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A Comparison of Internet Marketing Methods Utilized By Higher Education Institutions

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A COMPARISON OF INTERNET MARKETING METHODS UTILIZED BY HIGHER EDUCATION INSTITUTIONS

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A dissertation submitted in partial fulfillment
of the requirements for the degree of
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ABSTRACT

Use of Internet marketing techniques in higher education to attract prospective students is relatively new. While the research is recent, there are several studies that identify what is most valuable to students seeking information on college web sites. Higher education is now facing increasing competition from for-profit schools and reduced funding from typical sources. This study examines how two different Carnegie classifications use Internet marketing techniques and identifies if there is a difference in how much they use these techniques. Content techniques and search engine optimization (SEO) techniques were examined for 56 higher education institutions in this study. Of the 14 internet marketing techniques that were studied, seven were focused on the content that prospective students identify as valuable to them and the other seven were focused on the techniques that are recognized as important SEO techniques to improve web page visibility on search engines. The seven content focused internet marketing techniques were developed based on multiple studies that identified what prospective students value most on a higher education web site. The content techniques that were examined include online applications, a cost calculator, online course information, admissions contact information, online visit requests, mail information requests, and student focused navigation. The seven SEO focused internet marketing techniques were developed from journals, guidelines provided by search engines, and SEO experts. The SEO techniques that were examined included use of the H1 header tag, page titles, description meta tags, relevant keywords, user friendly page addresses, Sitemap.XML files, and Robots.TXT files.

This dissertation is approved for recommendation

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CHAPTER ONE

INTRODUCTION

Introduction

There are a large number of students who are considering attending college, and colleges need to market themselves effectively to attract the students they most want (Noel-Levitz, E-Expectations, 2010). In the past, public higher education institutions had limited competition and the Internet was not a factor in how students researched and selected colleges that they might attend (Wilson, 2010).

Because of the instant access to important information through Internet search engines and a pre-college population that frequently uses the Internet, colleges are viewed by students online and increasingly less verbal or face-to-face interaction takes place. These anonymous potential students may proceed through most of the admissions steps from a distance and many even prefer to apply electronically and avoid direct interaction with admissions staff (Bell, 2009).

Potential students have a very specific expectation of information they can find online from colleges. Students are seeking a list of degrees offered, academic program details, and cost of attendance. If this information is hard to find, unclear, or is part of a poorly designed web site, candidates will likely remove the college from their list of potential institutions that they might attend (Noel-Levitz, E-Expectations, 2010)

With the radical growth in for-profit universities like the University of Phoenix, all colleges are being pushed to use marketing and other business methods to sell higher education. Traditional higher education institutions such as public four-year colleges have enjoyed relatively little traditional competition because for-profits have lacked accreditation and were not

broadly available. The rapid growth of online course technology and increased student enrollment of online only degree programs have provided the for-profits a way to compete effectively against traditional higher education (Wilson, 2010).

The for-profit higher education institutions have spent significant time and money on Internet marketing techniques such as highly visible web sites and the use of online advertising to drive students to engage with their schools. The last barrier that prevented strong competition was the accreditation that was held by traditional colleges. Once for-profit institutions sued for accreditation consideration and gained the accreditation, they had the credibility and the businesses practices that have made them strong competitors (Lipman Hearne Insights, 2010).

For-profit colleges have become entrenched as strong competition to traditional higher education institutions, and there in now a declining resistance to using business tactics and corporate approaches in higher education. There are worries that a degree is turning into a commodity that is only discernible by its price alone (Marketing and Advertising Higher Education, 2008). The opposition to marketing shows a preference for how things were and are not acknowledging that for-profit institutions are more visible and even defined to be credible by higher education's accreditation bodies. The focus of defining the best education approach ignores the fact that potential students must be aware of what education approaches are available. Informing students and beginning an interaction between a college and potential students will require the use of online marketing techniques and even some use of business techniques (Marketing and Advertising Higher Education, 2008).

One of the primary arguments against using marketing and other business techniques in higher education is that business approaches are not well suited to drive something as important as getting an education. Both for-profits and traditional higher education agree that an education

cannot be marketed the same way a physical product is marketed (Marketing and Advertising Higher Education, 2008). Education is valuable, important, and beneficial; however, an education is intangible, it is not a physical entity that can be easily defined for quick advertisements or short brochures. Higher education is more difficult to market effectively when compared to physical products (Marketing and Advertising Higher Education, 2008).

Context of the Study

From 1999 to 2009, consumption of traditional print media consumption for 8-18 year olds has declined while all other forms of media have grown. Total print media dropped from 43 minute a day to 38 minutes in that time period. While print book use increased during this time from 21 to 25 minutes, newspaper use dropped by more than 50% from 7 to 3 minutes and magazine use dropped from 15 to 9 minutes (Rideout, 2010, p. 30). Newspapers have closed, magazines have reduced readership, and use of traditional phone books have declined. Because of this decline in viewership, traditional marketing has increasingly become fragmented and less cost effective than it once was (Pew Research Center, 2009). During the same time, Internet technology adoption rates have grown dramatically with 74% of adults having access to broadband Internet access (Rainie, 2005). The demographics of Internet use have shown that those who are nearest to entering college are also the largest consumers of online content (Rideout, 2010).

While media consumption patterns have moved from print to online, higher education has experienced increased competition from for-profit institutions and non-traditional learning opportunities. These competitive pressures have occurred at about the same time that state funding has declined and costs have risen (Marketing and Advertising Higher Education, 2008).

Because of the change in how people consume media and get their information, marketing is more complex than only 10 years ago (Lipman Hearne, 2010). With the change in marketing and increase in outside competition, the admissions function of higher education institutions has become more complex and more expensive in a time when there is less funding available and costs need to be managed (Marketing and Advertising Higher Education, 2008).

The convergence of marketing complexity, cost control needs, increased competition, and a shift in how potential students shop for a college education has led to a strong need for a method for improved communication and promotion using online technology (Raisman, 2003). The method of communication is Internet marketing which is being used heavily in many businesses, but has not fully reached the mainstream of higher education institutions (Primary Research Group, 2007). This study will examine the current use and trends of Internet marketing in U.S. higher education institutions.

Statement of the Problem

Higher education institutions are facing increased competition for students, and a critical point of the process is at the admissions portion of a school's web site (Wilson, 2010). If an institution does not understand the needs and expectations of potential students, or if they simply fail to use the proper techniques on their web site, potential students will remove the institution from consideration (Noel-Levitz, E-Expectations, 2010).

There are widely diverse opinions about what a higher education web site should look like, what content should be provided, and what the web site should accomplish. The critically important admissions pages of higher education web sites are informal and often not well designed (University Business, 2005). By having a good understanding of the needs of potential students and an approach that increases visibility on search engines, higher education institutions

can be seen by the potential students that they are seeking. Once potential students are aware of the higher education institution, the right web site content and marketing approach will attract the right type of student so that the success of the student and the college is more likely (Bell, 2009).

Purpose of the Study

The purpose of this study was to identify what Internet marketing techniques are most commonly used by two different classifications of higher education institutions. The instrument used to evaluate use of Internet marketing techniques was designed to address the most frequently used Internet marketing techniques as described by top Internet marketing organizations and search engines. In most cases, Internet marketers will use the term search engine optimization (SEO) to describe Internet marketing techniques that apply to how people find web site pages using search engines.

The study identified 56 different higher education institutions divided among two different Carnegie classifications to get an overview of the current state of Internet marketing use in higher education. Each of the 56 institution's web sites was assessed using the instrument. Each institution was assessed based on the use or non-use of specific Internet marketing techniques.

For higher education institutions, the most likely beneficiaries of the study are those who plan or direct Internet marketing and other marketing approaches for their admissions program. By determining potential opportunities in their Internet marketing methods, institutions can modify future plans in order to improve admissions performance measures.

Statement of Research Questions

The study answered the following research questions related to Internet marketing methods in higher education institutions:

1. What Internet marketing methods are higher education institutions using to recruit undergraduate college students?

    A. Do colleges place the content that students define as beneficial on their college web sites?

    B. Do colleges use SEO techniques to make their content more visible in search engines?

2. Are there differences in the Internet marketing methods higher education institutions use to recruit undergraduate students based on institutional type?

3. What opportunities exist in higher education for improving Internet marketing techniques in admissions efforts?

Definition of Terms

The following terms are defined to allow readers to understand the different components discussed in the study.

Inbound Link: An inbound link is a hyperlink to a particular web page from an outside site, bringing traffic to that web page. Inbound links are an important element that most search engine algorithms use to measure the popularity of a web page (SEM Glossary, 2010).

Internet Marketing: Leveraging the Internet as a means of communicating a company's messaging, attracting prospects and customers, and conducting market research (Internet Marketing Glossary, 2010).

Keyword: A word or phrase entered into a search engine in an effort to get the search engine to return matching and relevant results. Many web sites offer advertising targeted by keywords, so an ad will only show when a specific keyword is entered.

Link Building: The process of getting quality web sites to link to your web site, in order to improve search engine rankings (SEM Glossary, 2010).

Meta Tags: Information placed in the HTML header of a web page, providing information that is not visible to [human] browsers, but can be used in varying degrees by search engines to index a page. Common meta tags used in search engine marketing are title, description, and keyword tags (SEM Glossary, 2010).

Robots.TXT: A text file present in the root directory of a web site which is used to direct the activity of search engine crawlers. This file is typically used to tell a crawler which portions of the site should be crawled and which should not be crawled (Search Engine Optimization, 2010).

Search Engine Marketing: The process of building and marketing a site with the goal of improving its position in search engine results. SEM includes both search engine optimization (SEO) and search advertising, or paid search (SEM Glossary, 2010).

Search Engine Optimization: The process of making a site and its content highly relevant for both search engines and searchers. SEO includes technical tasks to make it easier for search engines to find and index a site for the appropriate keywords, as well as marketing-focused tasks to make a site more appealing to users. Successful search marketing helps a site gain top positioning for relevant words and phrases (SEM Glossary, 2010).

Search Engine: A search engine is an information retrieval system designed to help find information stored on a computer system. The search results are usually presented in a list and are commonly called hits. The most public, visible form of a search engine is a web search engine which searches for information on the World Wide Web (Search Engine, 2010).

Sitemap.XML: The Sitemaps protocol enables you to let search engines know what content you would like indexed (Sitemaps XML Format, 2010).

Title Tag: An HTML meta tag with text describing a specific web page. The title tag should contain strategic keywords for the page, since many search engines pay special attention to the title text when indexing pages. The title tag should also make sense to humans, since it is usually the text link to the page displayed in search engine results (SEM Glossary, 2010).

