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Management information systems: an information portal for a major with limitless interpretations

Benjamin Richard Lahue

University of Northern Iowa

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MANAGEMENT INFORMATION SYSTEMS
AN INFORMATION PORTAL FOR A MAJOR WITH LIMITLESS INTERPRETATIONS

A Thesis Submitted
In Partial Fulfillment
of the Requirements for the Designation
University Honors

Benjamin Richard Lahue
University of Northern Iowa
May 2014
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INTRODUCTION

Management Information Systems often referred to as MIS is the people-oriented use of computers in business. MIS is both a field of study and a career path. It combines the foundations of computing, analysis, and business into one field of study. MIS is a major that is growing in popularity; however, it is still unknown to many undergraduates. This thesis includes both research and creative aspects. The information gathered by research was used to generate the requirements for an information portal relating to the MIS program at the University of Northern Iowa (UNI). A portal is a one stop shop for information, resources, and tools relating to a specific topic, in this case, MIS. The primary purpose of the information portal is to be a resource of vital information relating to the MIS program at UNI. This portal is directed towards three primary audiences: prospective students, current students, and alumni. The portal provides information relating to what MIS is, why to choose MIS as a major, what MIS majors can do, and what the MIS program at UNI entails. In addition, the portal provides current undergraduates with key resources for success such as potential employers, what alumni have done, and job opportunities.

An information portal for the MIS program at the College of Business Administration at UNI (also referred to as UNIBusiness) does already exist; however, there are some issues with the current portal. The existing portal has not been maintained in some time and as such, it is not always the best source of information. In addition, technology has changed greatly in the just the past few years which has rendered the existing portal outdated. Currently the existing portal is not a centralized information source; information relating to MIS is currently scattered across the UNIBusiness site. Finally, the desires and expectations of students have changed greatly over the past few years. Since the portal is geared primarily towards students, it must meet their desires and expectations. It is a combination of these factors that prompted this thesis, the creation of an information portal for the MIS program at UNI.
RESEARCH
Introduction

When developing an information system it is important that the end users are highly involved from the beginning of a project. Since the end users will be the ones utilizing the system, it must cater to their needs and desires. Often times, users have the most input when it comes to system requirements. The system requirements for this thesis were generated from the research conducted. Data relating to the requirements for the information portal came primarily from three sources. Research included a review of other existing similar sites at various institutions, interviews of faculty and students, and a survey of current UNI students. Reviewing other existing similar sites at various institutions provided a baseline for what the portal should include. Other sites typically included information about what MIS is, what individuals who major in MIS can do, why someone should choose major, and what the MIS program entails. The final information portal addresses all of these fundamental points. To better understand why business undergraduates at UNI chose their major and what information they knew about the MIS program, a survey was created and administered to students. This survey gathered basic classification information, data relating to why students chose their major, their perception of MIS majors, and finally what it is that they knew about the MIS program at UNI. By collecting this information I was able to find what information prospective students look for and what information is necessary to include in the portal. Knowing what prospective students look for is key; however, the portal also needed to cater to the needs of current students. Short interviews were conducted with faculty to understand what it is they would like to see in an information portal. Faculty have the insight as to what it is that students often do not know about MIS as well as factors that are critical to the MIS program at UNI. The data from the survey, information gathered by interviews, and site reviews were combined to create a comprehensive and detailed list of requirements for the portal. The comprehensive requirements were the starting point for the actual construction and development of the information portal.
Source Review

The source review examined similar and existing information portals at other institutions. Below is a summary of MIS information portals at a variety of institutions across the United States. These institutions were chosen for a several reasons such as: the ranking of their MIS program, how much information was provided on their site, or their similarity to the University of Northern Iowa.

When looking at the MIS site of the University of West Florida it was immediately apparent that it is fairly basic. All of the information relating to MIS is on one page and is not laid out well. The site contains the most basic of information relating to what students say about the program, some possible employers, career paths, and what you will learn in the program. While this information is definitely a foundation, it is very limited (University of West Florida).

The MIS page at Georgia College and State University is fairly robust and contains a variety of information relating to MIS. The site touches on basic information such as what MIS is, possible careers, and salary expectations. The site does include both a student spotlight and a career highlight (this could be considered an alumni highlight). In addition to student and alumni information, the site contains announcements, student resources, and a link to the MIS program’s Facebook page. The site is well-rounded; however, things such as announcements and spotlights have not been updated in some time (Georgia College and State University).

