

Homepage & Global Header Usability Evaluation Report: University of Idaho

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University
of Idaho

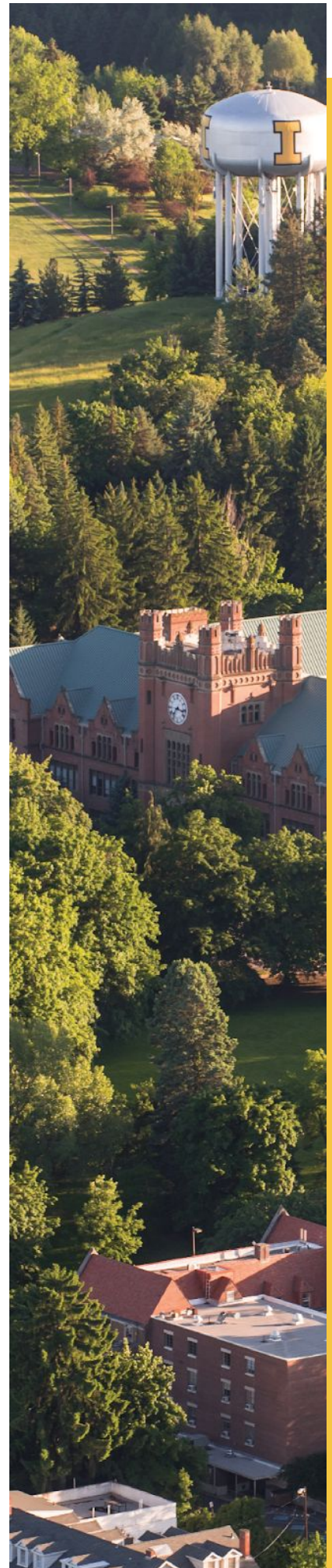


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Executive Summary

This report provides a usability analysis of the current University of Idaho homepage and global header (www.uidaho.edu). In this report, various methods were used to identify any usability issues in the current homepage and global header. Firstly, an online survey was utilized to gain information from clients about their expected outcomes of a redesign, the potential audiences, and users' needs and goals. Next, I reviewed usability guidelines specific to the design of university websites. This section gives an overview of the typical usability issues that arise within a university website, and ways to address them.

Afterwards a heuristic markup based on the 10 heuristic guidelines developed by Jakob Nielsen in 1994 was conducted on the current homepage and header. Several usability issues in terms of the information architecture within the global header, and the use of image carousels to present media content were found. The heuristic markup was followed by a competitive analysis. The analysis was conducted on the homepage and headers of three prominent universities. Design trends and conventions in the way information was presented to users were identified through the process. A heatmap listing the various header elements in each institution's web page was developed in order to understand trends in header element naming and order.

Thereafter, user activity within the homepage and header was examined using Google analytics. I examined how often all of the header elements were used, and the user flow from the homepage to the exit page in order to further understand the goals of the user.

After gaining insight into the different usability problems within the homepage and header I proposed the following improvements to be made,

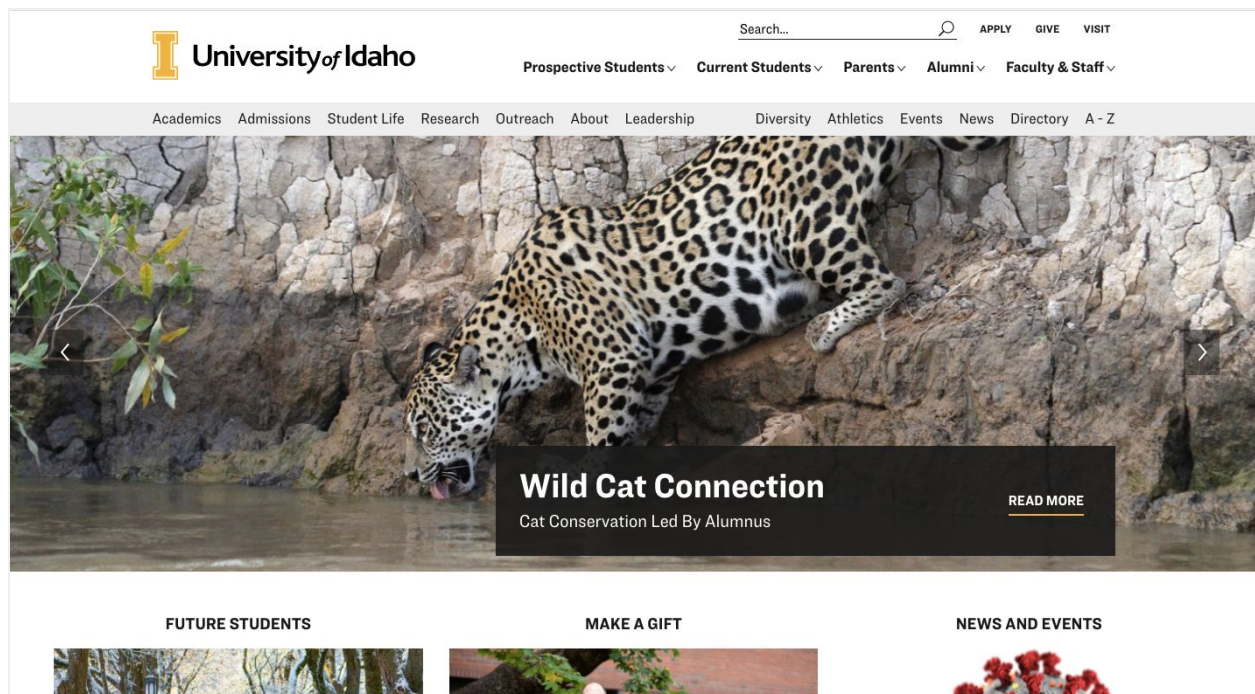
1. Tailor specific content within the homepage (Images, Linked resources etc.) to prospective students
2. Prioritize and re-organize header elements in the Global Header based on elements that are used most frequently and header conventions
3. Re-evaluate presentation methods of media content such as the image carousels in the homepage

Usability & University Websites

An academic institution's website has become a key representation of the college experience it offers to its students. In a study done in 2010 on the importance of university webpages in selecting a higher education institution, 94% of students indicated that they examine the website prior to considering a university (Schimmel, Motley, Racic, Marco, and Eschenfelder). These websites also act as a central source of information to other users such as current students, faculty, and alumni. A diverse range of users access university websites in order to fulfill their specific goals. Thus, it is important to provide users with a platform where they can access the information they need easily.

Figure 1

University of Idaho Homepage & Header



Primary Objectives

1. To recruit prospective students to University of Idaho
2. To ensure easy accessibility of University information for current students, faculty, & staff
3. Ensure that homepage is appealing and exciting to audience

To recruit prospective students to University of Idaho

New student recruitment is a primary goal of higher education institutions. With the growing number of both in-person and online higher education institutions, universities are hard pressed to highlight the unique value of their institutions to attract prospective students' attention.

The university homepage is the first point of contact with prospective students hoping to make the significant decision of which college or university to attend. Thus, it is important to understand and emphasize the information that is key to their decision-making process (Admissions, Academics, Campus Life etc.) on the homepage.

To ensure easy accessibility of University information for current students, faculty, & staff

Current students, faculty, and staff access the homepage in order to fulfill their specific goals. These can be related to accessing learning and communication platforms (Outlook, Bblearn etc.), learning about upcoming events, or viewing the latest in campus news.

Ensure that homepage is appealing and exciting to audience

With growing competition, universities must cut through the noise and present their unique value to students in an exciting and memorable way. It is essential to emphasize the university's core values and strengths on the homepage to attract new students as well as remind current students, faculty, staff, alumni, and parents about the merit of the institution.

Specific Objectives

1. Aid prospective students in accessing the information and resources needed to make an informed decision about attending the University of Idaho, and eventually in completing the application process
2. Aid current students, faculty, & staff in accessing key relevant information quickly and easily
3. Aid prospective students to discover the value of the university experience University of Idaho offers by present its strengths and core values in an exciting and memorable way

Stakeholders, Audiences, & User Stories

Some of the stakeholders of the University of Idaho homepage and global header are listed below. For this project I will be focusing on a select group of users.

- The Web Team
- The Marketing Team
- The Admissions, Enrollment, and Financial Aid offices
- The President of University of Idaho
- Office of Alumni Relations
- Prospective Students
- Current Students
- Faculty
- Staff
- Parents
- Alumni
- Administration and Staff

Prospective Students

Every year, prospective students from around the world begin the process of choosing the college or university they would like to attend. In order to make an informed decision, the first sources of information students turn to are online resources. Prospective students look for information about programs offered, available financial aid and scholarships, the extracurricular activities offered, campus life, financial costs, and steps, requirements and deadlines in the application process. Additionally, typical undergraduate prospective students may tend to have poor research skills that stop them from finding the information they need (Sherwin, 2016). Thus it is important to provide these users with a platform where they can easily and efficiently access key details.

The university homepage is an opportunity to help direct students towards the information they need, while also immersing them in the University of Idaho experience.

User Story

Amy is a 17-year old high school senior that is getting ready to apply for college. She hasn't decided on a major yet, but is keen on taking classes in various subject areas. She wants to find information on the types of programs that are offered at University of Idaho. Although academics are a priority for her, she also wants to "make the most of the college experience" by trying new experiences. However, she doesn't really know how to tell if the experience a specific university offers is right for her or which type of

information to look for to make such a decision. She is interested in four schools, including University of Idaho, but is unsure about applying due to her dilemma.

Current Students

Each year, 2660 students enroll at University of Idaho as first-year, transfer, and graduate students adding to the total of 11,926 that are enrolled. Current students consist of undergraduate, graduate, transfer, non-degree, and distance and extension students. Current students access the homepage to find links to key services such as email (Outlook), online learning management systems (Bblearn), VandalWeb, library resources and more, that allow students to carry out essential tasks. Students also access university online resources to find information about the academic calendar, as well as events happening on campus.

User Story

Roshan is a 23 year old international student from India. He is a Senior at University of Idaho and is making travel plans for graduation in the Spring semester. He typically only uses the homepage to access his email login page, but this time he wants to find the exact date of graduation. Roshan is extremely busy due to his academic, extracurricular commitments and his internship and has little time. While looking for the academic calendar, Roshan comes across the upcoming events section on the homepage. He sees that there is a basketball pregame on Saturday and remembers a friend mentioning it. He decides to attend the game with his friend to take some time off his busy schedule.

Faculty & Staff

Faculty & staff may be primarily interested in accessing the homepage to find links to their email (Outlook), online learning management systems (Bblearn), VandalWeb etc. These users also access the homepage to find information about academic programs in order to advise students on which classes to take, find the contact information of other faculty and staff, access the academic calendar, and to find information about the office of human resources.

Methods

Gathering Requirements with Clients

A survey was developed in order to gather preliminary information about the current homepage and global header and the design requirements from the clients. The aim of this survey was to understand the client's objectives, expectations, and what their metrics of success might be. Furthermore, through the survey I was able to gain vital knowledge about users of the homepage and their needs, and problems they encounter while using the homepage.

The survey consisted of questions regarding the main audiences of the homepage and their goals, major pain-points in the current design, and potential improvements to the design (See Appendix A). From the eleven responses I received, five responses were removed due to incomplete data.

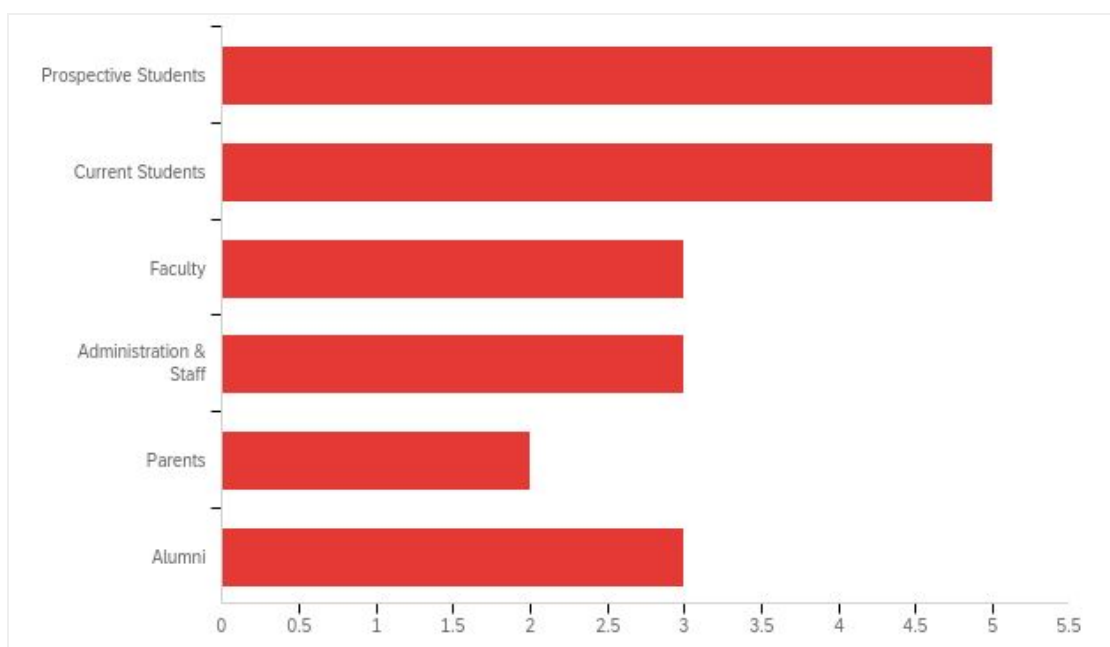
I was able to extract the following insights from the remaining six responses,

Main Audiences

When asked about which audiences to focus on, five out of six respondents identified prospective students and current students (See Figure 2). Respondents also identified faculty, administration and staff, alumni, and parents (less frequently) as secondary audiences of the platform.