Limitations

The study accepted the following limitations:

1. A cross section of higher education institutions was selected to maintain a workable sample size. This means that the average performance may not fully represent what is occurring in a higher education classification.
2. Not all higher education classifications were selected. With the exclusion of some higher education classifications, a broad scale detailed analysis is not available.
3. The use of pay-per-click marketing was not considered as part of the study even though it is an important component of Internet marketing. This study focused on search engine optimization and the content present on a college's web site. Pay-per-click marketing

uses a different method of bringing potential students to a college web site compared to SEO and content information expected by potential students.

4. Data collection was performed over a three week period in June 2011 to improve point-in-time comparability. However, this means that several of the institutions considered in the study could make changes between time of data collection and final analysis.
5. There are significant disagreements on what techniques are most effective for improving an organization's online performance. The study identified techniques most commonly described by search engine companies and leading Internet marketing professionals as the basis of the study. The criteria were setup to establish a baseline for comparison, but may not be the optimum model for Internet marketing effectiveness.
6. The primary method of data collection was an analysis of readily available information on higher education web sites. Any content that was hidden or protected was not accessed. Methods used outside of the web site are not identified or considered. The data limitations prevented the study from looking at the entire marketing strategy of the higher education institutions considered in the study.

Assumptions

The study accepted the following assumptions:

1. The Internet marketing performance measures selected for the study are valid and represent an appropriate level of information for an Internet marketing techniques comparison study.
2. The performance measures selected can be obtained through use of an Internet browser, source code viewing, and readily available online tools.

3. Effective Internet marketing techniques are valuable for improving the visibility of higher education institutions for potential entering freshmen.
4. No large scale changes were made to an institution's web site during the data collection and analysis part of the study.

Significance of the Study

Most businesses still spend less time and money on online marketing compared to marketing efforts like direct mail and TV advertising. In 2007, Internet marketing advertising spending was $21B while newspaper advertising spending was $42B and TV advertising was $44B. However, from 2000 to 2007, TV and newspaper advertising dropped while Internet advertising grew from $8B to $21B (Coen, 2008), which indicates that marketing is moving from traditional methods to online methods.

Similarly, higher education institutions spend 38% of their marketing budgets on print and direct mail, while only spending 15% on online marketing techniques like web, interactive, and social media. While the marketing approaches used by higher education are focused on traditional methods, 55% of institutions increased their interactive and web spending from 2008 to 2009 (Lipmann Hearne, 2010).

Because of a shift from traditional research to online research for evaluating higher education institutions, higher education institutions may be missing significant opportunities to engage with the demographic of potential entering students (Noel-Levitz, E-Expectations 2010, 2010). Although the United States has moved away from traditional products and services research methods to online approaches, the 15 through 18 year old demographic is even more engaged with gathering information online (Rideout, 2010).

By marketing more effectively where potential students are looking, higher education institutions may be able to increase enrollment, improve average performance level of entering students, become more selective, and improve the probability of retention to degree completion. Higher education institutions can use Internet marketing to identify what they offer students, address student needs, and fulfill promises made to students (Recommendations for Selling Higher Education, 2008). Lindbeck (2010) found that web sites are perceived by students as the most valuable tool for admissions application, knowing deadlines, and learning general college information. Students value accurate and complete information on a college web site (Raisman, 2003). They are also more likely to enroll in college when they have better information or guidance and college web sites can be a more reliable source of information than high school sources. College entrance decision makers identify course major, costs, academic programs, and a financial aid application as very important information that should be included on the college web site to aid decision making (Bell, 2009).

Higher education institutions can use effective Internet marketing techniques to gather a larger pool of applicants to consider for admission. By providing the most important information in an easily accessible web site that is easy to find with a search engine, students are much less likely to drop the college from consideration (Mentz, 2003). In addition to providing the right information, effective Internet marketing use allows an institution to rapidly communicate with potential students and build interest (Lipman Hearne, 2010). Public institutions currently respond slower to student applications than for-profit institutions response times; this difference in response time is part of the reason for the rapid growth of for-profits while public institution growth has slowed. By not competing with non-profit institutions, public higher education is reducing its pool of applicants and potentially the quality of students (Wilson, 2010).

Chapter Summary

This chapter identified the problems of heavy competition in higher education with the growth of for-profit institutions and the decline in funding from traditional sources. Along with financial challenges, higher education institutions are facing changes in how their students consume information and the marketing techniques that students respond to.

Although the study was limited by the type of information it can gather and the conclusions that can be made, the research questions about how Internet marketing techniques are being used or not used were answered. In addition, research question 2 examined the potential for differences between the ways two Carnegie classification institutions approached Internet marketing.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

Introduction

This chapter provides research information about Internet marketing of higher education services along with information about how marketing services work. The chapter starts with a section on how marketing services works with an emphasis on the differences between marketing services and marketing products. Research sources were gathered from a leading college marketing textbook and an article from the Chronicle of Higher Education.

The section on contemporary marketing addresses the importance of search engines and the rise of online media while traditional media usage declines. Research information on Internet marketing trends, effective web sites, and effective search engine optimization techniques are provided. Research sources were located using Ebsco Academic Search Complete and with web sites. Sources include multiple academic journals, the Pew Internet & American Life Project, a Google SEO guide, and individual reports.

For the higher education marketing section of this chapter, sources were located that described the current state of Internet usage for pre-college students and their expectations, marketing costs and corporate business practices in higher education, and higher education's move to Internet marketing channels. Research sources were gathered using Ebsco Academic Search Complete. All sources except one were available online as full text. The exception was a survey of college marketing programs that was checked out from the University of Arkansas library through interlibrary loan. The sources include academic journals, a business article, a survey of college marketing programs, and Noel-Levitz E-Recruiting Practices reports.

How Marketing Services Works

Higher education is considered a service and is defined to be intangible, unlike a physical product that can be touched. The primary purpose of marketing services is to encourage consumers to purchase those services. For colleges, there are three primary goals: communicate college identity and what it has to offer to students, address student needs, and fulfill promises made to the students (Recommendations for Selling Higher Education, 2008). Because higher education must communicate effectively to potential students, it is important to know that Raisman (2003) identified college web sites as the primary tool for marketing to potential students.

Marketing in further education colleges is identified as advertising and publicity, with a goal of recruiting students instead of satisfying them. This approach is a conventional marketing approach instead of an interactive or service marketing focus. Service marketing is the more effective approach in higher education. Most interactive marketing is performed by people who are not professional marketers and who have not received marketing training. Part-time marketers should be supported in their conventional marketing to improve student satisfaction (Brennan, 2003).

Traditional product marketing is not fully applicable to higher education because higher education is a service. Marketing textbooks focus on traditional marketing which describe the "4 P's" of product marketing, but service marketing is more complex because services are intangible. Kerin (2009) identified the "8 P's" of service marketing to adapt to the increase complexity of selling services compared to products. Product (service), price, place, and promotion are the first four P's and also match the 4 P's of product marketing. The next 4 P's for service marketing address some of the complexities that need to be considered. People,

physical environment, process, and productivity are the next 4 P's that are unique to service marketing like higher education.

Some of the 8 P's have been identified as integral to an evaluation of Internet marketing in higher education. Product (service), price, promotion, people, physical environment, and process are all very important components to consider for Internet marketing effectiveness. For services, place is focused on multiple service locations and were not examined in this study. Productivity, the eighth P, focuses on capacity management and is less important for Internet marketing (Kerin, 2009).

Product (service) is what is being sold to a potential customer and in the case of colleges, an educational experience is the service. Price is the amount a person pays for a service and is important to most students considering a college. Promotion is the method that an organization uses to promote the benefits of their service, improve publicity, and to advertise. For the study, promotion focused on methods colleges use to promote their services online. People are the service providers and the service consumers; people who consume the services offered are the ones who require that their needs are met to encourage purchasing the services, such as the first semester of college. Physical environment is important in higher education and should be available online through pictures and electronic viewbooks. Process is the methods used to provide services and is of interest to potential students wanting to understand degrees offered and the experience they can expect when attending the college (Kerin, 2009).

Contemporary Internet Marketing

The importance of search engines and how they work.

People use search engines to find web pages that match their interests. These searches are performed by several private individuals across multiple networks by using search engines.

The top search engine providers in the U.S. in 2010 were Google, MSN/Windows Live/Bing, and Yahoo! search. Google has over 65% of the search traffic in the U.S. while MSN has 13.9% and Yahoo! search has 13.1% of search traffic (Nielsen, 2010).

Search engine optimization (SEO) is the structured approach for improving organic, or unpaid, search results for a web site page. SEO efforts should focus on what is best for web site visitors and not search engines (Google, Search Engine Optimization Starter Guide, 2010). Google recommends that a web site page should have a short but unique and accurate page title. Each page in a web site should be unique. The description meta tag is not seen on the page, but should have useful and more detailed information than the page title. The filename of the page and its URL address should be descriptive so that they are easily understood by a visitor (Google, Search Engine Optimization Starter Guide, 2010).

The primary goal for a web site designer is to produce a site with intuitive navigation, useful content, and pleasing design elements. Success can be defined by the ease of use of the site and how valuable the visitor considers the content. In addition to on-site performance, search engine optimization is important to bring the visitor to the web site. One of the most important components of both on-site performance and search engine optimization is content that is valued by the site visitor (Journal of Visual Communication in Medicine, 2006). Search engines are the primary method people use to search for a college or university's web site. The easiest way to optimize a web site is to enter appropriate text in the web site's title, meta description, headings, and page content that search engines recognize (Goldsborough, 2005). These techniques are called search engine optimization (SEO) and are sometimes called search engine marketing (SEM). Additionally, the most effective way to get better search results for a

college web site in a search engine like Google is to have other sites link to the college's web site, which is another SEO technique (Goldsborough, 2005).

In addition to using Search Engine Optimization (SEO) techniques, Google recommends using a general sitemap for human visitors and an XML Sitemap to improve the visibility of pages to users and search engines. Navigation should be simple to follow and be made from text instead of Flash or JavaScript (Google, Search Engine Optimization Starter Guide, 2010). Also, Google recommends using the Robots.txt file to let search engines know what should be shown in search results and what should be hidden. A site without a robots.txt file cannot grant search engines the permission needed to look at their pages or show search results to searchers (Google, Search Engine Optimization Starter Guide, 2010).

While optimizing the web site for technical SEO methods is important, providing useful content may be more important than any other factor. Content should be made of easy to read text without errors along with organization that is easy to understand. A web site should include relevant language that web site visitors will recognize and easily understand, not industry specific terms or abbreviations. All content should be focused on providing benefits to web site visitors and not search engines (Google, Search Engine Optimization Starter Guide, 2010). There is limited scholarly literature about search engine marketing because the topic is so new. Many marketing concepts being used now were developed around the delivery modes and other aspects of an environment without the Internet. Online reputation management is also new because typical reputation management was geared toward traditional media like press releases (Owen, 2009).