The University of Alabama has a very media rich site including custom graphics and a quick introduction to the MIS program. The program does have a presence on Twitter, Facebook, LinkedIn, and a WordPress blog. The site does contain a good number of well written student testimonials. Student involvement is pushed on the website; however, links for more information relating to this area are broken. Faculty profiles are also present allowing students to find out some basic information about their professors. Finally, an area dedicated to undergraduate resumes is available which makes it easy for employers to contact potential job candidates. The University of Alabama’s site is inclusive of various aspects of MIS but the content is not always well organized (The University of Alabama).

The University of Arizona’s MIS program has many elements (online courses, graduate studies, etc.) which is geared to many audiences. Similar to other sites this site contains basic MIS information. The site does have up-to-date news and upcoming events as well as alumni news and profiles. Two features not found in other sites are the inclusion of an area dedicated to open job postings (a MIS job board) as well as an area containing information about scholarships available to MIS students. The site does incorporate staff information and integrates its ranking and performance throughout. Similar to the University of Alabama site, it is very robust but not necessarily organized effectively or efficiently (The University of Arizona, 2013).

Purdue University has a basic MIS information portal that showcases select program information; however, the site does have a few elements that set it apart. The site includes an area that focuses on faculty accomplishments and a section that contains information relating to their research workshops. In addition to these distinguishing factors, this site includes other common elements such as courses, rankings, and faculty information. Ultimately, the site is well laid out and very concise (Purdue University, 2013).
Iowa State University has a brief section relating to MIS. This page contains information about major requirements, the differences between MIS and other majors, as well as some basic contact information. In addition, the site is primarily text and does not contain useful functions, images, or integration of other media. Overall the content on the site is not robust nor does it explain what MIS is (Iowa State University, 2013).

After examining these six sites there are both common components and some elements that stand out. Every site included basic information relating to what MIS is and what the program entails. Useful components only found on select sites were: social media integration, alumni and student profiles, staff information, scholarship information, student involvement, and career information such as employers or a job board. After doing a source review it is more apparent that not all sites are well organized, effective, and updated regularly; the MIS information portal at UNI constructed for this thesis addresses all three of these key concerns.

**Literature Review**

A portion of this thesis included research to gather what students already know about MIS, how they chose their major, and their perceptions of the MIS program. In order to gain data on these subjects a survey was administered. The literature review focused on other surveys given to students that address student major choice and major perceptions.

One survey was administered at a university to business majors that were enrolled in a required MIS course. This study was based upon the Theory of Reasoned Action (TRA) framework. Within the TRA framework individuals are motivated by their beliefs to take specific actions. This survey also factored in previous research as to what beliefs influence major choice. The survey included demographic questions as well as those needed to assess influencers of major choice. The survey found that a student’s genuine interest in information systems significantly influenced their major choice. The other factors did not heavily influence a student’s major choice. Interestingly, the study did find that factors influence males and females differently. This survey served as a foundation for the undergraduate survey administered at UNI; items such as the TRA framework and influencers were key concepts taken from this survey (Kuechler, McLeod, & Simkin, 2009).

A similar research study was administered at another university to business students in a required MIS course. However, in this survey two new types of data were collected. In the previous survey respondents were asked for demographic and influencer related questions. The later survey also included questions relating to the perception of the MIS program and where students have gained their knowledge relating to the MIS program. This study found that job security, salary, and personal interest were some of the most important factors in the decision of a student’s major. Important career choice information came from friends and family, the internet, and major related courses. The study found that guest speakers, academic advisors,
and other factors play less of an integral role in major choice. Finally, students generally had a positive perception of the MIS program. This survey built upon the first in that it included elements focusing specifically around MIS. The idea to include MIS related questions and areas of focus directly stemmed from this survey (Li & Thomson, 2011).

The third and final study was conducted in a very similar fashion. A survey that incorporated the TRA framework and major influencers was administered to business students. This survey was only given to declared business majors and was administered in a core business course, not necessarily a MIS course. The survey found that students were interested in their field of choice and were happy with their choice of major. Similar to the second survey, this survey found that external influencers such as counselors, friends, and other students had little impact in their major choice. This study did also find that both job availability and security are strong influencers. Most importantly, this research clearly outlines that MIS and Non-MIS majors are influenced differently, and MIS students themselves have greatly varying influencers. This study not only solidified the foundation established by the other two surveys, it generated a final aspect of the survey administered at UNI. This survey examined differences between MIS and Non-MIS majors when it came to influencers; the idea of examining these differences was integrated in to the survey administered at UNI (Downey, McGaughey, & Roach, 2011).