Figure 2

Primary & Secondary Audiences of Homepage and Header



The main goals identified for prospective students were,

- Get an overview of the University (Fast facts, job placement, Schedule a campus tour)
- Learn about the academic opportunities at the University (Majors, Online learning, career development)
- Learn about campus life (Where to live, Greek life, Life in Moscow)
- Learn about and completing the application process (Deadlines, Required materials)

Respondents indicated the following goals for current students,

- Learn about upcoming events and important dates (Academic calendar, Breaks, Events on campus, Events in Moscow)
- Find resources critical for academic success (Tools like VandalWeb, VandalStar, Bblearn, Outlook, academic support and tutoring resources, registering for classes)

The goals identified for faculty, administration and staff, parents, and alumni were as follows,

- Faculty, Administration, and Staff may access the homepage to understand noteworthy achievements of departments, colleges, and students
- Parents share the same goals as prospective students, in addition to learning about parking, safety on campus, tuition and living costs, and financial aid
- Alumni may want to learn about donating to the school, upcoming events on campus, and to access *Here We Have Idaho* news articles.

Major Pain-points of Current Design

In the survey I asked respondents to identify the major pain-points of the current homepage and global header design. I was able to gather the following insights,

- The homepage is not updated regularly enough to reflect the latest stories, and the exciting and notable achievements of the University
- The global header is not user-focused and doesn't cater to the main audiences' needs and goals (No content specific to graduate students)
- Global header has too many options, is too cluttered, and not suitable for mobile devices (See Figure 3)

- The image and news carousel on the current homepage doesn't effectively reflect the University's diverse range of achievements. For example the user has to initiate movement through the carousel to view multiple stories by clicking arrows on sides. However, the arrows lack discoverability (See Figure 4)
- The search option is not prominent on the homepage
- The current homepage does not give visible access to information that is relevant to the two primary audiences such as degree finder, job placement, housing options, class schedule and campus life
- There is too much focus on secondary audiences such as Parents

Figure 3

University of Idaho Global Header

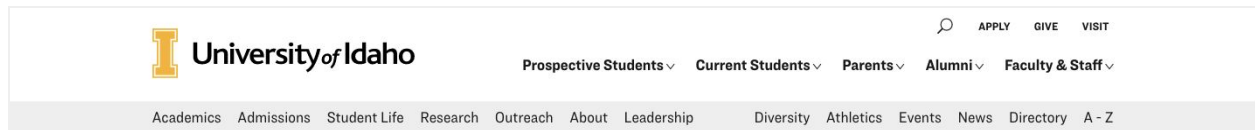
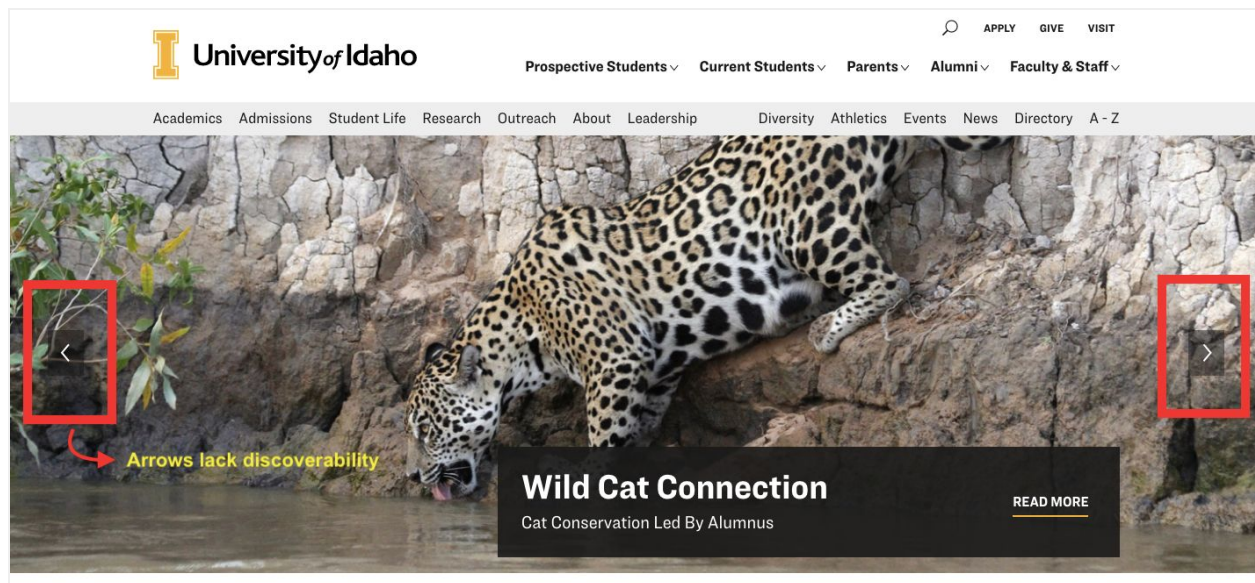


Figure 4

University of Idaho Homepage



Objectives & Outcomes

In the survey, I asked our clients to describe their expected outcomes that would indicate the success of a well-designed homepage and global header. I was able gain the following insights,

- Homepage attracts more prospective students for in-person and online enrollment at the University of Idaho
- Users spend more time viewing the content on the homepage
- Increased viewing of and click-throughs from the image and news carousel, and other image carousels on the current homepage
- Users are able to find the resources they need within the global header quickly and easily
- Primary audience members are able to find the information they need quickly within the homepage

Limitations & Constraints

- Time and financial constraints
- It will be challenging to identify which departments or units to highlight within global header
- Homepage currently consists of a lot of information and content that caters to multiple audiences - it will be challenging to discern which information to keep

Likes & Dislikes of Current Homepage & Header

In the survey, I asked respondents to explain some of the features in the current homepage and global header that they liked the most and the least. Their likes and dislikes are documented in the diagram below (See Figure 5). Identifying what works and what doesn't work in the webpage, allows us to understand which features are most important to keep and which need to be eliminated.

Figure 5

Likes & Dislikes of Current Homepage & Header

	Likes	Dislikes
01	Search feature within the global header	Global header is not user focused and has too many menu options
02	Image carousel as a way to showcase latest stories & achievements	Information in mini carousels at bottom of homepage go unnoticed unless user scrolls down
03	Consists of a lot of key information	The homepage is too busy with information
04	Relevant image & media content captures attention	Language & terms used in global header can be confusing to users

Reviewing University Website Design Guidelines

In this section I will summarize established usability design guidelines specific to higher education websites. The scope of this review includes online articles by established user experience consulting firms that define design recommendations based on research.

The university homepage is the first opportunity to make a positive impression on prospective students, as well as an information hub for current students. Thus, it is important to design a platform that provides users with a seamless and enjoyable experience. By understanding general design guidelines and recommendations for higher education websites, we will be able to better evaluate the current University of Idaho homepage and global header and develop effective design solutions.

Design Guidelines & Recommendations

With growing competition to attract and retain students, higher educational institutions are increasingly utilizing their online presence as a means to reach their audiences. An important way to improve university online platforms to ensure users have effective and meaningful interactions is by enhancing the user experience.

User experience consulting firms such as Nielsen Norman Group have developed design guidelines that focus on improving university websites. These design guidelines were published online by Katie Sherwin on the company website in 2016. The guidelines are based on a study conducted by the company testing 57 existing university websites. Usability sessions were conducted with 33 users between the ages 16 and 68, based in the United States, Canada, UK, and Taiwan. The participants included undergraduate and graduate prospective students and parents of prospective students. Participants were asked to complete exploratory and directed tasks to understand the usability issues of the tested university websites.

This study focused on prospective students as the primary audience of university websites. The author highlights the fact that many prospective students haven't yet had the chance to develop the proper research skills, and can be confused with terms and concepts they are unfamiliar with.

The ten design guidelines developed and recommended by the Nielsen Norman Group aim to eliminate confusion for users and to enable users to find the information they need with ease (Sherwin, 2016). The guidelines are listed below,

1. Clearly identify your university on every page

The name of the university should be clearly indicated on every page of the website as users may arrive on specific pages through external search. Indicating the university name makes it easier for users to identify the institution.

2. Use images that reflect your university's values and priorities

Images are a great way to portray the student experience as well as the university's values. It is important to be aware of what the images communicate to audiences about the university. An example the author describes is that with, "a video gallery with thumbnails of people that all look the same: users see a lack of diversity" (Sherwin, 2016). Images and videos that are authentic and depict the University of Idaho mission could cement the value of the Vandal experience for prospective students to understand the value of the Vandal experience.

3. Make your About Us page count

"The About Us page is one of the top places where prospective students go to decide if a university is a good fit for them" (Sherwin, 2016). An informative about us page in the form of an easy-to-read list of key facts can make an impact on audiences. Furthermore, the about us page should be easily accessible users from the homepage so they can find the information they need quickly.

4. Emphasize your strengths and achievements

At the first point of contact users, especially prospective students, want to discover the unique value of a university and what it has to offer to its students. This compelling information should be presented to users in a simple and easy-to-find manner, rather than be placed within dense paragraphs of text.

Critical information can be placed above the fold of the page to ensure users can view it without having to take further action (i.e. scrolling). *Above the fold* is a term used to refer to the content visible on the web page without scrolling (Schade, 2015). This is the content users can consume with the least interaction cost i.e. scrolling. However, what is placed *above the fold* has to be promising enough to motivate users to scroll. Therefore, if critical information is placed below the fold of the page, the content above the fold should capture the user's attention and encourage further exploration. The content placed below the fold should also be easily discoverable to users when scrolling through and scanning the page.

5. Make it easy for users to view a list of majors and programs

A prospective student's decision to attend a university is largely based on the majors and programs offered at the institution. Therefore, this vital information should be easily accessible to potential students within a university's online platform. During their research, the Nielsen Norman Group found that although a university offered the program users wanted to pursue, 48% were unaware that such a program is offered at the institution (Sherwin, 2016). Prospective students are usually unfamiliar with which majors are offered within the different schools in the university. Therefore, it is crucial to offer users a way to easily view all of the majors offered by name.

6. Provide information about job placement after graduation, and link to it from the alumni section of the website

Job placement after college is a crucial factor that can affect a student's decision to attend a university. This information in the form of statistics, placement locations, and sources should be clearly depicted in the website. In the company's research, it was found that users typically went to the Alumni page when asked to find job placement data. This data should either be highlighted, or linked to within the homepage in an easily discoverable way.

7. Clearly show the application deadlines, and offer a step-by-step description of the application process

Information about the application process and relevant deadlines are essential to a prospective student. Finding key dates and deadlines can be a challenging task for users, thus the steps in the application process should be outlined clearly in the university website. Details of applying should be clearly linked within the homepage or global header either as *Admissions* or *Apply*.

8. Follow the user journey: check the main tasks for each of your audiences

By examining the user journey for each audience, we can identify whether there is duplicate, missing, or incomplete information within the website. We can also understand whether the user will have a seamless experience when navigating through the university website.

9. Beware the perils of making your website cool

The author warns that using hip language or interaction in a university website comes across as superficial, and would distract users from the value of the university. It is important to provide users with age-appropriate content that is easy to understand and use (Sherwin, 2016). One recommendation is to include testimonies of current students. Student created content can be an effective way to engage prospective students, and show them the true Vandal experience.