The initial research by Sergey Brin and Lawrence Page that created Google, the most widely used search engine in the United States and the world, was a research paper at Stanford

that defined how Internet search can be improved. Their prototype search engine used the structure of hypertext, or the code inside web site pages, to gather information. The prototype would automatically crawl and index the web to provide searchers a better search result. The primary goal of the research was to provide high quality search results over a rapidly growing World Wide Web. Some of the methods they used include page rank and anchor text (The Anatomy of a Large-Scale Hypertextual web Search Engine, 1998).

Fragmentation of traditional media and rise of online media.

American are reading newspapers less and viewing the Internet more for news. From 2006 to 2009, newspaper reading declined from 43% to 39% of the adult population. While the number of people reading newspapers online increased, total newspaper readership still declined. People have watched TV news at about the same level since the early 1990s, but the proportion of Americans getting news from TV, radio, or newspapers has declined. Newspaper viewership is not only declining for the youngest generations, but it is also declining for older generations like the Silent / Greatest Generations (Pew Research Center, 2009). At about the same time as the decline of traditional news viewing, advertising revenue for newspapers dropped 12% from $48 billion to $42 billion while Internet advertising grew 160% from $8 billion to $21 billion from 2000 to 2007 (Coen, 2008). This shows how most organizations have changed their approach to promoting their products and services.

Growth in Internet usage in the U.S.

Search engines are heavily used in the U.S. and that usage is even higher with younger demographics. In 2008, about half (49%) of Internet users use search engines daily to find what they were looking for. For Internet activities, only e-mail is more frequently used than search using a search engine. For younger people search engine use is even more frequent with more

than half of the 18 to 29 and 30 to 49 age groups using search engines daily (Pew Internet Life, Search Engine Use, 2008). Traditional mass media outlets like newspapers, magazines, radio & TV worked for advertising programs in the past, but may not be as effective with the current generation of students who spend more time online. A new struggle that has emerged over the past 25 years is the market saturation and heavy competition among colleges and universities seeking students to enter their academic programs. The current workplace still demands effective communication & organizational skills but it also requires technology driven efforts that now define business programs today (Robles, 2009).

Internet usage has increased in daily usage along with high speed broadband usage. In 2004, 63% of adults and 81% of teenagers (12 to 17) in the U.S. got online regularly. From 2000 to 2004, daily use of the Internet by adults grew by 37% and broadband access grew from 6 million to 60 million homes (Rainie, Internet the Mainstreaming of Online Life, 2005).

A majority of adults used the Internet frequently through high speed connections and gender usage is approximately the same while income makes a difference in online usage. In 2009, 74% of adults used the Internet on a regular basis and 60% of American adults used broadband connections at home. Adult Internet usage is 74% for both genders with the highest adult Internet usage occurring in the 18 to 29 year old demographic. The higher an adults household income or education level, the more likely they use the Internet regularly (Pew, Internet Broadband and Cell Phone Statistics, 2010).

Every age group increased their Internet usage from 2000 to 2010. Teens and young adults, the target audience for higher education marketing, use the Internet the most. The teens group, ages 12 through 17, and early adults, ages 18 through 29, were the most active online

groups. Internet usage was 95% for early adults and 93% for teens. For adults 18 and older, 79% were online (Pew Internet Life, 2010).

People use the Internet as their first source of information more than any single alternative. The researchers in the Pew Internet Life study asked how people sought help when experiencing any of 10 problems like making a decision about education, health concerns, or dealing with a tax matter. Of those who had experienced one of the ten problems, 58% used the Internet to seek help, which is more than any other alternative source of information (Estabrook, 2007).

The growth of home Internet accessibility is affecting library usage. When youth in fifth through twelfth grade had Internet access at home, they used their public library less often for non-school activities. The study found that 100% of the students had some type of Internet access with 85.8% having access at home and 90.3% having Internet access in multiple locations (D'Elia, 2007).

Younger demographics have increased their online media usage while decreasing their print usage. For 8 to 18 year olds, total media usage has increased from 1999 to 2009. The jump from 6 hours and 19 minutes to 7 hours and 38 minutes per day occurred while they also increased the time that they were consuming two or more type of media at the same time. The only type of media that showed a decrease was print, which dropped from 43 minutes to 25 minutes per day. Print is the lowest consumed media type except for movies (Rideout, 2010). Home computer use has increased between 2004 and 2009. Internet access at home went from 47% to 84% and laptop ownership jumped from 12% to 29% between 2004 and 2009 (Rideout, 2010). Recreational use of a computer grew from 27 minutes a day to 89 minutes during this same time period (Rideout, 2010). Home Internet use is prevalent in teens while newspaper

reading has dropped from 1999 to 2009. For a typical day, 70% of teens go online with home Internet use being more common than any other location. Teens use the Internet at home 70% of the time and only 20% of the time at school. Teens cut their average newspaper reading time by more than half with average time reading going from 7 minutes in 1999 to 3 minutes per day in 2009 (Rideout, 2010).

Internet marketing trends.

Internet marketing is focusing more on the searcher or content consumer by providing easier to use services that address their needs. Jakob Neilson, an expert on web site usability, said flash-based design and other visually appealing graphic effects for a web site “[are] a complete waste of money” and that “Web sites should invest in simplicity, not complexity." (Levy, 2008, p. 12).

Google has a dominant majority of search volume in the U.S. which affects how organizations must configure their web sites to be seen by potential customers. As of October 16, 2010 Google had 71% of searches, while Yahoo! had 14% and Bing had 10% (Top 20 Sites and Engines, 2010).

Critical elements of effective web sites.

Critical element of a web site help search engines locate the information being searched for by a person while providing the right content and structure for that person when they visit the web site. SEO experts identify these elements to increase performance of a web site page on search engines.

A peer group of the top 72 SEO (Search Engine Optimization) experts worked to define which elements of a web site page were most important for being seen by a search engine like Google and to be listed more highly in search results (SEOmoz, 2009). The elements they

identified included keywords, titles, web site name, and the right heading text tags. Keyword phrases are terms that a person may use to search for a web site using a search engine like Google. Using keywords is defined to have high importance by the SEO experts when placed in the title tag of a web site page, in the web site name (domain), and in the H1 headline tag. With the proper usage of a keyword phrase, a web site is more likely to appear in the first page of search results and be seen by the people that a college wants to get to their web page (SEOmoz, 2009).

The SEO experts indicate that graphics can be detrimental if used improperly. Using elaborate pictures and graphics instead of desired content drives visitors away from a web site. By making content, like application for admission, easy to find, more prospects will apply to the college (Poock, 2001).

Marketing Higher Education

Increased usage of the Internet for college searches.

Twenty years ago, brand identity was not a concept considered by colleges and universities. In 2008, a majority of higher education institutions were looking at branding identity activities and interest had grown for consulting agencies to provide branding services (Porter, 2008). Now, college web sites are the primary marketing tool for colleges and universities (Raisman, 2003). The college web site is still the preferred destination for students to communicate with a college. When searching for college web sites, students relied on Google and other search engines more than any other method (Noel-Levitz, E-Expectations 2010, 2010). A web site is the primary recruitment marketing tool for colleges and universities. The most valued features identified by prospective students include online applications, campus visit

request forms, cost calculators, and online course catalogs (Noel-Levitz, E-Expectations 2010, 2010).

Students learn about prospective colleges through mail, personal contacts, e-mail, high school counselors or teachers, and the college's web site (Noel-Levitz, E-Expectations 2010, 2010). Youth use the Internet from their homes and library to research and visit colleges. Discussions with recent high school graduates show that they are informed candidates for admission that enjoy the privacy and limited interaction of searching online (Mentz, 2003).

Unfortunately, most universities structure their web sites to match their organizational structure instead of the needs of students or other groups of people accessing the web site. One recommended approach is to structure the online admission process in the sequence the student will go through. The five sequences that a student would proceed through can include: Prospective students, applicants, accepted students, enrolling students, and enrolled students (Mentz, 2003).

Critical elements of effective search engine optimization techniques.

By optimizing a web site for search engines, a college's web site has a better chance of being shown in search engine results for a potential college entrant. Mentz recommends that college web sites be search engine friendly. Meta tags are the text elements of pages that provide an overview of the page and can be important to a specific search for college information. Page content should include important keywords and information that the target audience would find interesting. Headings should be at the top of the page and be informative. The web site name, or domain, should tie to the university or college. Pages can be organized by categories in such a way that the web site link to that page makes sense to a person, or search engine, seeking specific information (Mentz, 2003).

Students' expectations from college web sites.

The Poock study researchers discovered that college-bound high school students value web site content more than any other factor. Students are looking on college web sites for admission content, course offerings, admissions, and details on majors and minors (Poock, 2001).

The architecture, or how the web site is organized around information, is the second most important factor to prospective students' appraisal of a web site. Web sites that are dominated by graphics instead of content are less valuable than content focused web sites. Sites that are organized by target group like future students, current students, or parents were more effective than sites arranged by function like admissions and academics (Poock, 2001).

For 78% of potential students, they believe that a web site should focus on their needs. If the site lacks focus on the student and seems unprofessional, a majority of those students think that the college may be a lower quality institution. Grouping links on a home page by target groups and terminology that the group understands will increase the value potential students see in the web page (Poock, 2001). Valuable information in the right location helps college web sites provide accurate and complete information that is easy to find (Raisman, 2003). By correctly providing the right content and service that web site visitors want, visits to the web site are directly affected. A web site's popularity can be increased somewhat by increasing the number of links to its web site from other web sites, but improving content is the best way to increase popularity (Espadas, 2008).

Student perception of usefulness of technologies used during the admission process should define what is used to market to students. The highest levels of usefulness for technology are tied to a college's web site and include application notification, deadlines, and college

information. E-mail, cell phone, and other technology methods are less useful to students (Lindbeck, 2010).

College related outcomes are affected by knowledge of college and financial aid. The better information and guidance a potential student gathers, the more likely they are to enroll. While high school sophomores do not actively gather information about college, high school students do gather information about cost and financial aid between 10th and 11th grade and in 11th grade. Relying on high schools to provide college information may be problematic because college guidance in high school is minimal (Bell, 2009)

Students in the 9th and 11th grade get college and financial information from posters and announcements in school and from the Internet. While students do use college web sites, information on the web sites are not easy to find (Bell, 2009). College bound seniors have significant expectations of web sites they use to research colleges. If a college web site does not provide needed content, 16%% of seniors will drop a college from consideration and 72% will be disappointed (Noel-Levitz, E-Expectations - Scrolling Toward Enrollment, 2010).

