

# State of Departmental Web Sites Today

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## Abstract

This paper examines a set of information systems departmental websites. The use of photographs and the inclusion of content elements is compiled and compared across 50 different academic department pages. Discussion is provided on similarities and differences across departments and how this information can be useful for improving existing departmental pages.

**Keywords:** web page design, student recruiting, images, marketing

### 1. INTRODUCTION

Ask any college recruiter or admissions officer how their job has changed over the last twenty years and they will undoubtedly discuss the impact the internet has had on traditional recruiting. In 1998, 78% of students indicated their use of the web in gathering information while choosing college, with 80% of those students gathering information on majors and programs offered (Guernsey, 1998). Universities have worked to improve their web based recruiting and as a result, university web pages are becoming more and more sophisticated to meet the needs of an increasingly technology savvy field of prospective students. In the field of computer and information systems, departments have embraced new technology to reach a shrinking field of qualified candidates. However, very little research has been completed on how websites are designed for IS departments and what students expect to find on departmental websites.

### 2. IMPORTANCE OF DEPARTMENTAL WEBSITES

Although many universities were slow to make the marketing jump to the web, recruiters are beginning to employ many techniques beyond the online viewbook to attract students (Powell, 2009). Large

amounts of time and effort are being spent to improve the online branding of institutions of higher learning (Bennet & Ali-Choudhury, 2009). The importance of this lies in the fact that many students' first contact with a university will be through the web site. The same is true of the academic departments that make up the college or university.

In departments teaching in the technology field, design and maintenance of the departmental website can have a profound effect on a department's ability to recruit and enroll students. As departments see falling enrollment in IT programs, competition for these students becomes fierce. A poorly designed web site or a web site that does not match up against competing programs could handicap a department in its recruiting efforts.

### 3. ASPECTS OF WEB DESIGN

There are many opinions on what constitutes good design for a web site. There are many different models on web design that generally fall in two categories: high-level and low level guidelines (Preece, et al, 1996) High level models focus on general guidelines like knowing your audience and low level models are very specific on fonts, colors, etc. In addition to performance and content, the aesthetic nature of a page also affects the perception of visitors (Schmidt, Liu, & Sridhara, 2009).

Research by Yu-Hui Tao (2007) shows that there were many gaps in the application of both types of guidelines by information professionals. Many IT professionals focus on the technology solution at the expense of the usability or human factor of the interface. Because this exists in industry, one can assume that similar problems may exist in academia. Faculty and staff with information systems backgrounds that are responsible for planning and implementing departmental web sites may also be lacking in these design skills.

Another aspect of design that sometimes is overlooked is the use of photographs in web design. Studies have provided varying opinions on the effectiveness of certain types of photography, but it has been established that the inclusion of photographs is important to web visitors (Vilnai-Yavetz & Tifferet, 2009). Generally speaking, two types of images are found on university websites; images of people and images of buildings (Poock & Lefond, 2001). A third type of image, a technology related image such as a keyboard or computer chip, are also present on departmental sites, as this study will show. Researchers differ on the effectiveness and impact of people versus buildings in images. Vilnai-Yavetz and Tifferet found that images of buildings had a stronger influence on viewers and suggest that the inclusion of these images made the "product" more tangible. Other studies have found evidence to support the opposite view and discovered that there were some differences in preferences across cultural lines (Cyr et al, 2009).

Consistency in design has been shown to be an important aspect in web design. Consistency in physical and aesthetical aspects of a page are as important as consistency in text and the information provided (Ozok & Salvendy, 2000, 2004). Guidelines developed from this research suggest designers should know their users and their knowledge level and should provide content consistent with those factors.

#### **4. ADDITIONAL TECHNOLOGY**

Increasingly, schools are turning to newer technologies to recruit students. Blogs, social networking sites, and video go beyond the traditional website (Joly, 2006; Von Foregger, 2008; Roach, 2006; Feeny, 2009).

However, Wang and Fessenmeir (2006) warn that a successful web marketing strategy should not be an inventory list of technologies applied. Content, customer relationships, and promotion of web site are integral parts of the puzzle. To this idea, the investigation in to computer and information systems websites was undertaken to examine where CIS departments are today in their use of their departmental websites.

#### **5. RESEARCH QUESTION**

In order to gauge how computer and information systems departments are using the web to communicate with students, a study was undertaken to analyze the content available on existing websites and determine what similarities and differences exists between programs. This information can assist departments in gauging how they compare with departments in universities and suggest ways in which they can innovate.

#### **6. METHODOLOGY**

50 colleges and universities offering four year degrees in computer information system, or a closely related field, were chosen from the Association for Information Technology Professionals chapter list. Members of the organization include large and small universities, as well as public and private institutions. Of the 50 institutions selected, 41 were public institutions and 9 were private. The mean size of the institutions studied was 11,461 with a high degree of variation ( $SD=9084.48$ ). Institutions selected were all located in the United States.