10. Be prepared for users to search for information about your university on external sites

When prospective students that may not be equipped with advanced research skills cannot find the information they are looking for, they tire quickly and easily and often turn to external sites for information. External sites include college-aggregator sites and online forums. The author recommends improving the internal search engine to ensure that users can find the information they need within the university website.

Clique Studios is another prominent web design and development firm that has developed best practices for university website design. The company has based these practices on past user experience work developing university websites. The design practices were published on the company website by Michael Facchinello in 2019.

Following these general practices would ensure that the distinctive audiences of a university website will be able to fulfill their goals without confusion and frustration.

1. Group navigation by type

While there is a lot of information to navigate through in a university website, the type of information and its main audience determines how this information should be accessed. There are three types of navigation typically used in websites,

- a. Content-based navigation - This type of navigation is based on elements that are frequently accessed by users such as *About*, *Admissions*, and *Academics*. These are typically displayed in the global header.
- b. Audience-based navigation - This type of navigation is based on the different audiences that frequently access the website to fulfill certain goals. Users can quickly and easily access all of the content that is relevant to them without having to search for specific information through content-based navigation only.
- c. Utility-based navigation - This navigation type focuses on giving users one-click access to information and resources they need immediately, such as links to Blackboard, Outlook, and the academic calendar. The author recommends pulling these types of links from the global header and arranging them separately.

2. Don't break clearly established conventions in navigation

The general features of a university website such as terminology and top-level navigation (global header) should remain consistent with other university websites as differences may lead to a frustrating experience. Prospective students that need to compare several university websites to determine which school to attend under time constraints would be especially sensitive to inconsistencies in navigation (Facchinello, 2019). Thus, it is important to keep the overall website design consistent with the user's mental model.

3. Provide mapping

- a. Bread crumbs - Users should be able to figure out “where they are, where they have been, and where they can go” (Facchinello, 2019). This keeps users from getting confused and frustrated when looking for the information they need within the website.
- b. Be wary of hyperlink overload - Hyperlink overload may result in users resorting to external sources to find the information they need. Instead of using hyperlinks, the author recommends using buttons and content grouping to present this information to the user in a clear easy-to-read manner.

4. Make your “About Us” count

This guideline was developed based on the research done by the Nielsen Norman Group described as indicated previously.

5. Clearly delineate university programs and degrees

Prospective students have to compare and evaluate a large amount of information within a short span of time to make the important decision of which university to attend. Presenting users with key details that show the unique value of a program in comparison to other programs offered within the university, and in other universities.

Heuristic Markup

A heuristic evaluation can be a great method to identify usability issues in a website. This technique is often referred to as a method of *discount usability*, as it is a quick and inexpensive way to identify the main usability problems of an interface in order to rapidly implement and test new design solutions (Nielsen, 2009). Typically a heuristic evaluation includes having a small group of evaluators, preferably three to five, examine the website interface and identify potential usability issues based on a set of guidelines. It is important to note that the standard number of evaluators recommended for a heuristic evaluation is more than one, as past studies have shown that different evaluators find different sets of usability problems that do not overlap (Nielsen, 1994). Due to constraints I was unable to recruit multiple evaluators. Therefore, I conducted the less formal approach of a *heuristic markup* in which I navigated within the homepage as a user would and identified usability problems based on heuristic guidelines. I used the following set of heuristic guidelines for interface design established by Jakob Nielsen in 1994, when conducting the markup.

- Visibility of system status
- Match between system and the real world
- User control and freedom
- Consistency and standards
- Error prevention
- Recognition rather than recall
- Flexibility and efficiency of use
- Aesthetic and minimalist design

- Help users recognize, diagnose, and recover from errors
- Help and documentation

For the heuristic markup, I began by taking some screenshots of the current homepage and global header and identified some potential issues by sketching within the image.

During the heuristic markup I was able to identify the following usability issues,

- The global header consists of many header elements, and the secondary header menu which is content-based is cluttered. The space between the *Leadership* and *Diversity* header elements can be confusing (See Figure 6). Unless users are familiar with institution structure, grouping these particular header elements by spatial proximity like this makes little sense.
- The search button is not prominent and blends in with the rest of the header elements. Also the search button is placed towards the center of the homepage, which goes against search button placement conventions and may stray from the user's mental model of where the search button usually is (See Figure 6). The search button should be placed in a location that is consistent with other websites, such as on the top far right of the header (**Consistency and Standards**). If the search button is placed towards the center, the entire search box where users can enter text should be visible.
- The arrows to advance to the next story in the image carousel on the landing page are barely visible with certain images (See Figure 6). Additionally, there is no indication within the image carousel of how many stories users can advance through and whether the carousel auto-advances through the stories. This violates the **visibility of system status** guideline, where users should be kept informed about what is going on. However, the fact that the carousel doesn't auto-advance allows the user the **control and freedom** to navigate the carousel on their own.
- The mini image carousels at the bottom of the page are consistent. However, the fact that the *News and Events* element is not an image carousel is not evident at first glance (See Figure 7). The visual similarity and the close spatial proximity of the *News and Events* element to the other *Future Students* and *Make a Gift* elements can confuse the user about its functionality.
- An image is embedded within the global header (See figure 8). Although this image is associated with the *virtual tour* link, the image and description itself is not clickable. This can be confusing to users. Additionally, there is a chance that the image may be ignored by users due to Banner Blindness (Pernice, 2018). Banner blindness is the users tendency to ignore elements they may perceive as ads.
- The terms used as header elements such as *Resources* and *Top Links* may be confusing to the user, as they might not be aware of what each term means in

terms of fulfilling their goals (See Figure 9).

- Specific links (Email, BbLearn, VandalWeb) are repeated within each drop down menu for each audience (See Figures 9 and 10). Since these links are the most frequently accessed header elements by current students, faculty, and staff (See Table 5), they should be quickly accessible to the relevant audiences (***Flexibility and Efficiency of use***). Expert audiences such as current students, faculty, and staff know exactly where these links (Email, VandalWeb etc.) lead, thus efficiency can be increased by giving these users easy access to the links they need the most, without having to access a dropdown menu and then click a button.