The three sources reviewed have very similar foundations. All of the surveys administered are based off of the TRA framework and are centered on student belief influencers. It is a common occurrence that genuine interest in a major is a key influencer. In addition, other things such as salary and job security tended to play an important role; however, external influencers such as counselors, students, and friends tended to not have an impact. It was apparent that each survey attempted to use demographic data to segment the data collected to better determine which influencers impacted certain individuals. These three surveys served as a foundation for the construction of the survey that was administered at UNI.

**Methodology**

Research conducted as part of this thesis included a review of other existing similar sites at various institutions, interviews of faculty and students, and a survey of current UNI students. While the various research processes were highly related, the samples and methods for each type of research were very distinct. University MIS sites considered in the site review were selected for a few reasons. Some universities were selected based on their direct competition with UNI. Other universities were chosen based on the similarities they shared with UNI while others were selected purely because of their national ranking. For each site, elements such as content, functions, and aesthetics were reviewed with
an objective eye. The review of other existing similar sites at various institutions provided a baseline for what the UNIBusiness MIS portal should include. The selection of participants for interviews was straightforward. Faculty members were selected due to their involvement with the MIS program at UNI, knowledge of MIS as an area of study, and experience working in MIS related professions. Faculty were asked questions relating to student needs, desired functions, and pertinent information to be included in the portal. Students selected for interviews were chosen based on their performance within the MIS program, professional experience, and overall MIS involvement. Students were asked questions relating to desired functions and pertinent information to be included in the portal. Student and faculty responses were summarized and reviewed; some provided responses became system requirements.

A majority of the research data utilized in this thesis came from the survey administered at UNI. The survey was designed around the TRA framework and notion of influencers discussed in the literature review section. The survey was constructed to gather classification information, data relating to why student chose their major, their perception of MIS majors, and finally what they knew about the MIS program at UNI. In order to obtain the most accurate data, it was necessary to focus on students still early on in their undergraduate career. By focusing on underclassmen, the survey results gave a better depiction of what students knew about MIS before taking advanced courses. In addition, focusing on underclassmen placed a larger emphasis on factors that influence major choice, especially when examining first year students. It was decided that the survey was to be administered in a required business course on information technology (MGMT 2080 - Introduction to Information Systems). This course is often taken by students early on in their undergraduate career (first or second year). All instructors of the information systems course were asked to set aside fifteen minutes for the administration of the survey, all instructors agreed to the request. The final survey, which can be seen in Appendix A, was administered to 171 students during the required course. Students were asked to fill out the survey to the best of their ability while providing honest feedback. Participation in the study was voluntary; students could refuse to answer any question and withdraw from the study at any point.
All students were made aware that the survey did not impact their course grade, there were no direct benefits to them as a result of taking the survey, and there were no risks associated with taking the survey. There were no complications encountered while administering the survey. Answers to the survey were completely anonymous and after the responses had been recorded, the questionnaires were destroyed. An analysis of the summarized findings was then conducted; the analysis and findings will be addressed in the results section.

Results

As noted previously, the survey was administered to 171 students; however, eight surveys were discarded from the sample as they were not completed by business majors (the desired sample). A major and gender breakdown of respondents can be seen in Table 1. This table shows that the students in the sample have a wide range of majors; however, a majority of students were accounting and management majors. The students in the sample are a good representation of the College of Business Administration student population. Table 2 shows average student grade point average (GPA) by gender and major. This table shows that the students participating in the survey possessed a wide range of GPAs. The students responding on average possessed a B average GPA, slightly above the College of Business Administration average GPA.
### Table 1

<table>
<thead>
<tr>
<th>Major</th>
<th>Female</th>
<th>Male</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting</td>
<td>24</td>
<td>23</td>
<td>47</td>
</tr>
<tr>
<td>Business Teaching</td>
<td>2</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Economics</td>
<td>1</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>Finance</td>
<td>9</td>
<td>16</td>
<td>25</td>
</tr>
<tr>
<td>Management</td>
<td>16</td>
<td>34</td>
<td>50</td>
</tr>
<tr>
<td>Marketing</td>
<td>8</td>
<td>17</td>
<td>25</td>
</tr>
<tr>
<td>MIS</td>
<td>0</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Real Estate</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>61</strong></td>
<td><strong>102</strong></td>
<td><strong>163</strong></td>
</tr>
</tbody>
</table>

