COEN 163 Project 1 - UX / UI Review

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Abstract. This paper quantitatively and qualitatively analyzes and compares the quality of two university art department websites, one of which is well designed and one of which is poorly designed (based on our interpretations of these qualifiers). In detail, we looked at (1) the needs and goals of a typical user of these websites, (2) how usable the sites' interfaces are, (3) the quality of the content the sites serve to users, (4) the aesthetics of the sites, and (5) how well optimized the sites are for search-engines and social networks.

Keywords: User Interface, User Experience, Usability, Website, Browser, Design, Style, Aesthetics, Social Network.

Sites Selected For This Project:
Well Designed Site: art.stanford.edu
Poorly Designed Site: art.yale.edu

1   Website business category

1.1   Website goals, typical users and their needs, and how the website satisfies these needs.

Both sites host information related to the arts school at their respective universities. We believe the goal of both sites *should* be to provide information regarding the art school to users in a manner such that they can easily parse the site and find what they are looking for. Stanford's site seems to embrace this goal, though Yale's site seems to disregard this goal in favor of turning the website itself into an art piece, a goal that is unique and interesting, but that ultimately results in poor user experience/interface. The typical user of both sites is an individual seeking information related to the art school including: student work being completed at the school, typical course load of a student at the school, information about the schools mission, and how to apply to the school.

When looking at Stanford's site, we found that the site met our heuristic expectations of what an academic website should look like and how it should be navigated. As such, we found it extremely intuitive to perform manual information search

operations on the site to meet the needs of the user through the use of space, color, and iconography.

When looking at Yale's site, we found that the site challenged and defied our expectations of what an academic site should look like: the landing page is immediately jarring to users and offers no clear styling, coloring, spacing, or pattering. Links are not made apparent to the user whatsoever and can only be found by hovering over text in an attempt to determine what is and what is not a link, significantly increasing the difficulty associated with user satisfaction. For these reasons, and more which we will go into later in this report, we do not believe that Yale's site does a good job satisfying the needs of typical users.

2   Websites Usability

2.1   How long does it take for pages to load and will the visitors get bored
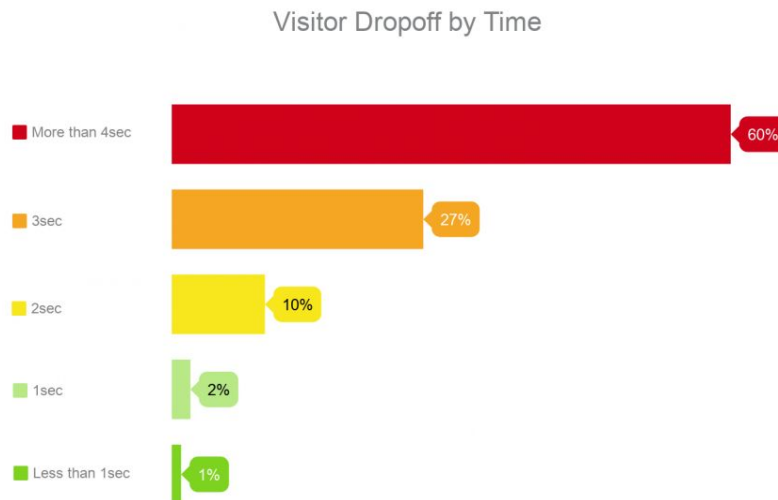

Fig. 1. Time before a visitor gives up on loading a website. [1]

In our testing, Stanford's site was substantially quicker in loading than Yale's site (0.99s vs 1.68s across 3 trials), though we would consider both sites quick enough in loading for users to avoid getting bored. That being said, users may possibly have lower expectations for Yale's site due to its initial layout after the longer load. Also, statistics show that users tend to not favor websites that load longer and usually end up using another website as they lose interest in those that have longer loading times.

2.2   Can information be found easily?

Stanford's site follows the traditional layout and design users have come to expect from an academic website including an easy-to-read navigation bar at the top of the page that includes links for "about," "academics," "news," and "events," to name a few of the options. These four links alone are enough to satisfy the majority of our user's needs. Some additional options are included in the user interface but despite hosting a lot of information, Stanford's site refrains from feeling cluttered or disorienting to users. Moreover, important information featured in the navigation bar is placed towards the bottom so users don't have to scroll up to find the information again.

Yale's site, on the other hand, is organized as a single vertical column with information that is not sorted or organized in an easily understandable and digestible manner. The repetition of images, excessive amount of coloring, and different font size make it difficult to read, understand, and process information. Yale's site also includes both a navigation bar on the left and a quick links dropdown on the right, with both not standing out. Furthermore, information in these sections is cluttered and links are not made clear to the user (only showing any indication that they are a link when hovered over, instead of always having an underline or some other demarcation as a link). Some links do notably have a ">>" at the end of the text in an attempt to tell the user that the text is in fact a link, though this is not made clear to the user, especially as some links span multiple vertical lines of text.