Figure 6

Heuristic Markup of Global Header

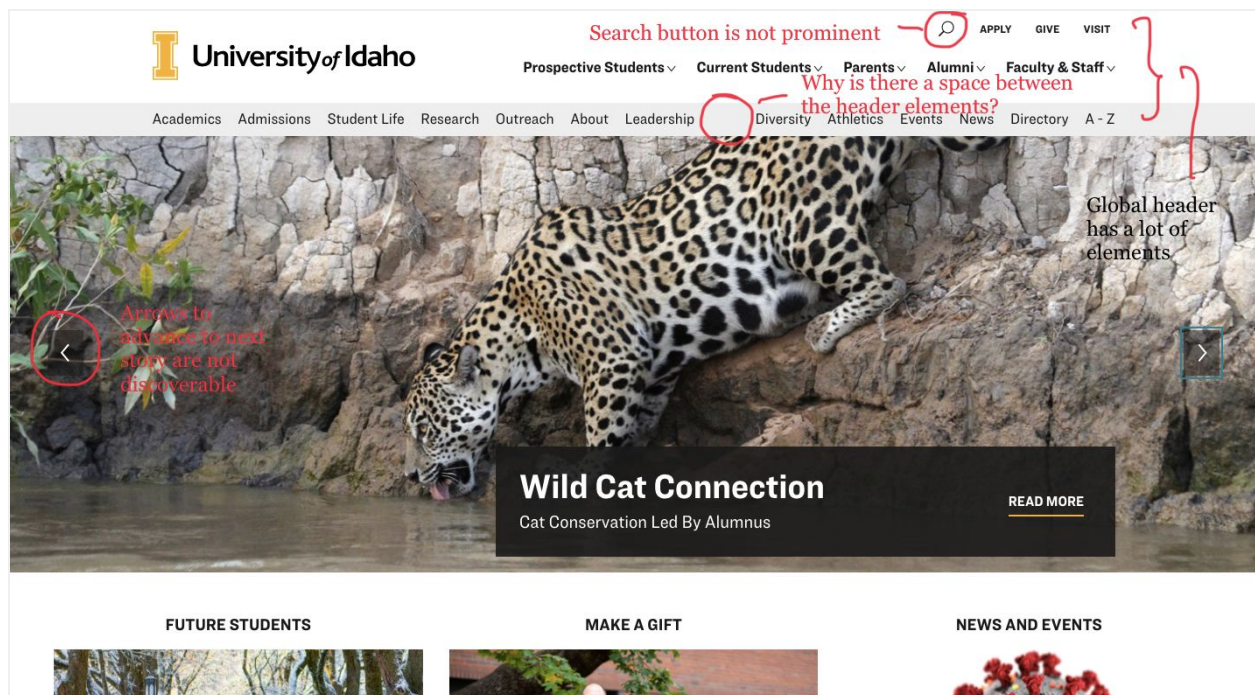


Figure 7

Mini Image Carousels on Homepage

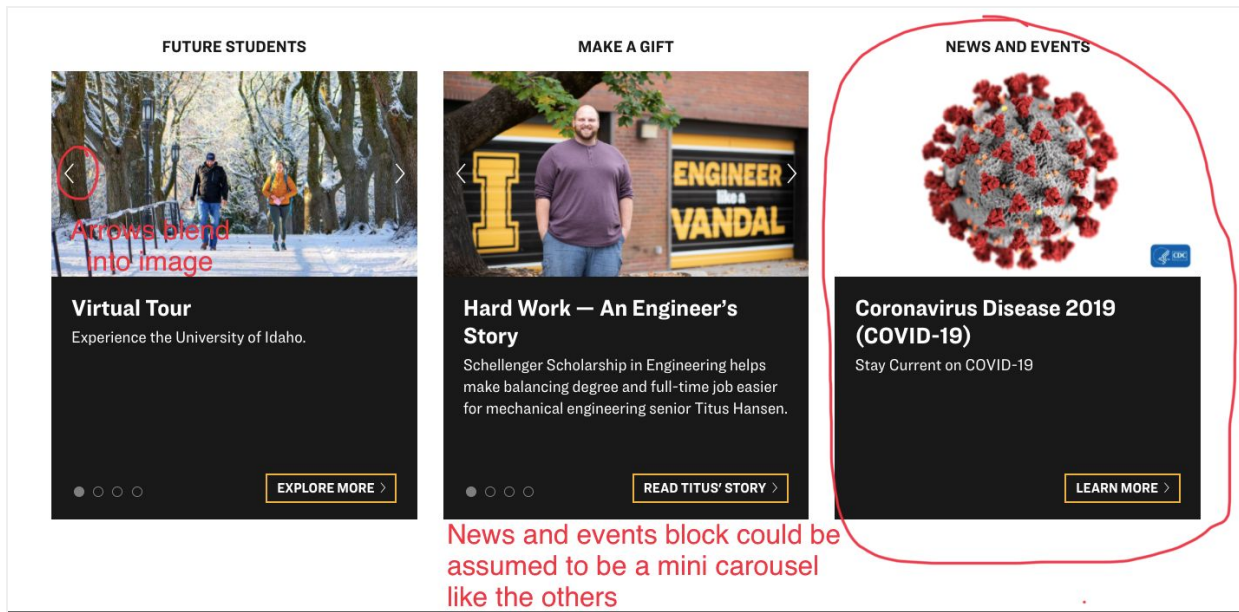


Figure 8

Naming of Header Elements and Media Content within Header

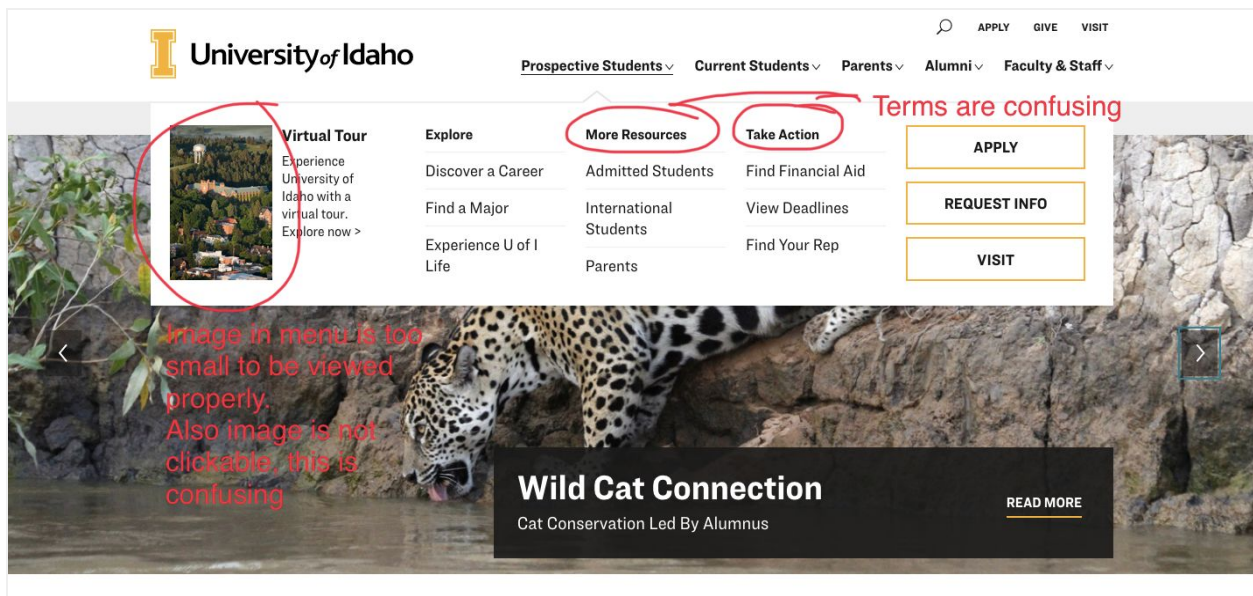


Figure 9

Naming of Header Elements

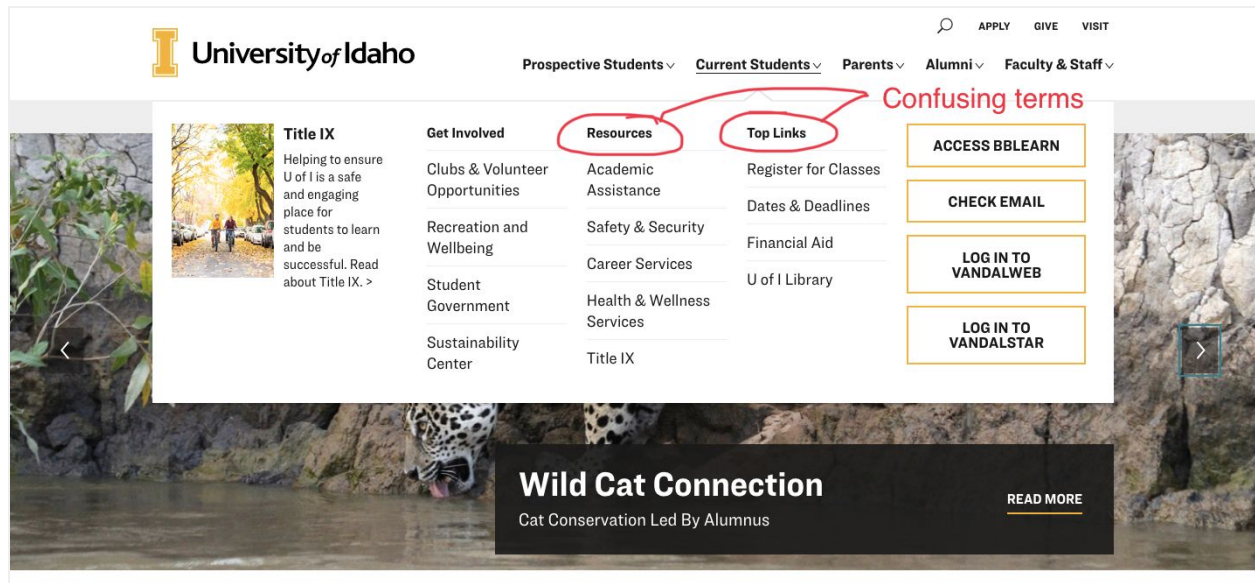
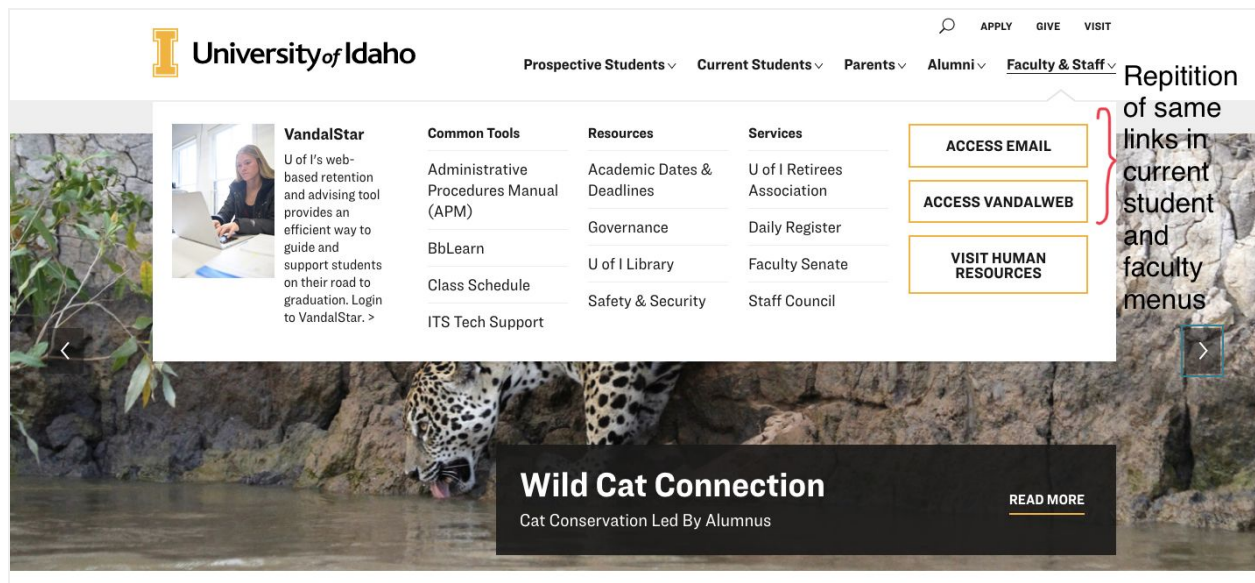


Figure 10

Likes & Dislikes of Current Homepage & Header



Competitive Analysis

Through a competitive analysis we can assess and compare similar products in the marketplace. By evaluating homepages and global headers published by other universities, we can identify unique features, design strengths and weaknesses, and design trends used by competitive academic institutions and use them as a point of reference. In this report I have conducted a competitive analysis on the websites of three prominent higher educational institutions. I evaluated the homepage and header based on the following criteria,

- Main elements and features
- Elements and features unique to the homepage and header
- Features that don't work
- Media types displayed in the homepage (Images, Video etc.)
- Types of navigation used in header (Content-based, Audience-based, Utility-based)
- Inclusion of Social Media Content
- Navigation items included in global header and the order

Johns Hopkins University - <https://www.jhu.edu/>

Homepage

At first glance, it is easy to observe that the Johns Hopkins University homepage mainly focuses on providing all of the key resources and content for their prospective students. As I discussed earlier, prospective students are less likely to have advanced research skills. By tailoring the homepage content specifically towards prospective students, JHU gets rid of the need for prospective students to search too hard for relevant resources. Some of the content tailored towards prospective students include,

- A statement that reflects the JHU experience and values (See Figure 11)
- *Explore* section that provides links to content of interest such as Undergraduate and Graduate Admissions, Hopkins in the community, Diversity and Inclusion etc. (See Figure 12)
- Latest student achievements and campus news (See Figure 13)
- Student and staff profiles and testimonies that reflect the JHU experience (See Figure 14)
- Search engine to explore majors and programs offered, along with list of schools

in the University (See Figure 15)

- Section highlighting the city of Baltimore to provide students with an idea of campus life and things to do (See Figure 16)
- Important links such as *Apply*, *Visit*, and *See Programs* that directly link to the relevant pages, are immediately visible in the global header (See Figure 17)

Figure 11

Johns Hopkins University: Statement that Reflects University Values



Figure 12

Johns Hopkins University: Explore Section



Figure 13

Johns Hopkins University: Latest Campus News and Student Achievements

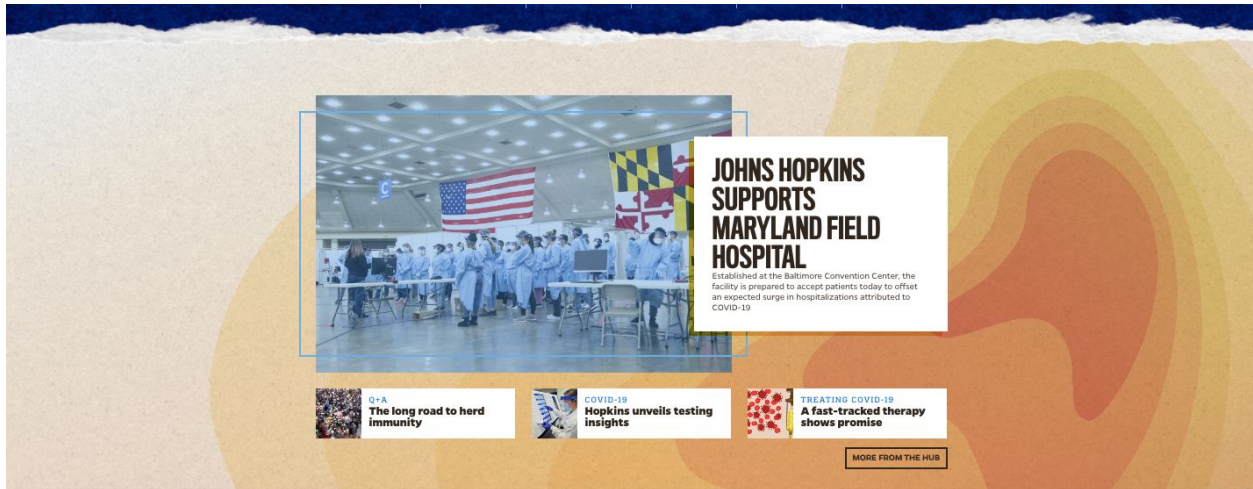


Figure 14

Johns Hopkins University: Student, Faculty, Staff Profiles and Testimonies



Figure 15

Johns Hopkins University: Search Majors and Programs

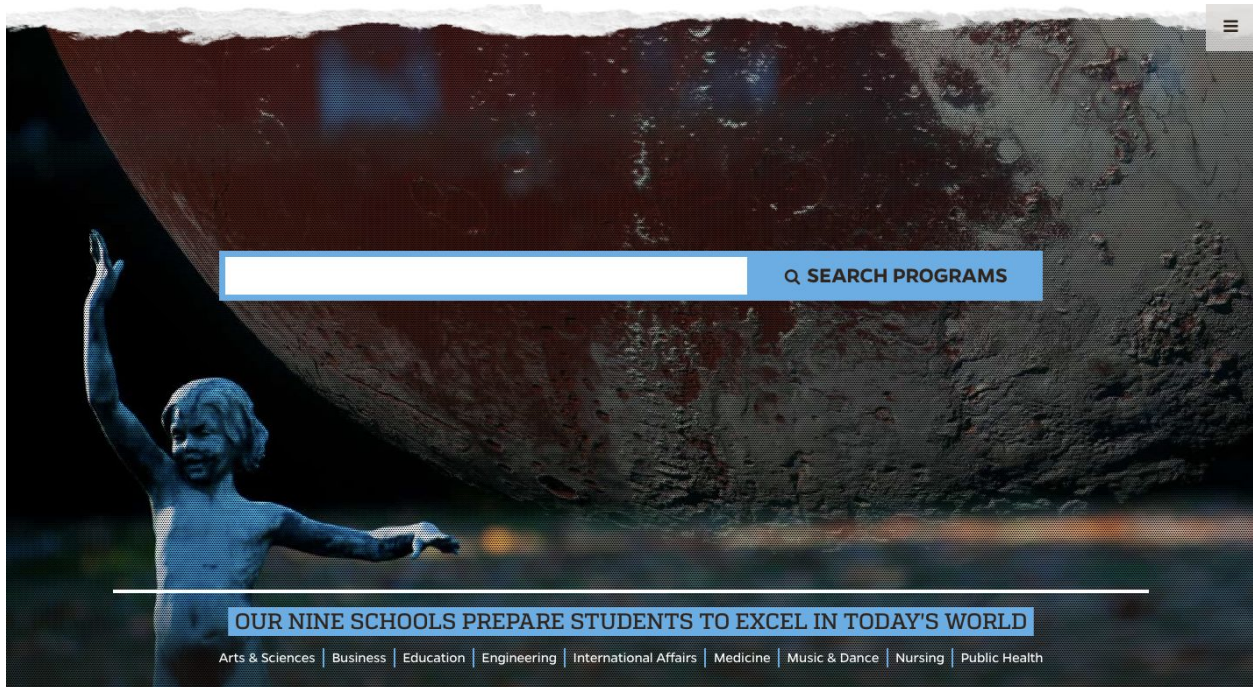


Figure 16

Johns Hopkins University: City of Baltimore



The university has also effectively used media content as a way to depict the university's values, priorities, and student experience. When users first open the homepage, a video that highlights the institution's focus and achievements in medicine and research fills the area *above the fold* (See Figure 17). Although the video plays automatically, it is unobtrusive to the user due to the inclusion of a clearly discoverable pause button and the absence of audio content. The video appropriately exhibits JHU's strengths and values and motivates users to explore the rest of the homepage.