In a study of potential college students, they identified multiple items that are very important to them on college web sites. The five most common items were identified by more than 53% of potential students. These five items were courses and major, cost breakdown, academic programs, financial aid application, and a request to be mailed information (Parmar, 2004). For community college web sites, prospective students value a home page organized by functional topic, organization, and content. These prospective students wanted information about courses offered, class schedules, programs of study, and admission information like how to apply, admissions contacts, and deadlines.

For students who had not selected a college, 23% would drop a school from consideration if they could not find information on a college's web site. While 80% of the seniors said content is more important that appearance, 57% would remove the college from their list if that content is outdated, wrong, or unhelpful (Noel-Levitz, E-Expectations - Scrolling Toward Enrollment, 2010).

A majority of seniors, 74% or more, are most willing to read all information about admissions details and deadlines along with cost and aid content. For 40% of those students, they would print the pages for reference (Noel-Levitz, E-Expectations - Scrolling Toward Enrollment, 2010).

BusinessWeek.com's MBA forums, staffers, and some prospective MBA applicants were asked what is most important on school web sites. Five items were selected for their research on MBA web sites. The list is not a listing of all requirements but identifies five highly important pieces of information that should be on a web site. Schools should have application deadlines, a complete list of application materials, admission director's name and contact information, financial aid information, and a description of the curriculum (Levy, 2008). An online tuition calculator was only used by 23.6% of 4-year public schools and 3.3% of 2-year public schools (Noel-Levitz, E-Recruiting Practices, 2010). By Fall 2011, all colleges are legally required to have net price calculators on their web sites (Noel-Levitz, E-Expectations 2010, 2010). In a study of top community college admissions web sites, three areas were identified as critical to admissions web sites: interactive functions for students to communicate with admissions, information about the college community and a way to schedule a visit, and the ability to apply online and track application status (Community College Journal, 2008).

Increased marketing costs facing higher education.

American public higher education is cutting budgets and laying off employees while the for-profit universities are growing. For profit career colleges have been growing at 9% per year over the past 3 decades while all institutions only grew by an average of 1.5% per year. The for-profit schools educate approximately 7% of students seeking degrees at degree granting institutions in the U.S. In 2010, the for-profit University of Phoenix became the second largest U.S. higher education system (Wilson, 2010).

Marketing has one goal, persuading consumers to buy a product or service. Higher Education is an intangible product that is trying to differentiate, or stand out, in a crowded and competitive environment (Recommendations for Selling Higher Education, 2008). According to a Lipman Hearne study, marketing spending for a mid-sized college or university has jumped from $259,400 to $800,000 between 2001 and 2010. This increase in spending was a response from increased competition for students. Marketing spending at for-profits are near 40% of tuition revenue compared to non-profits who spend about 0.5% of their revenue on marketing. Most business corporations have a marketing budget of 4 to 12% of sales (Lipman Hearne, 2010). For schools that use moderate to heavy budgeting activities, 71% said that the marketing had a positive impact on quality of their applicants (Lipman Hearne, 2010).

Overall marketing budgets have declined for colleges even as web/interactive and social media budgets are being increased. Print publications are widely used by most institutions and print budgets have not declined between 2008 and 2009. Print consumes an average of 26% of marketing budgets while interactive/web and social media consume 15% of marketing budgets (Lipman Hearne, 2010).

Resistance to corporate business practices in higher education.

Several challenges are pushing non-profit higher education into marketing activities. Declining enrollments and reduced state support combined with increased costs and competition for students requires non-profit schools to become more commercial and competitive. This commercialization of admissions and academics has driven creation of marketing departments, hiring professional marketing directors, and hiring outside marketing firms (Marketing and Advertising Higher Education, 2008).

The shift in higher-education marketing is driven by for-profit institutions and has changed the marketplace to a point that it is being called the commercialization of higher education. State and federal support of education was strong in the 1950s and 1960s due to the space race, but the support began to decline in the 1970s (Marketing and Advertising Higher Education, 2008).

Education professionals are hesitant to embrace marketing because of the link with commercialism and selling. Instructors may see marketing as an intrusion on education and want to be left to their professional role of teaching. Schools should be involved in marketing because every school has a reputation that has to be managed. The need for effective marketing techniques drives a demand which identifies the need to choose the most appropriate marketing techniques and services to benefit the education institution (Rizvi, 2010).

The emergence of technology and a knowledge based economy in the 1980s and 1990s brought competition from the for-profit commercial education sector. Online schooling enabled schools like the University of Phoenix and DeVry University to become strong competition and now the for-profit institutions have 8% of student enrollment. As of 2006, the University of

Phoenix had an online enrollment of almost 130,000 students. (Marketing and Advertising Higher Education, 2008).

Commercial higher education depends on marketing and advertising for profitability. University of Phoenix spent $142 million on Internet advertising from September 2005 through September 2006. Non-profit higher education spends less than 5% of their annual budgets on marketing related activities compared to 20% spent by the for-profit schools (Marketing and Advertising Higher Education, 2008).

Most admissions web sites earn poor grades because prospective students are unable to find everything they need. While the National Research Center for College & University Admissions ranks higher education web sites based on availability of information, the top performers still do not provide 100% of the information that may be needed for applicants (University Business, 2005).

Jim Scannell, president of the higher-education consulting group Scannell & Kurz, says that that the for-profits "…are clearly a threat for both public and private schools, especially for adult students returning to get a B.A. or going part time to get a master's degree (Wilson, 2010, p. A4). In addition, the enrollment process at for-profits is much quicker than traditional colleges (Wilson, 2010).

Marketing for higher education should accomplish three main goals to be competitive. Colleges should communicate who the college is and what it has to offer to students, they should address needs of the target audience, and they should fulfill promises made to the students (Recommendations for Selling Higher Education, 2008).

The growth of the for-profit college admission process threatens the view of admissions as a profession rather than a business. Some small part of this growth is caused by widely

varying practices of admissions offices like variable pricing, early discounts, and even the occasional modification of admissions data to perform more effectively on college rankings. College education is an experience instead of a product and it can impact a person's quality of life. Students need to find the right fit based on good information instead of coercion. The admissions process should easy to understand with clear communication with parents and potential students (Jump, 2004).

Higher education and further education have both seen an increase in marketing emphasis over the past 20 years. This shift in focus makes some educators fear that the emphasis on critical thought has changed to an emphasis on marketplace demands. One of the major effects of this shift is an increase in the visibility of marketing in higher and further education (Newman, 2009).

Higher education's move to Internet marketing channels.

Admissions and enrollment team are increasing their use of web technology to provide forms and information to prospective students (Noel-Levitz, E-Recruiting Practices, 2010). A majority of four-year public institutions provide web based application forms (98.6%), course registration forms (76.4%), and confirmation acceptance (63.9%). This web technology usage increased from 2008 to 2010 for 2-year public and for 4-year public schools (Noel-Levitz, E-Recruiting Practices, 2010).

All 4-year public schools in the Noel-Levitz study accepted electronic applications for admission in 2010. The percentage of electronic applications compared to all applications received has increased from 80% to 90% in 4-year public schools from 2008 to 2010 (Noel-Levitz, E-Recruiting Practices, 2010).

Online communication methods related to admissions dominate in these areas: completing an application, getting answers to questions, communicating with current students, and communicating with faculty (Noel-Levitz, E-Expectations - Scrolling Toward Enrollment, 2010). While online communication methods are the primary preference for these seniors planning for college, financial aid awards and acceptance by mail are preferred over online methods (Noel-Levitz, E-Expectations - Scrolling Toward Enrollment, 2010).

The researchers of the Primary Research Group study discovered that 81% of the sampled colleges have a marketing department. Smaller colleges were more likely to have a marketing department than larger colleges. A department dealing with enrollment management was present in 81% of the colleges (Primary Research Group, 2007).

Only 68% of the colleges have a budget specifically for marketing. These colleges used traditional and non-traditional marketing approaches to promote their schools and programs. Direct mail is used by 88% of the colleges while only 52% use phone solicitation. Newspaper advertising is used by 86% of the colleges while 69% used magazine advertising to recruit students. Colleges also used radio (63%), billboard (42%), and television (36%) advertising to market their colleges (Primary Research Group, 2007).

Non-traditional marketing is growing in use. Methods used by the colleges include e-mail marketing (41%), web ads (47%), and search engine optimization (33%). SEO is used less often by larger or research focused schools (Primary Research Group, 2007). A merged method of traditional and non-traditional marketing is the college viewbook. Online viewbooks are offered as an Adobe PDF format for download or online viewing (29%) and other online non-PDF viewbooks (27%). At the same time, 9% of colleges have stopped offering printed viewbooks and 23% say they are printing less viewbooks (Primary Research Group, 2007).

Visitors can e-mail questions about applications using the college web site in 84% of the colleges. Most applications (53%) are received through the college web site (Primary Research Group, 2007). Paid online advertising like Google Ads was used by 23% of the colleges. For all online marketing, including advertising, colleges spent a mean of 12% of their marketing budget. Online marketing spending has increased for 70% of the colleges and 40% of the colleges have increased their online marketing spending by more than 5% in the past two years (Primary Research Group, 2007).

Chapter Summary

The literature provides important information in four unique areas. These areas include changes in how people access information, changes in how colleges market and interact with potential students, what information is valued by students, and what information is valued by the search engines that potential students use to find college information. These four areas are the factors that drive colleges to improve their Internet marketing techniques.

The average U.S. person is changing how they access information and how they interact with their world. Americans are reading newspapers much less while using the Internet more often and most people use the Internet as their first source for information. Internet usage and broadband usage is growing, especially in younger age groups that may be considering college. Search engines are used daily by a majority of Internet users to find information they are seeking. Google is the search engine that has the majority of the search market. Because of this shift in how people access information, marketers and advertisers are also moving away from print advertising to online advertising. Part of this shift includes a shifting focus toward Internet marketing to focus on the needs of a searcher and the content that the consumer wants.

Non-profit higher education is facing significant pressure from for-profit education providers that use online marketing to bring in students. Even though non-profit colleges are behind for-profit colleges in Internet marketing usage, the non-profit colleges are increasing their Internet marketing usage and adoption of online interaction with potential students. Part of the difficulty with marketing education is that higher education is a service and must be marketed differently than a product. For-profit institutions are spending more time and money on Internet marketing techniques and the structure and content of the for-profits web sites use modern optimization techniques more than non-profits. Non-profit institutions are concerned about moving to corporate business practices.

The content most valued by students on a college web site includes applications, cost calculators, course information, and degree majors and minors information. Students value a well structured web site that is geared to their information needs. Having links grouped by user needs or according to the admissions process sequence are more useful than using the college's organizational structure to arrange information.