An informal survey of institutions resulted in a list of elements seen across many websites. These elements were used to compare the main web pages of the selected institutions. Each department page was analyzed for the presence of different elements and the type of images included. These images were coded as images of people, buildings, or technology. In addition to this information, the gender of people in the images were also recorded. In addition to these elements, other technologies such as Facebook or Twitter were recorded. Each page was analyzed for the existence or absence of each item and was recorded in Excel for further analysis.

The elements studied include:

- Consistency of design with university or college
- Degree information
- Student activities or organizations
- Alumni information
- Departmental news or calendar
- Professional or industry news
- Information for prospective students
- Faculty / Staff information
- Research information
- International or study abroad opportunities
- Financial aid or scholarship information
- Accreditation information
- Career or internship information
- Number of images
- Type of images
- If people image, gender of subjects
- Number of links on main page
- Inclusion of other multimedia content or use of social networking tools such as Facebook, Twitter, and Linked-In.

## 7. FINDINGS

The results of the analysis revealed many similarities and many differences between the web pages studied. The chart in the appendix shows the level of consistency among departments on the elements studied.

These results demonstrate there are three elements shared across more than 70% of all websites studied. Consistency with college or university design, information on degree programs and faculty information were found consistently on departmental websites, whereas information on international and study abroad programs, industry news, and research were less likely to appear on a website. Only eight of the sites studied included other technologies such as Facebook or video.

When examining information gathered on the use of images, there were some interesting trends. The average number of images on websites examined was relatively low at 1.69 (SD=1.65). Of the images included on websites, 34 showed people, 10 showed buildings, 6 were pictures of hardware, and 5 websites did not contain

any photographs. Examining people images that focused on individuals instead of groups found that 52 of the subjects were male and 24 were female.

The number of links was also recorded to provide insight on the amount of information provided on a web site and the complexity of the navigation of the site. The average number of links on the pages studied was 15.98 (SD=10.37) with the number of links ranging from 1 link to 50 links on the main departmental page. Links that were part of templates at the college or university level were not included.

## 8. CONCLUSIONS

The information gathered demonstrates some similarities in content included in websites but many more differences in information systems departments' web pages. Not surprisingly, there was a noticeable focus on degree programs and curriculum requirements. Many of the websites seem to serve as an informational brochure on departmental offerings instead of a recruitment tool. Information on ancillary programs or student environments was less likely to appear across departments. Items that might traditionally be included as recruitment material such as scholarships or student activities appeared on a third of sites. This is mirrored by the fact that less than 40% of sites studied had separate information for prospective students.

When studying the way images are used in department pages, there are improvements that can be made. Because research shows that images are important in effective web communication (Vilnai-Yavetz & Tifferet, 2009) it is surprising that the average number of images on pages was less than two. Including more images on department websites could increase the appeal of the site and hopefully in turn, increase the appeal of the program. Including images of both people and buildings can appeal to the emotional side as well as build trust in your product.

In addition to the number and type of image, departments should also be aware of the subjects of the images and the potential impact they might have on their recruiting efforts. In this study, male students and faculty members outnumbered females

almost 2 to 1. Many would argue that this a true representation of gender in the IS field. However, including underrepresented groups like women and minority students may have a positive effect on increasing the diversity of the student body.

One surprising finding of this study is the reluctance of departments to embrace new technologies to allow them to reach students in new ways. Mobile computing, social networking, and multimedia resources are technologies that many IS students use on a daily basis. It is troubling to see that departments have ignored these communication channels with their technology savvy students. Of the 50 departments surveyed, only eight had implemented innovative ideas beyond static HTML. A few departments had Facebook presences and two had joined in on Twitter. Video messages from deans and students appeared on a few pages, but one university was using multiple media to communicate with students. This university had a Facebook and Twitter presence but also used other social networking sites such as LinkedIn. They gave prospective students insight into what it is like to be an IS student by hosting student blogs, and participated in podcasting through iTunesU.

There are many avenues for further research in this area. After the preliminary cataloging of what IS departments are currently including in their web presence, it would be prudent to survey prospective students on their expectations and preferences to compare with the current state of the web sites. Also, further research needs to be conducted on the use and effectiveness of including additional technologies such as Web 2.0 technologies or participation in established social networking sites. From this, guidelines or best practices can be developed to help IS departments utilize their web sites in the most effective manner and meet the needs of their current and prospective students.

Overall, the professionalism and aesthetics of the department pages studied was consistently high. However, the content provided varied greatly and very rarely focused on recruiting students. Departments are using web pages to provide information, many times to current students. There is little attention to selling the

program to prospective students and encouraging enrollment in IS programs. Departments need to keep pace with emerging technologies and leverage these to communicate with their prospects using the channels they embrace.

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**Appendix**