Figure 17

Johns Hopkins University: Apply, Visit, and See Programs Header Elements



Images are used alongside the depicted news articles to further emphasize the university's strengths (See Figure 13).

An entire section is devoted to depicting Instagram posts by the University account (See Figure 18). These images not only portray campus life, but give prospective students an opportunity to connect with the university through social media.

Figure 18

Johns Hopkins University: Social Media Images & Posts



Another section within the homepage depicts student and staff profiles and testimonies (See Figure 14). This section depicts the diversity of the community at JHU, and is an engaging and authentic way to show prospective students the value of the student experience.

One of the sections in the homepage, placed right below the fold, provides links to top news stories that are important to current students, faculty, and staff (See Figure 19). Placing these links right below the fold allows users to access important content quickly and easily.

Figure 19

Johns Hopkins University: Latest Campus News



Global Header

The location and architecture of the global header on the JHU homepage is unique, as it is placed on the right edge of the homepage (See Figure 20). The header minimizes to a hamburger menu when the user scrolls down to the rest of the page.

Figure 20

Johns Hopkins University: Global Header



While the content in the homepage is tailored towards prospective students, the global header includes content for all audiences of the university website.

A hybrid approach is used in this global header as it integrates the audience-based, content-based, and utility-based navigation types (See Figure 21). The *Menu*, *Search*, and *News & Events* header elements expand to show submenu options (See Figure 21). By minimizing the header elements to six items with expanding submenus, JHU has solved the problem of a cluttered header while providing the different audiences access to relevant content.

Additionally a link to the *About Us* page and subsections within this page are listed as submenu items in the menu. This makes it easier for prospective students to find information about the university (See Figure 21).

The *Apply*, *Visit*, and *See Programs* header elements stand out from the other header elements as they consist of a different background and font color. Differentiating and bringing attention to relevant links allows for an efficient and seamless experience for prospective students.

A weakness in this design is that the header placement deviates from typical design conventions and thus from users' mental models of university websites.

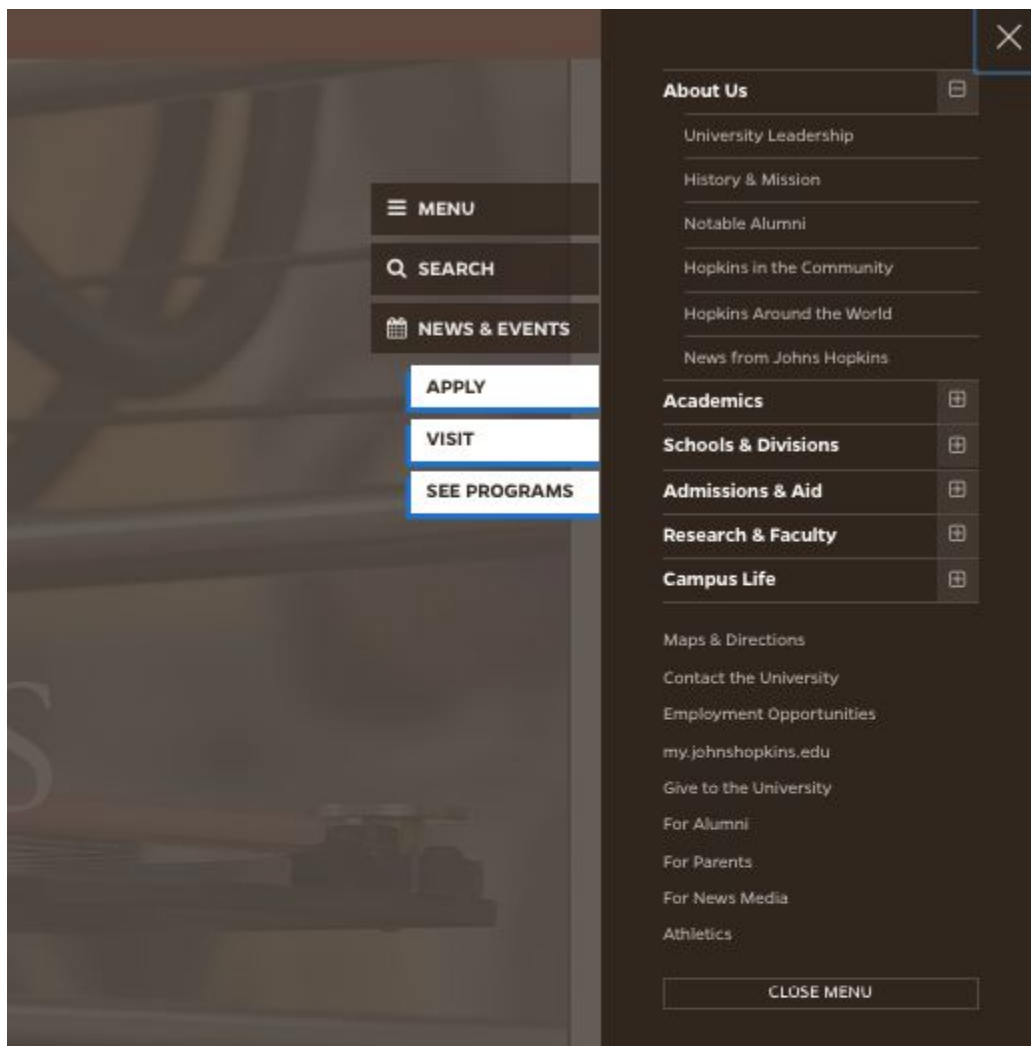
Table 1

Johns Hopkins University: Header Elements by Navigation Type

Audience-Based	<i>For Alumni, For Parents, For News Media</i>
Content-Based	<i>About Us, Academics, Schools & Divisions, Admissions & Aid, Research & Faculty, Campus Life, Athletics</i>
Utility-Based	<i>Apply, Visit, See Programs, Maps & Directions, Contact the University, Employment Opportunities, my.johnshopkins.edu, Give to the University</i>

Figure 21

Johns Hopkins University: Global Header Expanded



University of Notre Dame - <https://www.nd.edu/>

Homepage

This homepage, although mainly focuses on providing content for prospective students, encompasses content for current students, faculty, and staff as well. The homepage begins with articles that show users the university's latest news and student achievements with corresponding images in the form of tiles (See Figure 22 and 23). The later sections in the homepage also include university news and stories (See Figure 24 and 25). These sections help to depict the university's strengths and priorities to prospective students.