Optimizing a college web site using search engine optimization techniques can attract more searchers to a college web site. SEO experts and Google search engine representatives agree that the right keywords in titles, web site names, and headings is beneficial to being found by a searcher, but the right information is critical.

CHAPTER THREE

METHODOLOGY

Introduction

This chapter identifies the methodology used in the study to research the different Internet marketing approaches used by selected institutions from two Carnegie classifications of higher educations. The methods for data collection on web sites using readily available tools while not using any protected information is described along with the data collection instrument. Of the 56 institutions sampled from the population of two Carnegie classifications, 24 were from Public 4-Year Primarily Associates and 32 were from Research Universities with High Research. The data collection instrument listed general institution information and the 14 Internet marketing techniques identified by the study while data analysis was performed with descriptive statistics. An evaluation of the potential bias of the researcher and how that was managed is described at the end of the chapter.

Methodology

The purpose for conducting the study was to identify what Internet marketing techniques are most commonly used by different classifications of higher education institutions. A major component of Internet marketing is providing the content that visitors value most. Survey research from studies was used to identify the types of content that potential students value most. The collected data identified which web sites provide preferred content and which web sites do not. The other data collection included the SEO methods used related to making the web site page visible to search engines. The two data components were designated as SEO and Content in the instrument and data tables.

Data Gathering Instrument

The instrument that was used to evaluate the use of Internet marketing techniques was designed to address the most frequently used Internet marketing techniques as described by top Internet marketing organizations and search engines. In most cases, Internet marketers will use the term search engine optimization to describe Internet marketing techniques that apply to how people find web site pages using search engines. The instrument also gathers data about the type of informational content that is provided on the web site that may be used for comparative analysis.

Content component.

The content component of the instrument was defined by commonly identified critical web site components and content. Research identifies valuable web site elements according to what prospective students are seeking. Noel-Levitz (E-Expectations 2010, 2010) identified the most valuable items to include online applications, visit request forms, cost calculators, and online course catalogs. Similarly, the Poock study indicated that college-bound high school students were seeking admission content, course offerings, admissions information, and details about majors and minors (Poock, 2001).

The most beneficial technology used by colleges was identified by prospective students to be a college's web site. In particular, the most important content identified by students in the Parmar study (2004) include courses and major, cost breakdowns, academic programs, financial aid applications, and mail request forms. Although this study is geared toward prospective freshmen, MBA applicants are interested in the same type of informational content on college web sites as prospective freshman: application deadlines, application materials, admissions contact information, financial aid information, and curriculum description (Levy, 2008).

Web site structure is important for locating information and user satisfaction but most universities structure their web sites to match their organizational structure instead of the needs of students or other groups of people accessing the web site. One recommended approach is to structure the online admission process in the sequence the student will go through (Mentz, 2003). Web sites that are dominated by graphics instead of content are less valuable than content focused web sites. Sites that are organized by target group like future students, current students, or parents were more effective than sites arranged by function like admissions and academics (Poock, 2001).

The seven elements of the content component of the instrument were online applications, a cost calculator, online course information, admissions contact information, visit request or visit schedule information, a request for mailed information, and a navigational structure that is student focused.

SEO component.

The SEO component of the instrument was defined by research from the dominant Google search engine SEO guide, journal articles, and SEO specialists. These elements are identified as the SEO component of Internet marketing.

By optimizing a web site for search engines, a college's web site has a better chance of being shown in search engine results for a potential college entrant. Mentz recommends that college web sites be search engine friendly. Page content should include important keywords and information that the target audience would find interesting. Headings should be at the top of the page and be informative (Mentz, 2003).

The peer group assembled by SEOMoz identified the most critical SEO components to include keywords, titles, web site name, and the right top level headings. With the proper usage

of a keyword phrase, a web site is more likely to appear in the first page of search results and be seen by the people that an organization wants to get to their web page (SEOmoz, 2009). Google recommends that a web site page should have a short but unique and accurate page title. The description meta tag is not seen on the page, but should have useful and more detailed information than the page title. The filename of the page or its page address should be worded so that it is easily understood by a visitor (Google, Search Engine Optimization Starter Guide, 2010). The easiest way to optimize a web site is to enter appropriate text in the web site's title, meta description, headings, and page content that search engines recognize (Goldsborough, 2005).

In addition to using Search Engine Optimization (SEO) techniques, Google recommends using a general sitemap for human visitors and an XML Sitemap to improve the visibility of pages to users and search engines. Navigation should be simple to follow and be made from text instead of Flash or JavaScript (Google, Search Engine Optimization Starter Guide, 2010). Also, Google recommends using the Robots.TXT file to let search engines know what should be shown in search results and what should be hidden. A site without a Robots.TXT file cannot grant search engines the permission needed to look at their pages or show search results to searchers (Google, Search Engine Optimization Starter Guide, 2010).

The common elements that occur among different sources are the elements that were used in the instrument. The SEO component elements include these seven items: the H1 header tag, page titles, description meta tag, relevant keyword use, user friendly page address, Sitemap.XML file presence, and Robots.TXT file presence. The instrument used for data collection is shown as Appendix A: Data Gathering Instrument in the Appendices section.

Sample and Population

The study identified 56 different higher education institutions divided among two different Carnegie classifications to get an overview of the current state of Internet marketing usage in higher education. The first classification is Public Associates and 4-year Schools that primarily provide associates degree programs. This classification is abbreviated as Assoc/Pub4 Associates. The second classification is Research Universities with high research activity. This classification is abbreviated as Research Universities/High.

Assoc/Pub4 colleges were selected from a population of 42 colleges in that classification. The 24 colleges were selected by taking all colleges of a specific size and setting classification that did not exceed 5 colleges for that category. When a size and setting classification had more than 5 colleges, the first 5 colleges sorted by the Carnegie unit ID were selected. College campuses were dropped when there were duplicates under the same parent campus.

Research Universities/High schools were selected from a population of 98 schools in that classification. The 32 colleges were selected by taking all colleges of a specific size and setting classification that did not exceed 5 colleges for that category. When a size and setting classification had more than 5 colleges, the first 5 colleges sorted by the Carnegie unit ID were selected.

If a pre-selected school was identified that does not have its own web site, it would have been removed from the study and the next sequential school would have been added if another school of the same size and setting exists. However, no pre-selected schools lacked a web site. Both sets of classification lists are located in the appendices. For occurrences where there were multiple college campuses of a parent college, only one of the college's campuses was kept in the data sample.

Each selected institution's web site was assessed using the instrument. Each institution was assessed based on use or non-use of specific Internet marketing techniques and availability of content defined as beneficial by prospective students.

Data Collection

Data was collected by viewing publicly available higher education institution web sites. The Carnegie Foundations web site was used for selection of the institutions by classification. By looking at text, pictures, and navigation elements on the web site pages and also viewing the coding of web site pages, data was extracted to a Microsoft Excel 2007 spreadsheet and later extracted to SPSS as raw data. The Access database will also include selected Carnegie data.

The content most valuable to future students includes the ability to access online applications, a tuition & fees calculator, online course information, admissions contact information, a way to request an onsite visit, a mail information request, and student focused navigation. Technical data about the web sites' functionality will include use of SEO techniques on the primary admissions page. The techniques were identified by the presence of H1 headings format, page title meta tag text, description meta tag text, relevant keywords, a user friendly page address, the Sitemap.XML file, and the Robots.TXT file.

Data Analysis

The statistical software program, SPSS PASW Statistics 18, was used to calculate descriptive statistics and analyze data. Microsoft Excel 2007 was used to gather data for the 14 Internet marketing components of each institution in the study. The content data and SEO data are inputs that were rated individually because there is no formalized approach for weighting the variables to produce a single reliable index of web site performance. Instead, all techniques were evaluated as contributing or not contributing to the number of Internet marketing techniques

used. The research objectives questions were addressed by the numbered items on the instrument as shown in each research question.

Question 1: What Internet marketing methods are higher education institutions using to recruit undergraduate college students?

This question was answered by looking at the occurrence of the content and SEO techniques for all web sites in the study. A summary of the occurrence of use of all methods was provided and then an examination of the top percentage uses were calculated to determine which items are most commonly used.

Content-1	Online Applications
Content-2	Cost Calculator
Content-3	Online Course Information
Content-4	Admissions Contact Information
Content-5	Visit Request
Content-6	Mail Information Request
Content-7	Student Focused Navigation
SEO-1	H1 Use
SEO-2	Page Title
SEO-3	Description Meta Tag
SEO-4	Relevant Keyword
SEO-5	User Friendly Page Address
SEO-6	Sitemap.XML Presence
SEO-7	Robots.TXT Presence

Question 1.A. Do colleges place the content that students define as beneficial on their college web sites?

This question was answered by looking at the occurrence of the content techniques for all web sites in the study. A summary of the frequency of use of the methods was provided and then an examination of which methods were used most often by the colleges identified in this study. Because beneficial content is critical to prospective college students considering a college, any element missing was identified as a significant improvement opportunity.

Content-1 Online Applications

Content-2 Cost Calculator

Content-3 Online Course Information

Content-4 Admissions Contact Information

Content-5 Visit Request

Content-6 Mail Information Request

Content-7 Student Focused Navigation

Question 1.B. Do colleges use SEO techniques to make their content more visible in search engines?

This question was answered by looking at the occurrence of the SEO techniques used for all web sites in the study. A summary of the frequency of use of the methods was provided and then an examination of which methods were used most often by the colleges identified in this study. Because SEO techniques can affect the visibility of page content on a college web site, it is critical to consider these elements for improving the ability for potential students to find the information they need when using search engines. Any element missing was identified as a significant improvement opportunity.

SEO-1	H1 Use
SEO-2	Page Title
SEO-3	Description Meta Tag
SEO-4	Relevant Keyword
SEO-5	User Friendly Page Address
SEO-6	Sitemap.XML Presence
SEO-7	Robots.TXT Presence

Question 2. Are there differences in the Internet marketing methods higher education institutions use to recruit undergraduate students based on institutional type?

This question was answered by comparing the content provided by higher education institutions by Carnegie classification. Because this question is more complex than the initial research questions, a t-test of two independent samples had to be used to determine whether there was a statistically significant difference between the mean performance of Research Universities with High Research and Public 4-Year Primarily Associates. For this analysis, all 14 Internet marketing elements were added together to provide a score for each institution that could range from 0 to 14, with larger numbers indicating more Internet marketing techniques were being used. The combined Internet marketing number was then compared to a binary variable of the two Carnegie classes that were represented as a 0 for Public 4-Year Primarily Associates and a 1 for Universities with High Research. Before the independent samples t-test could be used, SPSS was used to create a Q-Q plot that confirmed that a normal distribution of data was present for the Internet marketing number, which indicated the independent samples t-test was a valid test for comparing means for statistically significant differences.