### Table 2

<table>
<thead>
<tr>
<th>Major</th>
<th>Female</th>
<th>Male</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting</td>
<td>3.48</td>
<td>3.21</td>
<td>3.35</td>
</tr>
<tr>
<td>Business Teaching</td>
<td>2.95</td>
<td>NA</td>
<td>2.95</td>
</tr>
<tr>
<td>Economics</td>
<td>4.00</td>
<td>3.14</td>
<td>3.25</td>
</tr>
<tr>
<td>Finance</td>
<td>3.46</td>
<td>2.92</td>
<td>3.12</td>
</tr>
<tr>
<td>Management</td>
<td>3.36</td>
<td>3.18</td>
<td>3.24</td>
</tr>
<tr>
<td>Marketing</td>
<td>2.94</td>
<td>2.97</td>
<td>2.96</td>
</tr>
<tr>
<td>MIS</td>
<td>NA</td>
<td>3.07</td>
<td>3.07</td>
</tr>
<tr>
<td>Real Estate</td>
<td>3.10</td>
<td>NA</td>
<td>3.10</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>3.36</strong></td>
<td><strong>3.10</strong></td>
<td><strong>3.20</strong></td>
</tr>
</tbody>
</table>

**Table 3** shows average response values broken down by question and major grouping (MIS or Non-MIS).

This table allows us to see that MIS and Non-MIS students had approximately equivalent survey responses. It is important to note that there were only five MIS students in the sample, compared to 158 Non-MIS students. **Table 4** shows the standard deviation of response values broken down by question and major grouping (MIS or Non-MIS). The standard deviation between the two groupings (MIS and Non-MIS) was approximately equivalent across the questions; there is only a small amount of variation between questions.
### Table 3

<table>
<thead>
<tr>
<th>Mean of Responses</th>
<th>Non-MIS</th>
<th>MIS</th>
<th>Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Question 7</td>
<td>6.12</td>
<td>6.6</td>
<td>6.13</td>
</tr>
<tr>
<td>Question 8</td>
<td>5.73</td>
<td>5.8</td>
<td>5.74</td>
</tr>
<tr>
<td>Question 9</td>
<td>5.77</td>
<td>5.4</td>
<td>5.76</td>
</tr>
<tr>
<td>Question 10</td>
<td>5.85</td>
<td>5.2</td>
<td>5.83</td>
</tr>
<tr>
<td>Question 11</td>
<td>5.01</td>
<td>4.60</td>
<td>5.00</td>
</tr>
<tr>
<td>Question 12</td>
<td>5.66</td>
<td>5.80</td>
<td>5.66</td>
</tr>
<tr>
<td>Question 13</td>
<td>5.23</td>
<td>4.80</td>
<td>5.22</td>
</tr>
<tr>
<td>Question 14</td>
<td>5.47</td>
<td>5.20</td>
<td>5.46</td>
</tr>
<tr>
<td>Question 15</td>
<td>5.57</td>
<td>4.20</td>
<td>5.53</td>
</tr>
<tr>
<td>Question 19</td>
<td>5.52</td>
<td>6.20</td>
<td>5.54</td>
</tr>
<tr>
<td>Question 20</td>
<td>5.54</td>
<td>5.60</td>
<td>5.55</td>
</tr>
<tr>
<td>Question 21</td>
<td>4.43</td>
<td>5.40</td>
<td>4.46</td>
</tr>
<tr>
<td>Question 22</td>
<td>2.54</td>
<td>3.20</td>
<td>2.56</td>
</tr>
<tr>
<td>Question 23</td>
<td>3.20</td>
<td>3.00</td>
<td>3.19</td>
</tr>
<tr>
<td>Question 24</td>
<td>5.47</td>
<td>4.80</td>
<td>5.45</td>
</tr>
<tr>
<td>Question 25</td>
<td>4.64</td>
<td>4.80</td>
<td>4.64</td>
</tr>
</tbody>
</table>