Figure 22

University of Notre Dame: Landing Page

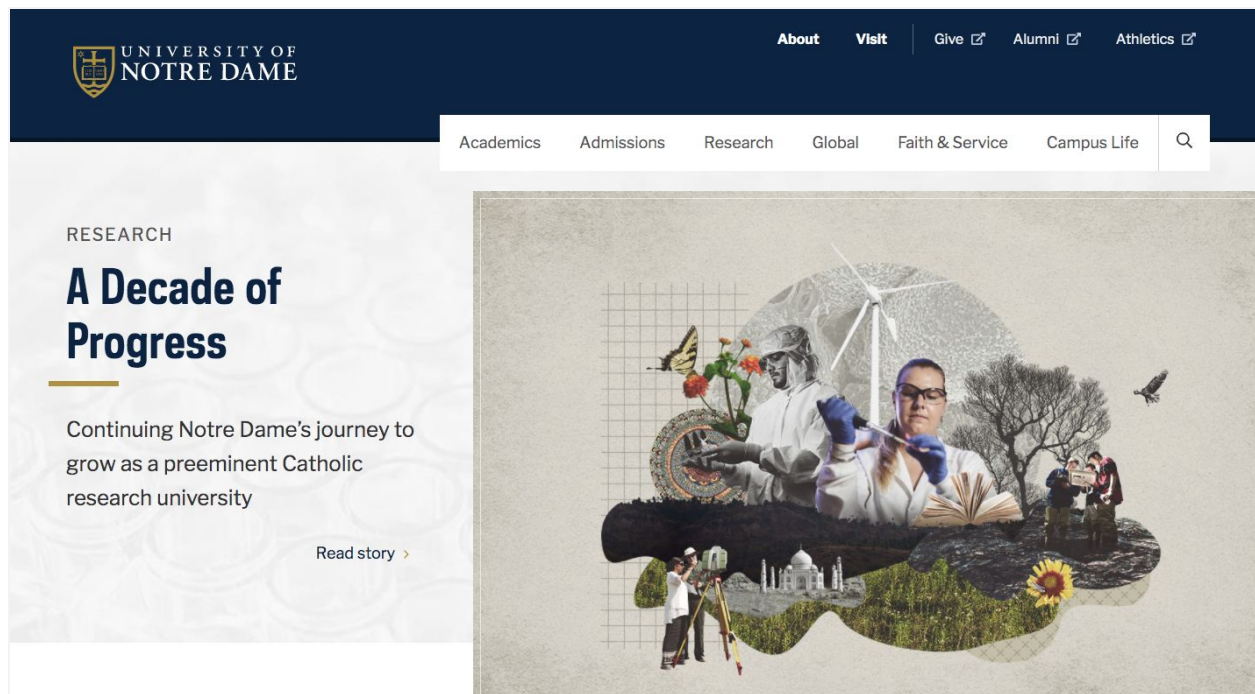


Figure 23

University of Notre Dame: Landing Page and Latest News

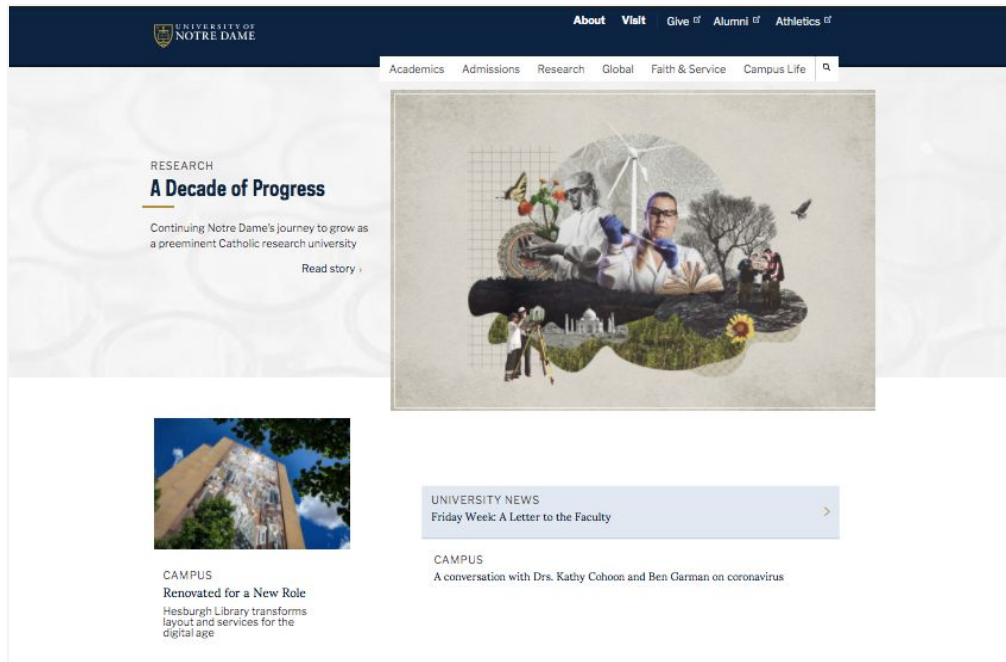


Figure 24

University of Notre Dame: Latest News and University Achievements

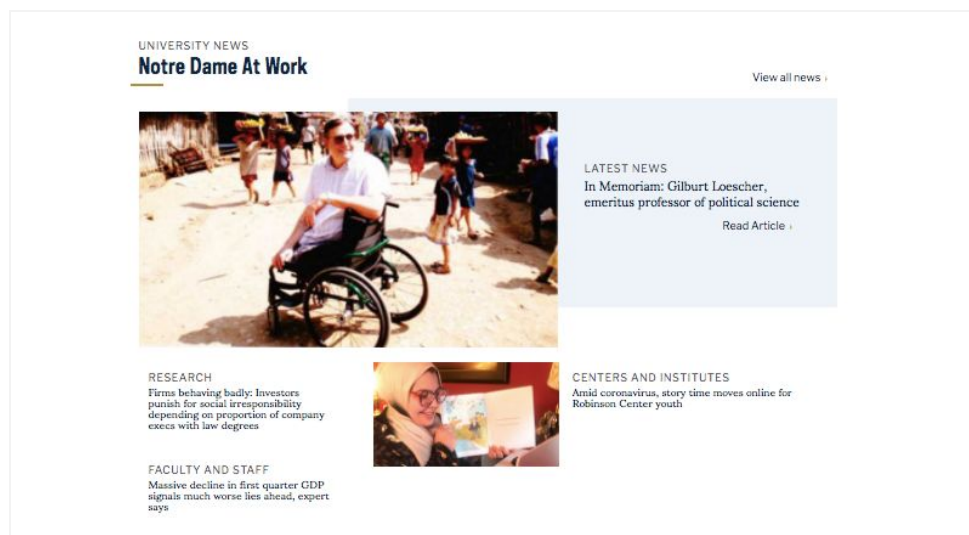
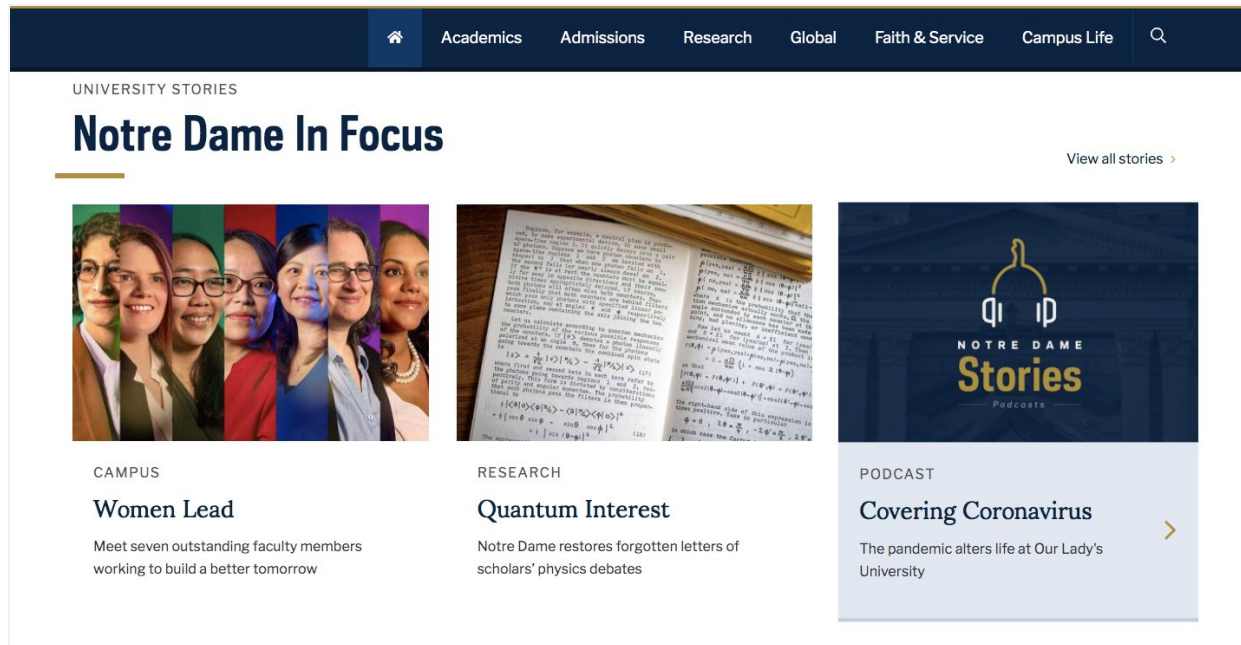


Figure 25

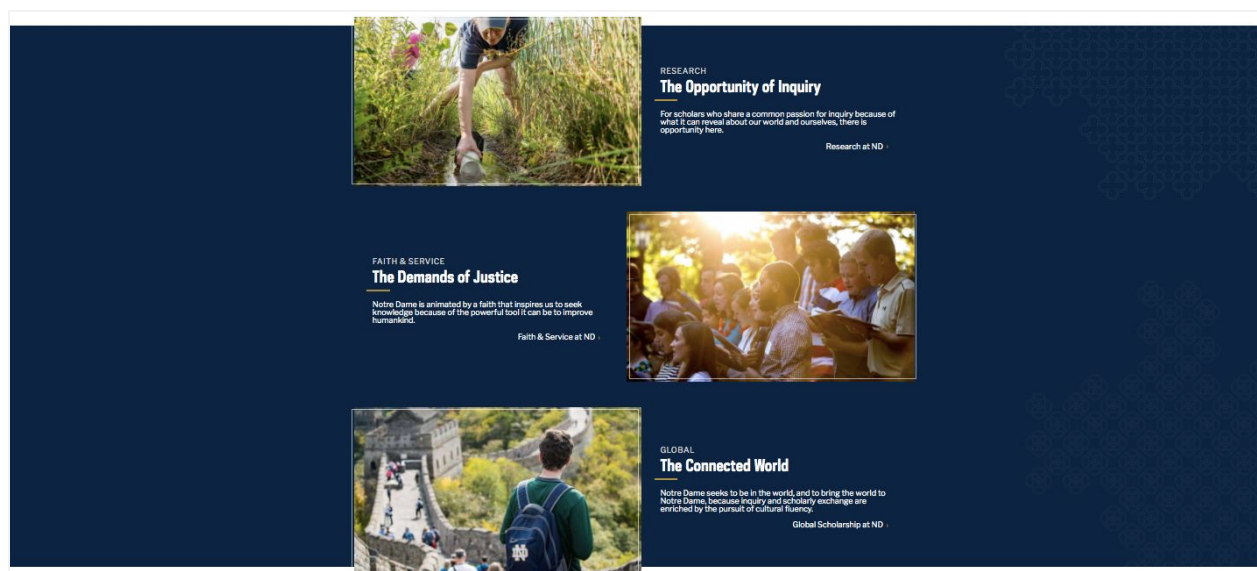
University of Notre Dame: Campus News and Stories



Topics of interest for prospective students such as *Research*, *Faith & Service*, and *Global Scholarship* are linked within the homepage (See Figure 26). The inclusion of these topics of interest also help to depict Notre Dame's values and priorities to prospective students.

Figure 26

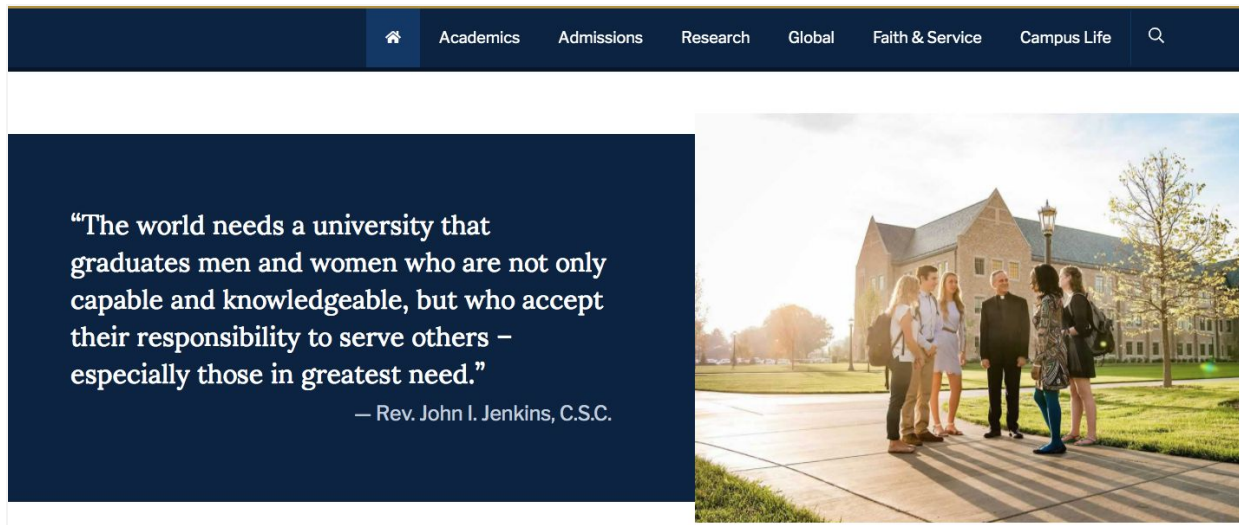
University of Notre Dame: University Values and Priorities



A feature that is unique to this homepage is a section that includes a quote by the President of the University of Notre Dame (See Figure 27). Quotes and testimonies by important figures in the University can enhance the authenticity of the website and capture prospective students' attention.

Figure 27

University of Notre Dame: Statement by President



Another unique feature of the homepage is the inclusion of a calendar section that highlights upcoming events for current students, faculty, and staff (See Figure 28). This can be very helpful to current students, faculty, and staff to keep track of events and key dates.

Figure 28

University of Notre Dame: Upcoming Events



Global Header

The content in the global header caters to the many diverse audiences of the website (See Figure 29). This header also uses a hybrid approach of all three navigation types, but mostly content-based and utility-based navigation. The only audience-based navigation header element is for *Alumni*. The internal search engine button is prominently placed with the main element of the global header.

Figure 29

University of Notre Dame: Global Header

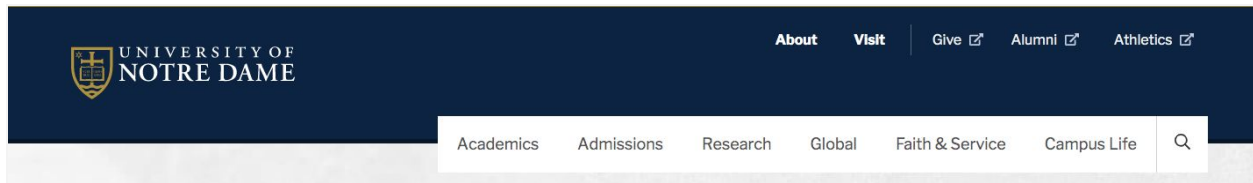


Table 2

University of Notre Dame: Header Elements by Navigation Type

Audience-Based	<i>Alumni</i>
Content-Based	<i>About, Academics, Admissions, Research, Global, Campus Life, Athletics</i>
Utility-Based	<i>Visit, Give</i>

Although this header has minimal elements and is easy to understand for users, it does not provide direct access to key elements such as the Apply page for prospective students, and utility-based elements for current students, faculty, and staff (Online learning management system, Email etc.).

The University of Chicago - <https://www.uchicago.edu/>

Homepage

The current University of Chicago homepage includes content for all of the website's different audiences. The area *above the fold* contains an image carousel that auto-advances through four stories with related images (See Figure 30). The stories describe the latest in UChicago news for all audiences including prospective students, current students, faculty, and staff. The content below the fold includes the latest news stories relevant to all audiences (See Figure 31). The homepage consists of a section that shows the details of an upcoming campus event as well (See Figure 32).

