control of college and university officials but is available to prospective students. This includes Web sites of official and unofficial student organizations, individual Web pages from students and faculty, and the anticipated negative consequences of applicants’ e-mails sent to faculty or department chairs that are not returned.

Conclusion
The Internet is becoming increasingly pervasive in society, but research on its impact has lagged behind its growth. Research that does exist tends to focus on business and other commercial enterprises, but little attention has been directed toward colleges and universities. This is a bit surprising, given that these sites are often a major source of information for college-bound high school students.

As the Internet continues to grow, and colleges and universities increasingly rely on it for disseminating information, communicating with prospective students, and as a means for applying, there is a corresponding need to understand the impact of this technology and how colleges and universities can better utilize this tool in their recruitment and marketing efforts. This study took an initial step towards that end.

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