### Table 4

<table>
<thead>
<tr>
<th>Standard Deviation of Responses</th>
<th>Non-MIS</th>
<th>MIS</th>
<th>Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Question 7</td>
<td>1.14</td>
<td>0.55</td>
<td>1.13</td>
</tr>
<tr>
<td>Question 8</td>
<td>1.26</td>
<td>0.84</td>
<td>1.25</td>
</tr>
<tr>
<td>Question 9</td>
<td>1.23</td>
<td>1.34</td>
<td>1.23</td>
</tr>
<tr>
<td>Question 10</td>
<td>1.16</td>
<td>1.1</td>
<td>1.16</td>
</tr>
<tr>
<td>Question 11</td>
<td>1.41</td>
<td>1.52</td>
<td>1.41</td>
</tr>
<tr>
<td>Question 12</td>
<td>1.14</td>
<td>1.64</td>
<td>1.15</td>
</tr>
<tr>
<td>Question 13</td>
<td>1.30</td>
<td>1.64</td>
<td>1.31</td>
</tr>
<tr>
<td>Question 14</td>
<td>1.22</td>
<td>1.30</td>
<td>1.22</td>
</tr>
<tr>
<td>Question 15</td>
<td>1.22</td>
<td>1.30</td>
<td>1.24</td>
</tr>
<tr>
<td>Question 19</td>
<td>0.98</td>
<td>0.45</td>
<td>0.97</td>
</tr>
<tr>
<td>Question 20</td>
<td>0.97</td>
<td>0.89</td>
<td>0.97</td>
</tr>
<tr>
<td>Question 21</td>
<td>1.52</td>
<td>1.14</td>
<td>1.52</td>
</tr>
<tr>
<td>Question 22</td>
<td>1.15</td>
<td>1.79</td>
<td>1.18</td>
</tr>
<tr>
<td>Question 23</td>
<td>1.51</td>
<td>1.87</td>
<td>1.52</td>
</tr>
<tr>
<td>Question 24</td>
<td>1.12</td>
<td>0.84</td>
<td>1.11</td>
</tr>
<tr>
<td>Question 25</td>
<td>1.27</td>
<td>1.10</td>
<td>1.27</td>
</tr>
</tbody>
</table>
While survey responses varied considerably, there are some factors in undergraduate major choice that were significant. Often students were planning on working in a field related to their major once they graduate (Question 7). Most students were happy with their current major choice (Question 8). Students often chose their major due to a sincere interest in that field of study (Question 9). Finally, many students indicated they chose their major since they have the skills and knowledge to succeed in the major (Question 10). The questions relating to MIS were far less conclusive. Most responses ranged from a score of three to five across the seven MIS questions.

The responses of the short answer questions cannot be quantified or compared with similar questions; however, there was a common theme across these question responses. More often than not, students looked to the Internet to find more information relating to their major. Students indicated that it was difficult to find information relating to job opportunities, major program requirements, and potential salaries for those in a similar field of study. When responding to MIS related questions, students often replied that those majoring in MIS can work with computers and that they did not know much if anything about the MIS program at UNI.

**Summary and Conclusions**

Through the reviews of other existing similar sites at various institutions, faculty and student interviews, and the administration of a survey to current UNI students, the necessary data to compile the requirements for the information portal was gathered. The various research methods showed that information such as what MIS is, what potential careers are for someone with a degree in MIS, and what the MIS program at UNI entails is vital to the success of the portal. The different sources allowed for the gathering of certain functions and features that should be included in the portal; these were used throughout the development of the portal. In addition, it was evident that students (both MIS and Non-MIS) often pick their major because they enjoy the field, will work in the field one day, and have the skills and knowledge to succeed in that program. Since the information portal is geared primarily
towards prospective and current undergraduate students, it must contain everything this audience desires and function to their liking. All of the data and general information gathered during the research process was utilized in one way or another during the development of the portal. The development of the portal itself will be addressed in depth within the next section.
PORTAL DEVELOPMENT

Planning

The development of the portal was broken down into five phases, each of which are described briefly in Figure 1. The phases for this project are consistent with a modified version of the systems development lifecycle commonly seen in the development of information technology projects (Federal Financial Institution Examination Council). Each phase contains a series of activities and out of each phase is an end product, a deliverable. Each phase will be further described in its own section.

Figure 1

- **Requirements**: During this phase all preliminary requirements are gathered and refined. **Deliverable**: A compiled list of final requirements.
- **Design**: During this phase a basic site design is created and approved. **Deliverable**: An approved site design and layout.
- **Development**: During this phase all site content is added and necessary functions are programmed. **Deliverable**: The completed site with all needed content and functions.
- **Testing**: During this phase programmed site functions are tested. **Deliverable**: A fully functioning and error-free system.
- **Implementation**: During this phase the site is implemented into its live environment and users are trained. **Deliverable**: A live version of the site accessible and all necessary users are trained.
Requirements

Portal requirements came from a variety of sources with a majority originating from faculty. These preliminary portal requirements were compiled and further refined. A preliminary list of requirements can be seen in Table 5. From this list of preliminary requirements, a final list was compiled (Table 6). This list of final portal requirements was used in the development of the system.