Figure 30

The University of Chicago: Landing Page

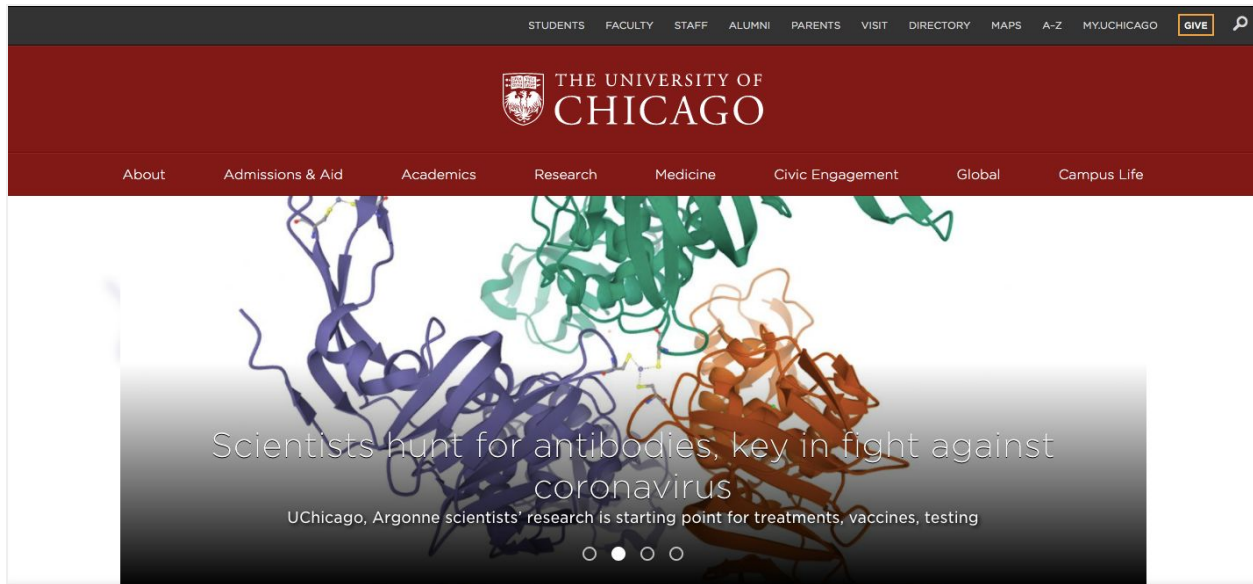


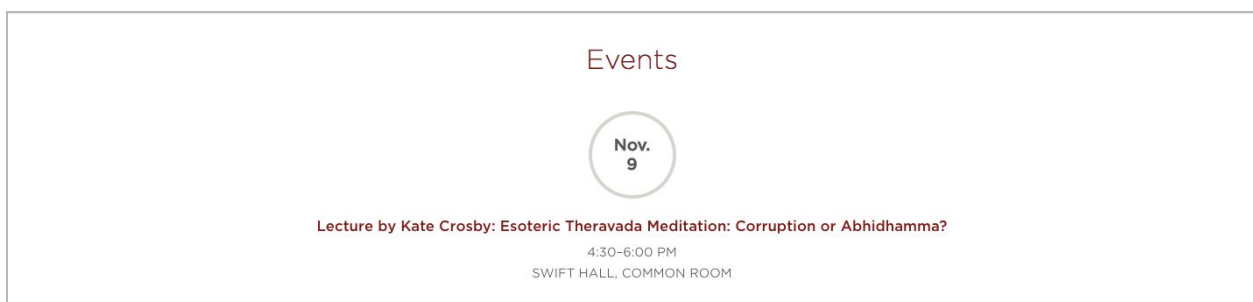
Figure 31

The University of Chicago: Latest News



Figure 32

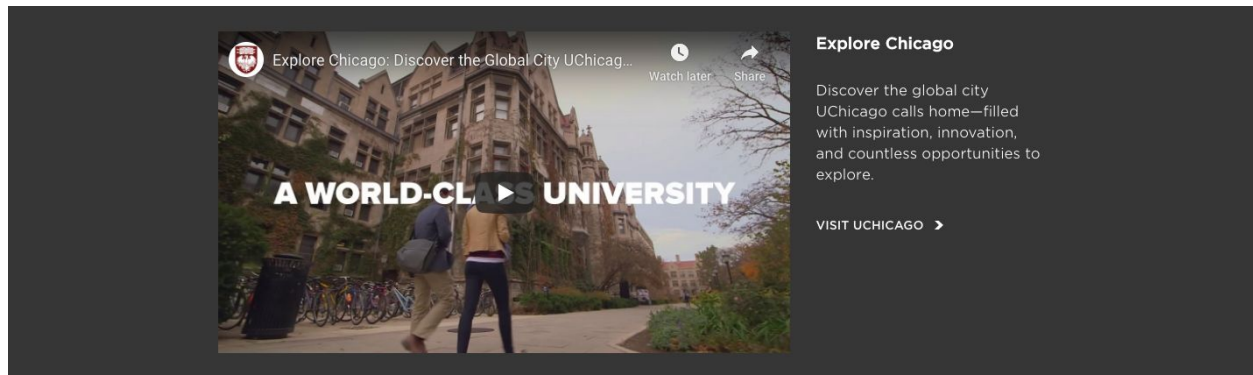
The University of Chicago: Upcoming Events



There are parts of the homepage that primarily focuses on prospective students as well. For example, the banner with video content that focuses on the city of Chicago and the UChicago experience gives prospective students an idea about the university hometown and campus life (See Figure 33). This section also includes a link to access information about visiting the campus.

Figure 33

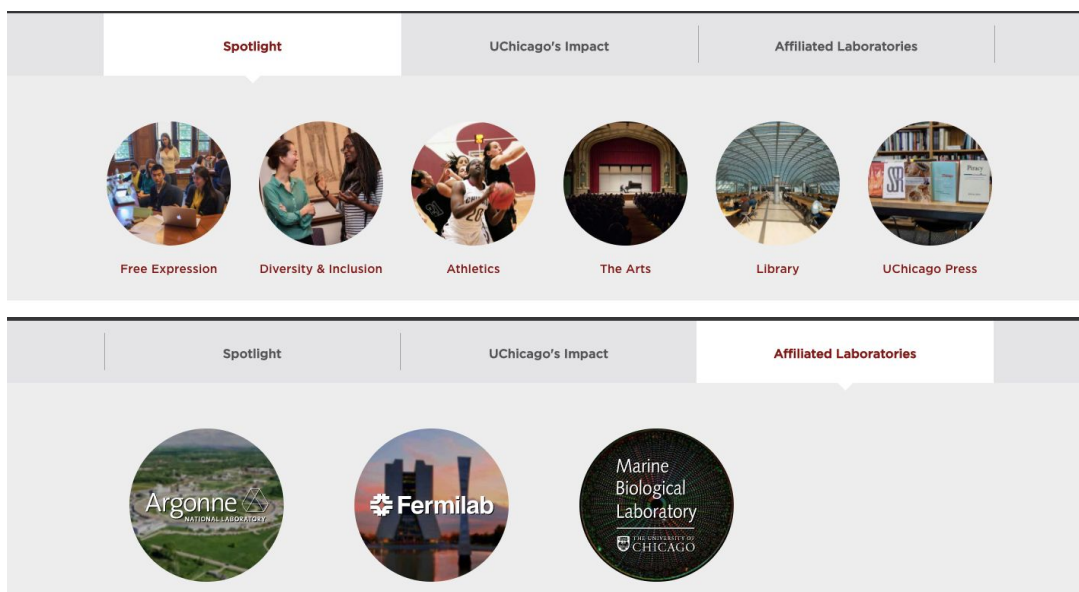
The University of Chicago: Explore Chicago Section with Video



A unique feature within the UChicago homepage is a section with tabs that Prospective students can click through to find out about popular topics on campus, UChicago's impact locally and globally, and affiliated laboratories in one of the sections. This section provides linked access to a lot of important information that would help a prospective student to make an informed decision about attending the university (See Figure 34).

Figure 34

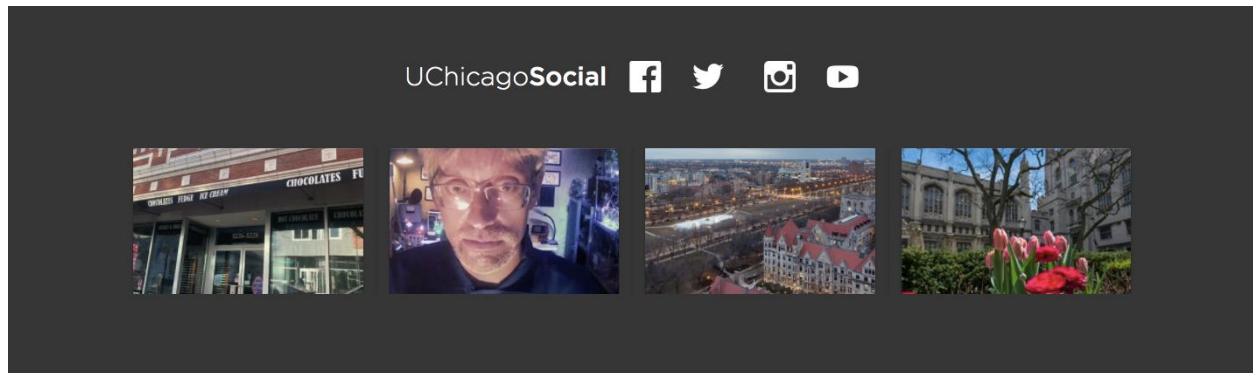
The University of Chicago: Value of UChicago Experience



The homepage also includes a social media section with links to the university social media accounts (See Figure 35).

Figure 35

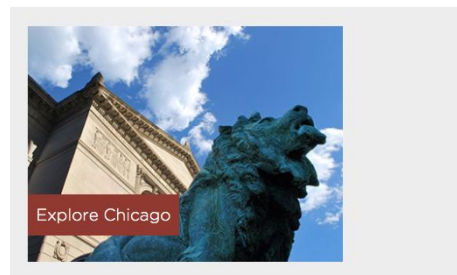
The University of Chicago: Social Media Images and Posts



The homepage includes a mini image carousel that aims to give prospective students access to explore the architecture, campus, and the surrounding city (See Figure 36). However, does not give the user the option to advance through the carousel manually. Users may get frustrated waiting for the carousel to auto-advance to the link they want to explore. The mini carousel also doesn't offer any cues to the user to indicate that it contains clickable links. This may cause the user to interpret the carousel as simply an image gallery.

Figure 36

The University of Chicago: Mini Image Carousel



A link to donations to the university is also included in the form of a banner (See Figure 37). However, the banner is similar in appearance to banner ads, which may result in the user ignoring the donations link as well as any content in close proximity to the banner (Pernice, 2018).

Figure 37

The University of Chicago: Donations to UChicago



Global Header

The global header, as in the header in the Johns Hopkins University website, takes a hybrid approach to navigation by employing Audience-based, Content-based, and Utility-based navigation (See Figure 38). The header elements are spatially separated based on the type of navigation the element belongs to. The Content-based header elements typically found in university websites are placed below the university name and logo, whereas the Audience-based and Utility-based header elements are placed above the name and logo. By grouping the different header elements and separating them into two spatial locations within the header area, UChicago has overcome the problem of having a busy and cluttered header while providing links and resources to all the distinctive audiences of the university website.

The Content-based header elements expand to display submenu items when the user hovers over it. This gives the users a high-level overview of the contents of a specific header element, and the chance to directly navigate to the page that is most relevant to them.

Figure 38

The University of Chicago: Global Header



Table 3

The University of Chicago: Header Elements and Navigation Type

Audience-Based	<i>Students, Faculty, Staff, Alumni, Parents</i>
Content-Based	<i>About, Admissions & Aid, Academics, Research, Medicine, Civic Engagement, Global, Campus Life</i>
Utility-Based	<i>Visit, Directory, Maps, A-Z, my.uchicago, Give</i>

Additionally, encouraging donations to the university appears to be a key objective to the University of Chicago as it is highlighted within the global header with a yellow border (See Figure 38)

Heatmap for Header Elements

In order to understand the header elements typically found in a university website global header, I created a heatmap in which I listed the navigation headings from left to right and color coded the items in a spreadsheet (See Figures 39 and 40). I separated the header items into primary and secondary headers based on their spatial location. Primary header refers to the header elements placed below the University logo, and secondary header refers to header elements placed above the logo.

The University of Idaho global header was also included in the heat map for comparison. This header is divided into three sections. For the purpose of this heatmap I have placed the tertiary header elements in the secondary header section (See Figure 40) in a separate row.

Figure 39

Heatmap of Primary Header Elements

[illegible]

Figure 40

Heatmap of Secondary Header Elements

[illegible]

The following insights were derived,

- Global headers tend to have a mix of Content-based, Audience-based, and Utility-based navigation. Typically, the primary header elements are always Content-based. The secondary header elements are a mix of Audience-based and Utility-based navigation.
- Global headers are typically divided into two sections, primary and secondary, placed below and above the university logo respectively. An exception was the global header in the Johns Hopkins University website, where the header is placed on the right edge of the page, as tabs that expand into a sidebar menu.
- The *About* header element is usually the first navigation item, either within the primary or the secondary header.
- The number of elements in the primary header is kept to a minimum, and vary between six to eight items.
- The navigation items commonly placed in the primary header are *About*, *Admissions & Aid*, *Academics*, *Research*, and *Campus or Student Life*.
- The primary header expands to provide users with specific links within the header item, usually in the form of a drop-down menu. This helps to give users an overview of the information provided under a header item and quick access to specific content.
- The header elements most frequently found in the secondary header includes Audience-based header elements such as *Alumni*, *Parents*, Topic-based elements like *Athletics*, Utility-based elements such as Account Login Links (*my.johnshopkins.edu*), *Give*, *Visit*, *Maps & Directions*.

Summary

After conducting this competitive analysis, I was able to identify some trends and conventions in the design of university homepages and global headers.

Across all three institutions, content within the homepage is primarily tailored towards prospective students. Media content is largely used to convey the university's values, priorities, and achievements, either in the form of video or images. The *above the fold* area contains a form of media (images, video) that would capture the user's attention and encourage them to scroll down to view more content.