Carnegie-2	Grouping

SEO+Content	The sum of all occurrences of Internet marketing by institution
Content-1	Online Applications
Content-2	Cost Calculator
Content-3	Online Course Information
Content-4	Admissions Contact Information
Content-5	Visit Request
Content-6	Mail Information Request
Content-7	Student Focused Navigation
SEO-1	H1 Use
SEO-2	Page Title
SEO-3	Description Meta Tag
SEO-4	Relevant Keyword
SEO-5	User Friendly Page Address
SEO-6	Sitemap.XML Presence
SEO-7	Robots.TXT Presence

Question 3. What opportunities exist in higher education for improving Internet marketing techniques in admissions efforts?

This question was answered by identifying the content and SEO techniques most often left out of higher education web sites.

Content-1	Online Applications
Content-2	Cost Calculator
Content-3	Online Course Information
Content-4	Admissions Contact Information

Content-5	Visit Request
Content-6	Mail Information Request
Content-7	Student Focused Navigation
SEO-1	H1 Use
SEO-2	Page Title
SEO-3	Description Meta Tag
SEO-4	Relevant Keyword
SEO-5	User Friendly Page Address
SEO-6	Sitemap.XML Presence
SEO-7	Robots.TXT Presence

Bias of the Researcher

As a business owner and college educator who works with multiple organizations to improve their effectiveness in Internet marketing, I started this study with an expectation of finding challenges and significant opportunities in higher education's approach to Internet marketing. This biased expectation required me to focus on objectivity at all times and to avoid jumping to conclusions while letting the data provide the answers to research questions and to adjust my own understanding of Internet marketing in higher education. I also have experience with higher education institutions that asked me to confidentially provide them an assessment of their existing Internet marketing techniques. These consulting experiences also were a risk factor to the objectivity of this study. I dealt with the threats of objectivity by gathering data for the study in small pieces without making a favorable or unfavorable judgment for any specific web site. This allowed me to see the complete data with a less-biased view than if I subjectively assessed each web site as I went through the process.

My educational background in engineering, business, and management information systems drives me to be a linear thinker that evaluates things as being correct or incorrect while following structured steps that I believe to be correct. With this education bias in mind, I actively sought to create a study design based on the research of others rather than my professional and educational background. I implemented a similar Internet marketing study for manufacturers in 2008 where the study design was based on my expectations of what good or bad characteristics might be. While the approach was helpful to the manufacturers involved in the process, the lack of a research based design prevented the study structure from being used in other situations or in other geographical areas. By seeing the problems that can come from a lack of research based designs, my inclination to do analysis with a formal research basis has increased in a beneficial way.

As a frequent student, an individual bias for my student preferences may have been my biggest challenge in removing bias from this study. A common failure among untrained people in research is that they believe a sample size of one, yourself, is a valid choice that produces accurate results. During the research phase of this study, I would often express doubt about the studies that I found that identified what web site content students valued most. By seeing a pattern repeated by several researchers over thousands of test subjects, I realized that I wanted to place my preferences into the study rather than the majority of students' preferences. After understanding the source of this frustration, it was much easier to identify a core expectation of an average entering college student as the standard for evaluation rather than my personal preferences.

Chapter Summary

The data gathering instrument was used to gather seven dimensions of available content and seven dimensions of SEO techniques on 56 different web sites. All components of the instrument are based on research that identifies valuable content from a potential student's perspective and critical SEO techniques from search engine professional's expertise. The data instrument also has identifying elements including the college name and college classification provided by the Carnegie classification system for Public Associates and 4-year Schools that primarily provide associates degree programs and Research Universities with high research activity. Data analysis challenges and anomalies were identified after data analysis had been completed and are described in the Discussion section of Chapter Five.

CHAPTER FOUR

RESULTS

Introduction

The competitive environment in higher education has moved toward a market based system that relies heavily on marketing techniques like Internet marketing. This chapter presents the results of this study where two different Carnegie classes of higher education institutions are using or not using Internet marketing techniques. There were 14 separate Internet marketing elements considered for the study that looked at the content most valued by prospective students and SEO techniques that are described most often as being effective techniques for improving the visibility of a web site page on a search engine. Seven of the elements addressed the content techniques while another seven elements were focused on SEO techniques. These techniques were evaluated over 56 colleges separated into two classes, Public 4-Year Primarily Associates and Research Universities with High Research.

This chapter provides answers to three research questions about the current approaches these higher education institutions are using in their Internet marketing. The data analysis included descriptive statistics and provides an overview of how each question is answered using the statistical results.

Data Collection

The original plan for data collection worked well, but did have some challenges. In an ideal situation, all SEO and content techniques could be identified in a single admission web site page. While SEO was easily evaluated on the primary admissions page, the content that students value most was spread throughout admissions sub-pages, other pages that function as admissions information pages like “prospective students,” and even pages far removed from admissions

information. This scattering of critical information is problematic for prospective students seeking information about a college. The scattering also caused the discrepancies between researcher data and the third party validation data when data could not easily be found. This discovery of content information being dispersed, rather than focused, in the web site suggests that an improvement in search rules for data collection could provide improved results and accuracy.

Data Analysis

Question 1: What Internet marketing methods were higher education institutions using to recruit undergraduate college students?

By looking at the occurrence of the content and SEO techniques for all web sites in the study, there were four different techniques that higher education institutions are using more than any of the other 14 considered. For each occurrence when an institution was using one of the techniques a 1 entered; if the technique was not present for that institution, the field would have a 0 entered. All 56 institutions in the study (100%) were using some form of online application that allowed students to complete their application using interactive forms that could be submitted directly to the school while online. Relevant keyword used was used by 96% of the institutions which was closely followed by 95% of the institutions using student focused navigation. For proper use of a page title meta tag with relevant text in the tag, 93% of the institutions properly implemented this Internet marketing technique. For the top 4 performing techniques, half were content oriented techniques and the other half were SEO oriented techniques. Table 1 shows all Internet marketing techniques and the sum of total institutions that properly used each one of the Internet marketing techniques.

Table 1: Descriptive Statistics of Internet Marketing Techniques for All Institutions

n=56

Name	Description	Sum	Mean	Std. Deviation	Variance
Content-1	Online Applications	56	1.00	.000	.000
SEO-4	Relevant Keyword Use	54	.96	.187	.035
Content-7	Student Focused Navigation	53	.95	.227	.052
SEO-2	Page Title	52	.93	.260	.068
SEO-5	User Friendly Page Address	51	.91	.288	.083
Content-3	Online Course Information	50	.89	.312	.097
Content-4	Admissions Contact Information	47	.84	.371	.137
SEO-7	Robots.TXT Presence	47	.84	.371	.137
Content-5	Visit Request	45	.80	.401	.161
SEO-1	H1 Use	40	.71	.456	.208
Content-6	Mail Information Request	37	.66	.478	.228
SEO-3	Description Meta Tag	18	.32	.471	.222
SEO-6	Sitemap.XML Presence	11	.20	.401	.161
Content-2	Cost Calculator	9	.16	.371	.137

Question 1.A. Do colleges place the content that students define as beneficial on their college web sites?

The occurrence of using Internet marketing techniques tied to content can be used to identify where higher education institutions are performing best when providing content to

prospective students. The top content component, online applications, was used by 100% of the web sites evaluated and is listed at the top of Table 2. Student focused navigation was present in 95% of the web site evaluated and it is tied to the presence of navigation and text related to the words "student" and "admissions." Online course information content was available on 89% of the sites and admissions contact information was present on 84% of the site evaluated. The cost calculator content technique was only used by 16% of the web sites and is the lowest performing Internet marketing technique of the entire study. This is a significant opportunity for institutions who are not using a cost calculator and who have students who are concerned about finances.

Table 2: Descriptive Statistics of Internet Marketing Techniques for Content

n=56

Name	Description	Sum	Mean	Std. Deviation	Variance
Content-1	Online Applications	56	1.00	.000	.000
Content-7	Student Focused Navigation	53	.95	.227	.052
Content-3	Online Course Information	50	.89	.312	.097
Content-4	Admissions Contact Information	47	.84	.371	.137
Content-5	Visit Request	45	.80	.401	.161
Content-6	Mail Information Request	37	.66	.478	.228
Content-2	Cost Calculator	9	.16	.371	.137

Question 1.B. Did colleges use SEO techniques to make their content more visible in search engines?

The occurrence of using SEO based Internet marketing techniques can be used to identify where higher education institutions are performing best for using SEO techniques on their web sites to make their content more visible to prospective students using search engines to seek a college. Table 3 shows that the two best performing SEO components were relevant keyword use with a 96% usage rate and page title with 94% of institutions using this technique on their web site. Higher education institutions were also using user friendly page addresses often with 91% having addresses that can easily be read and understood by humans. The fourth best performer for SEO techniques was use of the Robots.TXT file to grant search engines permission to browse their web site.

Table 3: Descriptive Statistics of Internet Marketing Techniques for SEO

n=56

Name	Description	Sum	Mean	Std. Deviation	Variance
SEO-4	Relevant Keyword Use	54	.96	.187	.035
SEO-2	Page Title	52	.93	.260	.068
SEO-5	User Friendly Page Address	51	.91	.288	.083
SEO-7	Robots.TXT Presence	47	.84	.371	.137
SEO-1	H1 Use	40	.71	.456	.208
SEO-3	Description Meta Tag	18	.32	.471	.222
SEO-6	Sitemap.XML Presence	11	.20	.401	.161

Question 2. Were there differences in the Internet marketing methods higher education institutions use to recruit undergraduate students based on institutional type?

After confirming that the two independent samples t-test was a valid test by using a Q-Q plot in SPSS, the t-test was run to compare the means of the two Carnegie classes. In the statistical analysis of the grouping comparing the classes, Table 4 shows that the class of Research Universities/High (RU/H) has an average that is more than a full point higher than Associates / Public 4 Primarily Associates (A/P4 A). By examining Table 5 for Levene's test, the significance is 0.024 which is less than 0.05, indicating that the variances between the two means of the Carnegie Classes are significantly different. The calculations were based on a 95% confidence interval.