Table 5

<table>
<thead>
<tr>
<th>Preliminary System Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>• The system should contain class and program information</td>
</tr>
<tr>
<td>• The system should contain statistics on MIS related jobs</td>
</tr>
<tr>
<td>• The system should contain faculty profiles</td>
</tr>
<tr>
<td>• The system should contain information about potential employers and careers for MIS majors</td>
</tr>
<tr>
<td>• The system should be applicable to both current and future students</td>
</tr>
<tr>
<td>• The system should explain the competitive advantage of the MIS program at UNI over other programs in the state</td>
</tr>
<tr>
<td>• The system should contain a faculty blog</td>
</tr>
<tr>
<td>• The system should integrate with existing social media</td>
</tr>
<tr>
<td>• The system should contain a job board</td>
</tr>
<tr>
<td>• The system should be well documented</td>
</tr>
<tr>
<td>• The system should showcase student work</td>
</tr>
<tr>
<td>• The system should include a map of where MIS alumni are located</td>
</tr>
<tr>
<td>• The system should have an area for alumni</td>
</tr>
<tr>
<td>• The system should be easily updatable</td>
</tr>
<tr>
<td>• The system should be updated on a regular basis</td>
</tr>
<tr>
<td>• The system should look appealing</td>
</tr>
<tr>
<td>• The system should be easy for users to navigate and utilize</td>
</tr>
</tbody>
</table>

Table 6

<table>
<thead>
<tr>
<th>Final System Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>• The system will have an area describing what MIS is, what majors can do, and why people should major in MIS</td>
</tr>
<tr>
<td>• The system will have an area for the MIS program at UNI which will include classes, program requirements, and transfer information</td>
</tr>
<tr>
<td>• The system will have a blog containing posts relating to faculty, student success, and alumni happenings</td>
</tr>
<tr>
<td>• The system will have job board containing available positions for current undergraduates</td>
</tr>
<tr>
<td>• The system will be well documented</td>
</tr>
<tr>
<td>• The system will be easily updatable</td>
</tr>
<tr>
<td>• The system will be updated on a regular basis</td>
</tr>
<tr>
<td>• The system will be visually appealing</td>
</tr>
<tr>
<td>• The system will be easy for users to navigate and utilize</td>
</tr>
</tbody>
</table>
Design

During the design phase, a large amount of time was spent with MIS faculty to create an approved design and layout. It was required that the design be visually appealing while staying within the constraints of the university. The UNIBusiness site was used as a base for consistency purposes. Using this base, interactive functions were integrated in to the site. The final layout was approved by faculty and used as the base of the new system.

Development

The development phase involved gathering of site content and integrating it in to the portal. The blog and job board portions of the system were programmed during this time. Additional specific functionality was integrated in to the system during this phase as well. Specific functionality items often were created from scratch, involved the use of media such as photos, and allowed interaction from site visitors. A portion of the system is an administration panel that allows select individuals to easily update and maintain the system. The administration portion of the system was created during this time.

Testing

The testing phase is meant to serve as an overall project check. During this phase all of the programmed site functions were tested to ensure that they function appropriately and properly. Some tests included user acceptance, form, and browser compatibility testing. User acceptance testing ensured that users were satisfied with the final system and it was easy for them to use. Form testing made sure that forms created for the administration portion of the site handled values appropriately, whether they were entered properly or not. Finally, browser compatibility testing was used to verify that the website functioned the same on most web browsers regardless of their capabilities or versions. Upon final completion of all testing, the system was ready for implementation.
**Implementation**

During the implementation phase the final system was launched and all users were trained. The live version of the system is accessible to everyone that has Internet access. The live system itself can be viewed by navigating to http://business.uni.edu/iss/. Necessary users trained included those that will publish blog posts and those that will maintain the job board portion of the website. User documentation, which can be seen in Appendix B, served as a training guide. Necessary users were given copies of the documentation so that they may reference it at any time in the future.