The global headers consist of a hybrid approach to navigation that combines Content-based, Audience-based, and Utility-based content. The Content-based header elements are usually placed separate from the Audience-based and Utility-based header elements. The specific conventions in the number and type of header elements placed in a university website global header are identified above.

Google Analytics

Analytics can be a helpful tool in user experience design, as it can provide quantitative data about how target audiences use a specific product. Although analytics alone cannot help us identify the reasoning behind users' behaviours, the data obtained and parsed through analytics can supplement other user research methods during the initial stages of research and design (Cardello, 2013). In this report I have used Google Analytics to review the distinctive audiences' usage behaviours within the homepage and mainly the global header. My review is based on the following criteria,

- Frequently used header elements
- Pages viewed directly after the homepage

It is important to note that analytics are not tracked for individuals under 18, and thus the target audience of prospective students. Therefore, for this report I have made several assumptions based on the age data available, the location of the Internet Service Provider, and whether users are traditional vs. non-traditional students in order to capture the analytics for prospective students. The data for prospective students may include the data for other segments such as non-traditional students, users residing outside of campus, and individuals that use a VPN.

All analytics data are based on the user activity that took place in the week of October 23rd to 30th, 2019.

Frequently Used Header Elements

Prospective Students

As mentioned before, due to the assumptions made regarding prospective students, the data I refer to may include the activity of other audiences.

When examining the activity within the header, the most frequently accessed header element was *Academics* with 883 unique uses. The second and third most frequently accessed links were the *Access Bblearn* and *Check Email* buttons, with 858 and 826 unique uses. However, since prospective students do not have access to a BbLearn or Outlook email account before acceptance into the university, this data will be considered activity generated by other audience segments.

Considering the general goals and needs of prospective students specified in the data collected through the survey previously, *Admissions* is a frequently viewed header element with 678 unique uses. *Apply* follows with 388 unique uses. This data indicates that easy access to the admission requirements and the application process within the header is important for prospective students.

Table 4

Frequency of Uses of Header Elements by Prospective Students

	Header Element/Links	Total Uses	Unique Uses
1	Academics - Main	1,105	883
2	Button - Access BbLearn	940	858
3	Button - Check Email	921	826
4	Admissions - Main	808	678
5	Apply - Main	471	388
6	Button - Access Email	433	394
7	Main	264	238
8	Student Life - Main	249	214
9	Button - Log in to VandalWeb	237	208
10	Athletics - Main	198	185
11	Faculty & Staff - Main	180	144
12	Explore - Find a Major	169	160
13	Research - Main	162	132
14	Current Students - Main	160	133
15	Directory - Main	156	148
16	A - Z - Main	142	128
17	Button - Apply	119	108
18	Button - Access VandalWeb	109	103
19	About - Main	103	95
20	Prospective Students - Main	83	67

All Users

This data represents the activity for all users except prospective students.

In general, *BbLearn* is the most frequently accessed link in the global header with 2962 unique uses. The links to check email for current students is next in quantity of unique uses with 2833 uses. *Academics* is the third most frequently accessed element, followed by the *Access Email* link for faculty and staff. Note that the link to access email accounts differs for current students, and faculty and staff. A list of the most frequently accessed header elements and links, along with the number of total and unique uses is indicated in Table 5.

Table 5

Frequency of Uses of Header Elements by All Users

	Header Elements/Links	Total Uses	Unique Uses
1	Button - Access BbLearn	3,227	2,962
2	Button - Check Email	3,140	2,833
3	Academics - Main	2,107	1,671
4	Button - Access Email	1,398	1,245
5	Admissions - Main	1,332	1,105
6	Directory - Main	890	850
7	Apply - Main	672	560
8	Main	662	576
9	Button - Log in to VandalWeb	634	559
10	A - Z - Main	579	501
11	Faculty & Staff - Main	552	459
12	Button - Access VandalWeb	517	471
13	Current Students - Main	423	366
14	Student Life - Main	393	347
15	Athletics - Main	360	337
16	Research - Main	307	258
17	Common Tools - BbLearn	291	258
18	Explore - Find a Major	289	271
19	Button - Visit Human Resources	277	250
20	About - Main	198	177

Pages Viewed Directly After the Homepage

After inspecting users' last viewed pages after viewing the homepage, we were able to identify the most frequent user flows. The following pages (accessed through the global header on homepage) were viewed directly after viewing the homepage. I have documented the user flows from the homepage to the page users exited from in Table 6.

Table 6

User Flows from Homepage to Exit Page

	Page accessed directly from Homepage	Exit Page
1	Academics (1515 sessions) →	After accessing this page users either exited from the page, or accessed the <i>degree finder</i> page
2	Current Students (1201 sessions) →	Users exited from this page or accessed the <i>academic calendar</i>
3	Admissions (940 sessions) →	The pages to <i>apply</i> , to <i>request information</i> , the <i>value of University of Idaho</i> page, <i>financial-aid</i> , and the <i>degree browsing</i> page were among some of the pages users viewed
4	Apply (485 sessions) →	Users viewed pages with links to <i>apply</i> , specifically for <i>first-year</i> and <i>dual credit</i> students
5	Faculty & Staff (328 Sessions) →	Users either exited from this page, or viewed the <i>Careers</i> page

Since the data I examined involved user interactions with global header elements, in the future I would like to examine user engagement with other components in the homepage such as the image carousel with links.

Conclusions & Recommendations

At the beginning of the report, we defined three primary objectives to be fulfilled within the University of Idaho homepage and global header,

1. To recruit prospective students to University of Idaho
2. To ensure easy accessibility of University information for current students, faculty, & staff
3. Ensure that homepage is appealing and exciting to audience

The current homepage and global header achieve these objectives through providing a large amount of relevant information to the different audiences of the homepage. However, improvements can be made in terms of the organization and the presentation of relevant information. Some the recommendations include,

1. Tailor specific content within the homepage (Images, Linked resources etc.) to prospective students
2. Prioritize and re-organize header elements in the Global Header based on elements that are used most frequently and header conventions
3. Re-evaluate presentation methods of media content such as the image carousels

Global Header

The current global header presents a lot of information and links to the users by implementing all three types of navigation i.e. Content-based, Audience-based, and Utility-based navigation. However, after examining the header based on feedback from clients in the online survey, heuristic guidelines, conventions in other competitive websites, and user activity data through Google Analytics, I recommend that the header elements should be reduced to the most useful and frequently utilized elements only.

The analytics data indicated that many of the links and resources currently placed within the global header are not accessed frequently by users. Additionally, the heatmap of the global headers of competitive websites give us an idea of the header elements that are traditionally emphasized, and the order in which they are placed. In the heuristic markup and in the clients' feedback through the survey, several usability issues such as confusing terms, inappropriate spatial grouping within the primary header, and repeated links were highlighted. In order to provide a visual representation of the changes that can be implemented within the global header, I have created the wireframe below.

Figure 41

Mockup of Global Header for University of Idaho



The above wireframe consists of header elements of all three types of navigation. Instead of having Audience-based elements for all of the different audiences, I pulled the links that were most frequently accessed by prospective and current students (Apply, BbLearn, Email etc.) and placed them as separate Utility-based header elements. I retained the Audience-based elements for faculty and staff, parents, and alumni. However, user activity data indicated that the most frequently accessed link within the Faculty & Staff header was the *Careers at U of I* page. Therefore, this link was pulled from within the global header and placed as a Utility-based header element.

The most notable change is the manner in which the header elements are spatially divided into two sections. This recommendation aligns with the design conventions observed in the competitive analysis and solves the problem of the header having too many options. The order in which the header elements in the primary header has been placed is based on header conventions established through the heatmap, as well as user activity observed through Google analytics.

The search button has been placed on the far right corner of the page to align with design conventions and with users' mental models.

Drop-down menus for each header element have been eliminated, as the most frequently accessed links have been pulled out and placed in the header element separately. Other important links and resources specific to prospective students, such as *Find a Major*, *Request Information*, *Application Dates and Deadlines*, *Financial Aid*, and *Academic Calendar* will be placed as content below the fold within the homepage.

Homepage

Image Carousels

Carousels are particularly beneficial when trying to fit a lot of content into relatively small real estate within the webpage. It can also eliminate any content priority issues by presenting different information in the same space. However, placing content within an element that requires user interaction can sometimes be disadvantageous. A

carousel involves content that can only be viewed sequentially with an interaction cost (Budi, 2018). Users may get tired of going through the content one-by-one to find something they would like to click on. Additionally, content placed beyond the first item in carousels are not always discoverable and users have often already scrolled past the carousel to view other content (Pernice, 2013).

Since carousels are not an effective method to engage users with media and linked content, I recommend eliminating the image carousels and placing the media and linked content individually within the homepage.

Instead of the image carousel, a hero image along with a link to the content featured in the image can be placed at the top of the page. Since this image will be placed in the area *above the fold* it must be an image that highlights the University's values and gives users an idea of the Vandal experience.

Providing Content for Prospective Students

Placing content that is tailored towards prospective students on the homepage is essential in order to attain the objective of recruiting more prospective students. The design guidelines discussed previously, the conventions established through the competitive analysis, and the user activity data discovered through analytics show that including content that provides insight into the values, priorities, and achievements of the university, and the value of the student experience is key.

I have described several features and elements that can be incorporated into the homepage below,

- Images with links to content that highlight the latest university achievements are a great way to grab the user's attention and showcase the strengths of the university. I suggest that placing such content on the landing page area, as well as right below the fold will ensure that the content is immediately viewable to the user. See example in Figure 19.
- The user activity data showed that although the *About* header element is not accessed very often, the *value of University of Idaho* page that is available through the *Admissions* header element is viewed frequently. From this data we can predict that users would like to understand the value of attending the university. I recommend placing some of the information in the *value of the University of Idaho* page such as post-college employment statistics and notable alumni.
- Including a section that displays a statement that reflects the university's values and priorities, as well as testimonies by students, faculty, and staff can be an authentic way to highlight the Vandal experience.
- The images used within the homepage must be representative of the Vandal experience. Including images of the University of Idaho campus, residence halls, student events can be an effective way to capture prospective students'

attention.

- I also recommend including sections that provide links to information about the application process, important deadlines, and financial aid with appropriate media.
- A section that highlights a virtual tour of the university, a link to the *Visit* page, and, and the link to *Request Information* should be included within the homepage.
- The *Find a Major* and *Career Finder* pages are important resources that are accessed frequently by prospective students. I suggest dedicating an entire section featuring these resources, as seen in Figure 15.

General Recommendations

While I recommend that the content on the homepage should be mainly focused on prospective students, I suggest including a section that depicts upcoming events along with a link to the *academic calendar*.

Future Work

There are limitations in this report. Using methods such as gathering design requirements with clients, a heuristic markup, a competitive analysis, and analyzing user activity data has yielded valuable insights into potential redesign solutions for the homepage and global header. However, conducting user research with users of each audience in conjunction with these methods would lead to more robust results.

In the future, I would like to conduct interviews with users of each audience to better understand their needs and goals when using the university homepage and global header. I would also like to conduct further user research by observing users complete specific tasks in the current homepage and header in order to understand how users interact with the homepage and global header. It would be helpful to have users interact with the homepages of competitive institutions to better understand the types of features that users find easy to use in order to fulfill their goals.

A potential solution to consider in the future is personalization of content on the homepage based on the type of user and their anticipated needs. Content such as the latest campus news, images, and student testimonies and profiles can be changed to content that resonates well with the user. Other content such as majors and programs, and information about visiting can also be tailored to the user based on their previous activity within the website, in order to give them an enjoyable and seamless experience.

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Appendix A - Survey

Survey Introduction & Questions

Hello!

Thank you for agreeing to take part in this survey! Our goal through this survey is to understand and define the goals for redesigning the current University of Idaho homepage and global header.

Your expertise and knowledge will be extremely helpful to us in defining the scope of the project. The survey should take about 15-20 minutes to complete. Be assured that all answers you provide will be kept in the strictest confidentiality. If you would like to continue, please click continue and begin the survey!

1. Understanding our audience is a key part of defining redesign requirements. Please select the audiences you would like us to focus on when redesigning the homepage and global header.

What might their goals be? Please list any goals and tasks in the text box below each audience choice.

2. What do you think are the major pain-points of the current homepage and global header?
3. What does success look like for this project? (e.g.: We would like to attract more prospective students... etc.)
4. What potential limitations/constraints do you see in redesigning the current homepage and global header?
5. What do you like about the current homepage and global header?
6. What do you dislike about the current homepage and global header?
7. On a scale of 1 to 7 (with 1 being extremely easy and 7 being extremely difficult), how easy do you think it is for each of our stakeholders to fulfill their goals in the current homepage?