Table 4: Group Statistics Comparing Two Carnegie Classes Performance

n=56

	Class	N	Mean	Std. Deviation	Std. Error Mean
SEO+ Content	0 (A/P4 A)	24	9.29	1.853	.378
	1 (RU/H)	32	10.84	1.110	.196

Table 5: Levene's Test for Equality of Variances for Two Carnegie Classes

n=56

SEO+ Content	Levene's Test for Equality of Variances		t-test for Equality of Means						
								95% Confidence Interval of Difference	
	F	Sig.	t	df	Sig. (2-tailed)	Mean Diff.	Std. Error Diff.	Lower	Upper
Equal variances assumed	5.43	.02	-3.90	54	.000	-1.55	.40	-2.35	-.75
Equal variances not assumed			-3.64	35.1	.001	-1.55	.43	-2.42	-.69

Question 3. What opportunities exist in higher education for improving Internet marketing techniques in admissions efforts?

By examining the occurrence of Internet marketing techniques used by higher education institutions, the techniques being least used can be identified as the most often missed opportunity for improving online visibility or improving the availability of valued content by prospective students. The four least used techniques can be seen in Table 6. Of those four, the least used Internet marketing technique was a cost calculator with only 16% using the technique among the 56 institutions examined in this study. With only 20% usage, the presence of a Sitemap.XML to improve page visibility on search engines was seldom utilized. The description meta tag was used on 32% of web sites in the study. The fourth least used Internet marketing

technique of mail information requests is used in 66% of the sites, twice as often as the description meta tag.

Table 6: Descriptive Statistics of Least Used Internet Marketing Techniques

n=56

Name	Description	Sum	Mean	Std. Deviation	Variance
Content-2	Cost Calculator	9	.16	.371	.137
SEO-6	Sitemap.XML Presence	11	.20	.401	.161
SEO-3	Description Meta Tag	18	.32	.471	.222
Content-6	Mail Information Request	37	.66	.478	.228
SEO-1	H1 Use	40	.71	.456	.208
Content-5	Visit Request	45	.80	.401	.161
Content-4	Admissions Contact Information	47	.84	.371	.137
SEO-7	Robots.TXT Presence	47	.84	.371	.137
Content-3	Online Course Information	50	.89	.312	.097
SEO-5	User Friendly Page Address	51	.91	.288	.083
SEO-2	Page Title	52	.93	.260	.068
Content-7	Student Focused Navigation	53	.95	.227	.052
SEO-4	Relevant Keyword Use	54	.96	.187	.035
Content-1	Online Applications	56	1.00	.000	.000

Validity of Data Analysis

After evaluating 10 randomly selected web sites taken from this study, there were only 7 mismatches out of 140 data points or 95% agreement between two individuals. Each of the 10 web sites had 14 Internet marketing criteria that had to be evaluated, which is where the 140 data points come from. In 2 of the mismatches, the third party could not find information that the researcher found. In 5 of the mismatches, the third party found the content when the researcher did not. By reviewing the web site discrepancies, it was discovered that the content was on the web sites for both the researcher and the third party; it was just not on the primary admissions page. One of the two types of errors that occurred was when content was located off the main admissions page, but still in a sub-page of the admissions page. The second type of error was when the content was well outside of the admissions pages and its sub-pages, which required significant searching to find the information. By improving the rules of information location, the accuracy of the data could be improved further. Note that in both error situations, the information that is valuable to prospective students and search engines were not on the main admissions web page, which may cause problems.

Chapter Summary

Chapter four discussed the results of this study, described how data was used to answer questions, and provided answers to the three research questions. The primary focus of the study was to determine if two different classifications of higher education institutions used Internet marketing techniques differently. The two classes do have a statistically significant difference in the Internet marketing methods they are using. With the analysis, there are significant opportunities for improving the performance of higher education web sites so that they utilize techniques that are currently not being used.

CHAPTER FIVE

CONCLUSIONS

Introduction

This chapter examines the results of the study to make conclusions about the research questions and other discoveries made during the study. The conclusions section provides concise answers tied to each of the research question elements. During the study, opportunities for further study were identified because of the need for improvements or new research. Recommendations for practice should be valuable to higher education institutions looking for a starting place for improving their institution's use of Internet marketing techniques. The final component of this chapter, discussion, identifies how the study performance compared with the literature reviewed in this study. In addition to comparing the findings of the study to existing literature, the discussion section describes additional limitations discovered during the research process.

Conclusions

For the scope of this study, there are five important conclusions that may be applied to higher education institutions in the two Carnegie classifications of Research Universities with High Research and Public 4-Year Primarily Associates. While these conclusions were most applicable to the subjects of the study, other higher education institutions could also evaluate how well they are serving their prospective students by evaluating if they are using SEO and content Internet marketing techniques listed in this study.

1. Higher education institutions have high performance in the areas of using online applications, using relevant keywords, having student focused navigation, and consistently using a page title.

2. The evaluated colleges provide some of the content prospective students are seeking. Online applications, student focused navigation, online course information, and admissions contact information are all elements that 84% or more of the study subjects did have on their web sites.

3. SEO techniques are used by colleges slightly better than content techniques. The top usage for content techniques, however, perform at the same level as SEO techniques. The top SEO techniques include relevant keyword use, use of a page title, user friendly page addresses, and inclusion of a Robots.TXT file. These top four usages are in 84% or more of the sites examined

4. Two different Carnegie classes of higher education perform differently in a statistically significant way. Research Universities/High (RU/H) had an average usage number that is more than a full point higher than Associates / Public 4 Primarily Associates (A/P4 A).

5. The opportunities for these institutions to improve their performance levels in using Internet marketing techniques can be described by the lack of usage identified in this study. The four least used techniques are the cost calculator (16% use), using a Sitemap.XML file so search engines can find a college's pages (20%), use of a description meta tag (32%), and a way to request information be mailed to the prospective student (66%). While the first three are very limited in use, the mail request is on approximately two of every three web sites studied.

Recommendations for Further Study

Although the study of Internet marketing in higher education institutions was purposefully limited, it did demonstrate that there is a significant need to drive improvement in higher education institutions' approach to communicating with prospective students. Further studies are needed to define how easily a person can locate the information they need to make a

decision about college. Studies should help define what approaches bring in students who are the best match for the college they select so they will have a higher probability of degree completion.

While web site content must match the needs of prospective students, colleges would also benefit from studies that show what page layouts work best and what wording best meets the needs of students. In some cases during the study, there were three different pages on the same web site named prospective students, admissions, and future students, which will just confuse visitors. Colleges want to serve their community as well as they can, but research is still developing for higher education marketing effectiveness.

Recommendations for Practice

The primary objective of this study was to identify if there were differences between two different Carnegie classifications of higher education institutions. Part of the analysis required to complete that objective was to determine what Internet marketing techniques are being used by each of the institutions in the study. While several schools had a majority of Internet marketing techniques present on their web sites, no single institution had all 14 techniques on their site. This means that it is likely that a majority of higher education institutions have opportunities to improve their web sites. Every institution should actively review their use of Internet marketing techniques valued by students and by search engines so that they can be highly visible and valuable to the students who are the best candidates for their institution. For colleges and universities that do not have many of the Internet marketing techniques in place, they should start by implementing the content that students demand the most. If there is doubt about what content students seek most, the institution should survey entering freshmen and ask them what they sought, what they found, and what they did not find. The first implementation step should be to

identify information that is being sought but not found. There are many people who claim to be Internet marketing experts, but if they do not encourage an institution to provide the information that students need most, the institution should seek a marketing expert that understands that a good web site should provide the most valued information before looking at complex graphics, technology, or trying emerging technology approaches.

Discussion

This study takes from and supports existing literature related to online marketing of higher education institutions. While there is significant hesitancy in higher education to engage in a market based environment, competitive pressures will likely increase. By expanding the studies that identify how a college most effectively recruits a student that best fits their institution, formal higher education can potentially outperform schools that focus on marketing alone without considering the core objective of educating students.

Existing literature suggests that many higher education web sites have institution focused navigation on their web sites. However, the research performed in this study indicated that a majority of the study subjects had navigation that was student focused. Some literature expressed that excessive graphics were problematic in higher education web sites, while this study only identified one web site as having excessive graphics that significantly slowed down the browsing experience and made content difficult to find.

Data analysis was often made difficult by content being in pages outside of the primary admissions page of the web site. Because this is a challenge in the research part of this study, this lack of easily finding content may also be a challenge to prospective students who are seeking information about a college. The way that several study subjects had important informational content spread through multiple pages is a limitation with this study configuration.

The unexpected limitation was that a researcher can choose to find content anywhere on the web site or can choose to limit the search to a primary admissions page to identify content that is easily accessible. Without the ability to understand how far a prospective student will go to find the information they value most, setting the search guidelines for presence of internet marketing techniques is not practical in these situations.

One additional limitation discovered by the research performed in this study was that many higher education institutions provide multiple pages on the same web site to attract the prospective student and critical information is scattered across multiple pages. Current literature does not seem to have identified the best page name to let prospective students know which page is the best to visit. To complicate the matter further, student expectations will change depending on what college web sites they have already visited. An expectation of where content might appear will likely be influenced by pages that contained critical content at other college web sites. The page names that were used by the institutions in this study include prospective students, admissions, admission, and new students. Occasionally there were no pages dedicated to incoming students. Even if a school decides to have multiple pages to capture the varied ways students discover their admissions information, having a hyperlinked list of the most important content for the prospective student on all pages could reduce frustration and improve web site performance for the college making the changes.

Chapter Summary

This chapter provides the conclusions to the study and provides concise answers to the research question elements tied to Internet marketing technique usage among the two Carnegie classification institutions studied. This chapter also provides recommendations for further study and recommendations for practice that higher education institutions can use to improve their own

approach to using Internet marketing techniques. The final component of the chapter, discussion, describes the performance of this study compared to literature considered for the basis of this study. The conclusions chapter finishes with an examination of additional limitations of this study like the difficulty in locating critical information on a web site when the information may be spread over multiple pages.

REFERENCES

2010 E-recruiting practices and trends at four-year and two year institutions. (2010). Retrieved September 26, 2010 from www.noellevitz.com/E-ExpectationsSeries

Anctil, E. J. (2008). Recommendations for selling higher education. *ASHE Higher Education Report, 34*(2), 19-30.

Anctil, E. J. (2008). Marketing and advertising higher education. (2008). *ASHE Higher Education Report, 34* (2), 89-98.

Bell, A. D. (2009). College knowledge of 9th and 11th grade students: Variation by school and state context. *The Journal of Higher Education, 80*(6), 663-685.

Brennan, R., & Felekis, G. (2003). Strategic management of marketing and human resources in further education colleges. *Journal of Further & Higher Education, 27*(2), May 2003, 143-156.