**Summary**

The initial purpose of this thesis was to create an information portal relating to the MIS program at UNI. The development lifecycle specified for the project was completed start to finish and as such, the desired portal has been created. Utilizing the information gathered from the research aspect of this thesis, the necessary requirements for the portal were generated. The requirements were the foundation of the portal and allowed the rest of the development lifecycle to progress. Throughout the remaining phases (design, development, testing, and implementation) the portal was brought to life and made visible to the world. The portal now serves as a resource of vital information relating to the MIS program at UNI. The portal contains content for three primary audiences: prospective students, current students, and alumni. The various audiences can find information relating to what MIS is, why to choose MIS as a major, what MIS majors can do, and what the MIS program at UNI entails. In addition, the portal provides current undergraduates with key resources for success such as potential employers, what alumni have done, and job opportunities. The portal will be a resource utilized by students for years to come as UNI Business continues to grow and expand the MIS program. The creation of the information portal reinforced everything that I have learned from the MIS program. Not only did this thesis allow for the application of concepts and ideas in a real world environment, it provided an opportunity to cultivate skills such as communication, critical thinking, and team work.
WORKS CITED


APPENDIX A: STUDENT SURVEY

The Management Information Systems (MIS) major at the University of Northern Iowa (UNI) has continued to grow over the years. To better meet the needs of both prospective students and current students I am conducting a short survey as part of research to find out more about our undergraduates. This collected information will better help the department and faculty tailor available information and resources to students.

As an undergraduate MIS student, I am asking your help in determining what it is that students need most when it comes to MIS program information. The questionnaire accompanying this notice should take no more than ten minutes to complete. Your responses, together with others, will be used for statistical summaries and generalizations only. Your participation in this study is voluntary; you may refuse to answer any question and can withdraw from this study at any point. This questionnaire does not impact your course grade whatsoever. We will be surveying only a small sample of undergraduates so your participation is vital to the study.

Answers to the study are completely anonymous. Your questionnaire will be destroyed once your responses have been recorded. The summarized findings with no identifying information may be published in an academic journal or presented at a scholarly conference. There are no foreseeable risks to you as a participant in this project; nor are there any direct benefits. However, your participation is extremely valued.

If you have any questions relating to the survey please contact me via phone at 319-560-170 or via email at lahue@live.com. If you have questions about your rights as a participant in this research project, please contact the Institutional Review Board (IRB) Human Protections Administration at 319-273-6148.
General Information
1. What is your major? (For double majors please circle both of your majors.)
   a. Accounting
   b. Business Teaching
   c. Economics
   d. Finance
   e. Management
   f. Marketing
   g. MIS
   h. Real Estate

2. What is your gender?
   a. Female
   b. Male

3. What is your class standing?
   a. Freshman
   b. Sophomore
   c. Junior
   d. Senior

4. What is your current age in years?

5. What is your current overall grade point average (GPA)?

6. How many times have you changed your major(s) since your first declaration? If you have not changed your major or declared your major please write 0.

Major Choice
For each statement below please select the response that best indicates your position on the statement.

<table>
<thead>
<tr>
<th>Completely Disagree</th>
<th>Moderately Disagree</th>
<th>Slightly Disagree</th>
<th>Neutral</th>
<th>Slightly Agree</th>
<th>Moderately Agree</th>
<th>Completely Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

7. I chose my current major because I intend to work in that field once I graduate.

   1  2  3  4  5  6  7
8. I am happy that I chose my current major.

9. I chose my major because I have a genuine interest in my major.

10. I chose my major because I have the skills and knowledge to succeed in it.

11. I chose my major because people think highly of those that studied my major.

12. There are plenty of jobs available for people that graduated with my major, which is why I chose it.

13. People that graduated with my major have job security, which is why I chose it.

14. I chose my major because people that graduated with it have a good salary.

15. When deciding my major it was easy to find information about it.

16. When looking for information relating to your major, where did you look?

17. What were some problems you ran into while looking for information relating to your major?

18. Was there any information you had trouble finding relating your major?
MIS Major
For each statement below please select the response that best indicates your position on the statement.

<table>
<thead>
<tr>
<th>Completely Disagree</th>
<th>Moderately Disagree</th>
<th>Slightly Disagree</th>
<th>Neutral</th>
<th>Slightly Agree</th>
<th>Moderately Agree</th>
<th>Completely Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

19. MIS graduates have good and well-paid jobs.

1 2 3 4 5 6 7

20. MIS graduates have job opportunities and security.

1 2 3 4 5 6 7

21. MIS is a fascinating field of study.

1 2 3 4 5 6 7

22. MIS is an easy major that requires little work to graduate.

1 2 3 4 5 6 7

23. MIS majors tend to be nerds and geeks.

1 2 3 4 5 6 7

24. MIS coursework can make me more competitive in the job market.

1 2 3 4 5 6 7

MIS Program
25. Information relating to the MIS program at UNI is abundant and easily accessible.