Brin, S., & Page, L. (1998). The anatomy of a large-scale hypertextual web search engine. Retrieved October 24, 2010 from http://infolab.stanford.edu/~backrub/google.html

Change in Internet access by age group, 2000-2010. (2010). Pew Internet & American Life Project. Retrieved September 10, 2010 from http://www.pewInternet.org/Infographics/2010/Internet-acess-by-age-group

Coen, R. J. (2009). U.S. advertising revenue by medium. Retrieved October 20, 2010 from http://www.businessinsider.com/us-advertising-spending-by-medium-2009-10

D'Elia, G., & Abbas, J. (2007). The impact of youth's use of the Internet on their use of the public library. *Journal of the American Society for Information Science & Technology, 58*(14), 2180-2196.

E-Expectations 2010: Focusing your e-recruitment effort to meet the expectations of college-bound students. (2010). Noel-Levitz. Retrieved September 26, 2010 from www.noellevitz.com/E-ExpectationsSeries

E-Expectations Report: Scrolling toward enrollment, web site content and the e-expectations of college-bound seniors. (2010). Noel-Levitz. Retrieved November 22, 2010 from www.noellevitz.com/E-ExpectationsSeries

Espadas, J., & Calero, C. (2008). Web site visibility evaluation. *Journal of the American Society for Information Science & Technology*, *59*(11), 1727-1742.

Estabrook, L. (2007). Information searches that solve problems. Pew Internet & American Life Project. Retrieved October 17, 2010 from

http://www.pewInternet.org/~/media//Files/Reports/2007/Pew_UI_LibrariesReport.pdf.pdf

Ezarik, M. (2005, November). Admissions sites earn poor grades. *University Business*. Retrieved October 20, 2010 from http://www.universitybusiness.com/viewarticle.aspx?articleid=145

Fallows, D. (2008). Search engine use. Pew Internet Life. Retrieved October 12, 2010 from www.pewInternet.org/Reports/2008/Search-Engine-Use.aspx

Goldsborough, R. (2005). Get your site noticed without spamming. *Black Issues in Higher Education, 21*(26), 40.

Insights: Internet. (2010). Nielsen. Retrieved October 17, 2010, from http://www.nielsen.com/us/en/insights/top10s/Internet.html

Internet marketing glossary. (2010). Retrieved October 20, 2010, from http://www.market-vantage.com/Internet-marketing-resources/Internet-marketing-glossary-definitions/

Jump, J. (2004). Admission, heal thyself: A prescription for reclaiming college admission as a profession. *Journal of College Admission, 184*, 12-17.

Levy, F. (2008, September 23). MBA admissions web sites: Not all are equal. *Business Week Online*. Retrieved October 20, 2010 from http://www.businessweek.com/bschools/content/sep2008/bs20080922_169763.htm

Lindbeck, R., & Fodrey, B. (2010). Using technology in undergraduate admission: A student perspective. *Journal of College Admission*, 10-17.

Marketing spending at colleges and universities. (2010). Lipman Hearne Insights. July 2010. Retrieved October 20, 2010 from http://www.lipmanhearne.com/keyinsights.aspx

Mentz, G., & Whiteside, R. (2003). Internet college recruiting and marketing. *The Journal of College Admission*, 10-17.

Mentz, G., & Whiteside, R. (2003). Online admissions and internet recruiting: An anatomy of search engine placement. *Educause Quarterly, 4*, 63-66.

Newman, S. & Jahdi, K. (2009). Marketisation of education: Marketing, rhetoric and reality. *Journal of Further & Higher Education, 33*(1), 1-11.

Newspapers face a challenging calculus: Online growth, but print losses are bigger. (2009). Pew Research Center. Retrieved October 18, 2010 from http://pewresearch.org/pubs/1133/decline-print-newspapers-increased-online-news

Owen, R., & Humphrey, P. (2009). The structure of online marketing communication channels. *Journal of Management & Marketing Research, 3*, 54-62.

Parmar, A. (2004). Student e-union: Colleges write textbook on internet marketing. *Marketing News, 38,* 13-14.

Poock, M. C. (2001). How college-bound prospects perceive university web sites: Findings, implications, and turning browsers into applicants. *College & University Journal, Summer 2001,* 15-21.

Poock, M. C., & Bishop, V. (2006). Characteristics of an effective community college web site. *Community College Journal of Research & Practice, 30*(9), 687-695.

Porter, J. (2008). Brand U: Marketing the alma mater. *Business Week Online*. Retrieved October 24, 2010 from http://www.businessweek.com/bschools/content/aug2008/bs2008085_851921.htm

Rainie, L. (2005). Internet: The mainstreaming of online life. *Pew Internet & American Life Project.* Retrieved October 12, 2010 from http://www.pewresearch.org/assets/files/trends2005-Internet.pdf.

Rainie, L. (2010). Internet broadband and cell phone statistics. Retrieved October 12, 2010 from http://www.pewInternet.org/Reports/2010/Internet-broadband-and-cell-phone-statistics.aspx

Raisman, N. A. (2003, February 14). Ah, what rotten webs we weave. *Chronicle of Higher Education, 49*(23).

Rideout, V. J. (2010). Generation M2: Media in the lives of 8- to 18-year olds. A Kaiser Family Foundation Study. Retrieved October 18, 2010 from www.kff.org/entmedia/upload/8010.pdf

Rizvi, S., & Khan, M. (2010). The uniqueness of educational marketing. *Journal of Economics & Engineering, 4*, 39-43.

Robles, M. (2009). An Analysis of business education recruitment strategies over the past 25 years: Then and now. *Delta Pi Epsilon Journal, 51*(1), 1-14.

Search engine (computing). (2010). Retrieved October 20, 2010, from http://en.wikipedia.org/wiki/Search_engine_(computing)

Search engine optimization (2006). *Journal of Visual Communication in Medicine, 29*(1), 39-40.

Search engine optimization SEO glossary. (2010). Retrieved October 20, 2010, from www.georgiaseo.net/georgia-search-engine-optimization-glossary-of-seo-terms.html

Search engine optimization starter guide. (2010). Retrieved October 18, 2010 from http://www.google.com/webmasters/docs/search-engine-optimization-starter-guide.pdf

Search engine ranking factors V3. (2009). Retrieved October 18, 2010 from http://www.seomoz.org/article/search-ranking-factors

SEM glossary. (2010). Retrieved October 20, 2010, from http://searchenginewatch.com/define

Sitemaps XML format. (2010). Retrieved October 20, 2010, from http://www.sitemaps.org/protocol.php

Survey of college marketing programs, 2007 edition. (2007). New York: Primary Research Group.

Top 20 sites and engines. (2010). *Hitwise*. Retrieved October 24, 2010 from http://www.hitwise.com/us/datacenter/main/dashboard-10133.html

Top community college admissions web sites. (2008). *Community College Journal, 78*(4), 40.

Wilson, R. (2010, February 12). For-profit colleges change higher education's landscape. *Chronicle of Higher Education, 56*(22).

APPENDICES

APPENDIX A: Data Gathering Instrument

Item Number	Description	Response Options	College 1
Carnegie-1	College Name	Multiple	
Carnegie-2	Grouping	Assoc/Pub4 Associates or Research Universities/High	
Content-1	Online Applications	1 for Yes, 2 for No	
Content-2	Cost Calculator	1 for Yes, 2 for No	
Content-3	Online Course Information	1 for Yes, 2 for No	
Content-4	Admissions Contact Information	1 for Yes, 2 for No	
Content-5	Visit Request	1 for Yes, 2 for No	
Content-6	Mail Information Request	1 for Yes, 2 for No	
Content-7	Student Focused Navigation	1 for Yes, 2 for No	
SEO-1	H1 Use	1 for Yes, 2 for No	
SEO-2	Page Title	1 for Yes, 2 for No	
SEO-3	Description Meta Tag	1 for Yes, 2 for No	
SEO-4	Relevant Keyword	1 for Yes, 2 for No	
SEO-5	User Friendly Page Address	1 for Yes, 2 for No	
SEO-6	Sitemap.XML Presence	1 for Yes, 2 for No	
SEO-7	Robots.TXT Presence	1 for Yes, 2 for No	

APPENDIX B: List of Colleges for Research Universities with High Research

Name	**City**	**State**
Auburn University Main Campus	Auburn	AL
Boston College	Chestnut Hill	MA
Catholic University of America	Washington	DC
Claremont Graduate University	Claremont	CA
Clark University	Worcester	MA
Clarkson University	Potsdam	NY
Colorado School of Mines	Golden	CO
Florida Atlantic University	Boca Raton	FL
Howard University	Washington	DC
Idaho State University	Pocatello	ID
Illinois Institute of Technology	Chicago	IL
Louisiana Tech University	Ruston	LA
Loyola University Chicago	Chicago	IL
Northeastern University	Boston	MA
Northern Arizona University	Flagstaff	AZ
Northern Illinois University	Dekalb	IL
Rutgers University-Newark	Newark	NJ
Saint Louis University-Main Campus	Saint Louis	MO
San Diego State University	San Diego	CA
Southern Illinois University Carbondale	Carbondale	IL
Stevens Institute of Technology	Hoboken	NJ

(table continues)

APPENDIX B (continued)

Teachers College at Columbia University	New York	NY
The University of Alabama	Tuscaloosa	AL
The University of West Florida	Pensacola	FL
University of Alaska Fairbanks	Fairbanks	AK
University of Colorado Denver	Denver	CO
University of Denver	Denver	CO
University of Idaho	Moscow	ID
University of Missouri-St Louis	Saint Louis	MO
University of New Hampshire-Main Campus	Durham	NH
University of New Orleans	New Orleans	LA
University of South Alabama	Mobile	AL

APPENDIX C: List Of Colleges for Public 4-Year Primarily Associates

Name	**City**	**State**
Abraham Baldwin Agricultural College	Tifton	GA
Chipola College	Marianna	FL
College of Southern Nevada	Las Vegas	NV
Daytona State College	Daytona Beach	FL
Edison State College	Fort Myers	FL
Florida State College at Jacksonville	Jacksonville	FL
Gainesville State College	Oakwood	GA
Gordon College	Barnesville	GA
Indian River State College	Fort Pierce	FL
Kent State University Ashtabula Campus	Ashtabula	OH
Miami Dade College	Miami	FL
Miami University-Hamilton	Hamilton	OH
Middle Georgia College	Cochran	GA
Northwest Florida State College	Niceville	FL
Ohio University-Chillicothe Campus	Chillicothe	OH
Oklahoma State University Institute of Technology-Okmulgee	Okmulgee	OK
Oregon State University-Cascades Campus	Bend	OR
Peninsula College	Port Angeles	WA
South Texas College	McAllen	TX
University of Connecticut-Stamford	Stamford	CT
University of Hawaii Maui College	Kahului	HI

(table continues)

APPENDIX C (continued)

University of Minnesota-Rochester	Rochester	MN
Utah State University-Regional Campuses and Distance Education	Logan	UT
Western Nevada College	Carson City	NV