1 2 3 4 5 6 7

26. How much do you know about the MIS program at UNI?
   a. A lot
   b. Some
   c. A little
   d. None

27. What are some specific things you know about the MIS program at UNI?

28. What are some possible careers for individuals that study MIS?
APPENDIX B: USER DOCUMENTATION
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Logging In
1. Navigate to the administration panel.
2. Enter your username and password.
   a. NOTE: Your password is case sensitive.
3. Click “Login” and you will be redirected to the administration panel.

Logging Out
1. Click “Logout” from the left hand side navigation.
   - ADD POST
   - EDIT POST
   - ADD CATEGORY
   - EDIT CATEGORY
   - ADD USER
   - EDIT USER
   - ADD POSITION
   - EDIT POSITION
   - LOGOUT
2. Your cookies will be deleted and you will be redirected to the login form.
Adding a Post

1. Click “Add Post” from the left hand side navigation.

2. Enter a descriptive post title and select an appropriate category.

3. When writing the body of the post, ensure that custom styling is used sparingly. Blog posts should be formatted similarly.

4. Check the “Publish” box if you would like post to be shown immediately.

5. Once finished, click “Submit Post” and you will receive a confirmation message.
Editing a Post

1. Click “Edit Post” from the left hand side navigation.

2. Select the post you would like to edit by clicking on its title. Posts are automatically sorted by the date they were composed.

3. Edit the post as necessary and click “Submit Post” once finished, you will be redirected back to the edit form to perform any additional changes.
Adding a Category

1. Click “Add Category” from the left hand side navigation.

2. Enter your new category name and click “Add Category” when finished. You will receive a confirmation message upon submission.
Editing a Category

1. Click “Edit Category” from the left hand side navigation.

2. Select the category you wish to edit from the drop down menu and click “Edit Category” once you have it selected.

3. Edit the category name as necessary and click “Edit Category” when finished. You will receive a confirmation message upon submission.
Adding a User

1. Click “Add User” from the left hand side navigation.

2. When adding a user enter their first name, last name, and title or position (whichever is applicable to the user).

3. A username is required; the standard username format is first initial and last name.
   a. Example: Ben Lahue’s username is BLahue.

4. A password is required and should be set upon account creation. There are no specific password requirements for this system.

5. Select an appropriate role for the user.
   a. The administrator role has access to all functions of the panel. Users with this role have the ability to manage posts, categories, users, and positions.
   b. The blogger role has access to some blog related functions of the panel. Users with this role have the ability to add and edit posts.
   c. The job board role has access to position related functions of the panel. Users with this role have the ability to add and edit positions.

6. The education, professional accomplishments, and interests fields are recommended for bloggers as they are shown on the blogger’s profile.

7. Check the “Active” checkbox if the user account should be active.

8. A PNG image can be uploaded for bloggers, keep image size and quality in mind when deciding on a user photo. This photo will be shown on the blogger’s profile.

9. Once finished, click “Add User” and you will receive a confirmation message.
**Editing a User**

1. Click “Edit User” from the left hand side navigation.

2. Select the user you wish to edit from the drop down menu and click “Edit User” once you have it selected.

3. Edit the user as necessary.
   a. If the password field is left blank, the user’s previous password will be used.
   b. The username cannot be changed.
   c. If a new image is specified, it will overwrite the previous image.

4. Click “Edit User” when finished. You will receive a confirmation message upon submission.
Adding a Position

1. Click “Add Position” from the left hand side navigation.

2. The employer, position, and location fields are required.
   a. The position is equivalent to a job title.
   b. The location field should include both the city and state.

3. The contact fields (name, phone, and email) are optional; however, they are highly recommended.
   a. The phone number must be in the format of 123-456-7890 and the email address must be valid.

4. The expiration date is the date at which the job will no longer appear on the job board.
   a. The date must be in the format of mm/dd/yyyy. It is recommended that you use the date picker tool to the right of the field.

5. Check the “Published” checkbox if the job should be displayed immediately.

6. Once finished, click “Add Position” and you will receive a confirmation message.
Editing a Position

1. Click “Edit Position” from the left hand side navigation.

2. Select the position you would like to edit by clicking on its position name. Positions are automatically sorted by their expiration date.

3. Edit the position as necessary and click “Submit Position” once finished, you will be redirected back to the edit form to perform any addition changes.
This Study by: Benjamin Richard Lahue

Entitled: "Management Information Systems": An information portal for a major with limitless interpretations

has been approved as meeting the thesis requirement for the Designation University Honors.

5/5/14
Date

Dr. Roberta Roth, Honors Thesis Advisor, Department of Management

5/7/14
Date

Dr. Jessica Moon, Director, University Honors Program