2.3   Is there a search button available for visitors?

Stanford's site has a search-button and search-bar functionality that is easily findable in the top right above the navigation bar on all pages, which follows standard design protocols. Stanford also has a page dedicated to the search feature at https://art.stanford.edu/search/node. As a result, users can search for any information they desire or can't find.
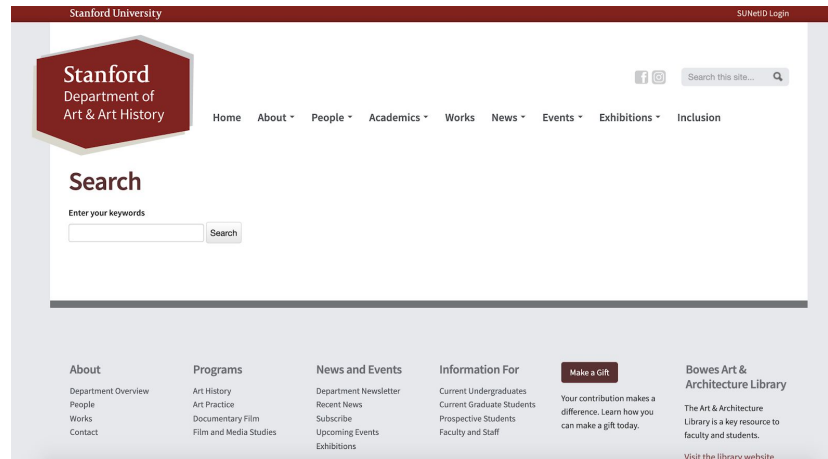
Fig. 2. Stanford's dedicated search feature page [2]

Yale's site, on the other hand, has no search-button or search-bar functionality located on any of their pages and seems to act adverse to the user as they do have a page in their site hierarchy dedicated to search which does not give a 404 error or any other indication that the page shouldn't be visited.

2.4   Are all the links working correctly?
The links on Stanford's page all work and have accurate/helpful naming for the href. For instance, clicking on "View Past Events" will lead users to a new page that has all the previous events in the art department listed.

Yale's website has broken links for current students. if you scroll down to the current students section [2] and try clicking on names you'll get either 404 errors or too many redirect errors. Thus Yale's site does not provide error prevention, as users naturally will end up with 404 errors if they simply click on certain links. The error messages are also unknown to common users and do not help users diagnose and recover from the problem.

2.5   Does the website work properly in different browsers? Check all of the widely used browsers. Does the website work well on tablets and mobile devices(responsiveness)?
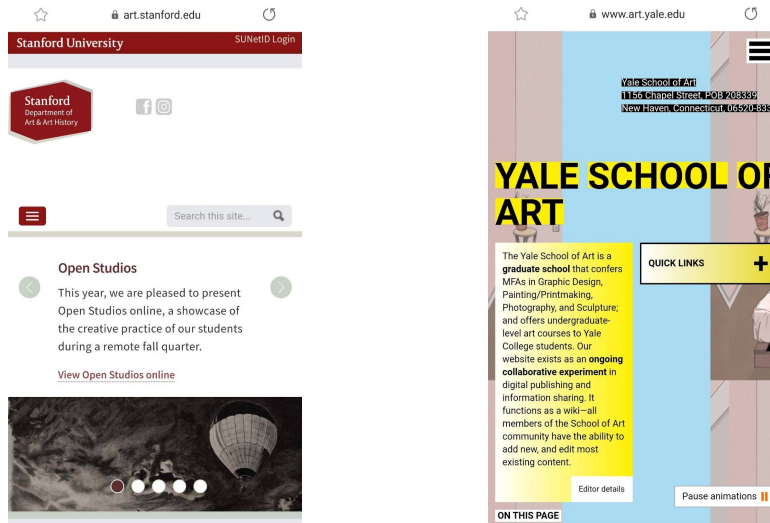
Fig. 3. The mobile layout of Stanford's site [3] and Yale's site [4]

On mobile devices, Stanford's site is modified well in providing a responsive mobile web layout. For instance, the navigation bar is now an icon on the upper left, which is very fitting in current design trends. All links, images, and texts are the same and work identically to the site on a computer.

Yale's site has major improvements on the mobile device website in terms of less images and better text size, but there are still broken links. Furthermore, the dropdown bar shown after clicking the navigation button does not follow current design protocols and seems like it should go on the bottom of the site. Users may not know that the words shown in the dropdown bar are clickable and older generations/adults will have trouble clicking on the small text given how close they are.
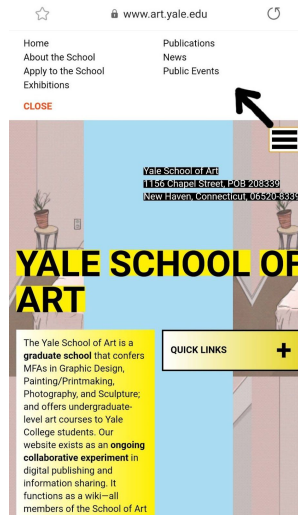
Fig. 4. The mobile layout of Yale's navigation bar [5]

2.6   Is the website accessible to anyone using the internet?

Stanford's webpage is easy to navigate, clear, and concise for people of ages to gather information and find what they desire. The webpage does not use many different coloring and provides simple images and text for users to read, which makes it easier for the audience to find relevant information. Finally, the addition of a search bar makes a web page accessible to all because all information can be found by simply searching for it.

On the other hand, Yale's webpage proves to be accessible only for those that are confident with technology and abstract pages, specifically younger generations or students that are familiar with the site already. The amount of excessive images, coloring, and varying text size makes it very difficult for any user to find desirable information.

3   Content quality

3.1   Are the fonts that have been chosen easy to read?

Stanford's site uses the same text font family for all the text on the mainpage, so it's very uniform and doesn't distract the user from focusing on certain paragraphs. The site also uses only a few text colors, which helps with overall clarity and clearness.

Meanwhile, the text on Yale's site is not easy to read and user unfriendly. There are different fonts, text size, and text color for almost every new section and category,

which makes it difficult for any person of any age to see. Some words are bolded for no reason and some titles/headers are highlighted or modified for perhaps artistic purposes.

3.2   Is there considerable contrast between the font color in the background color?
Although Stanford's font color doesn't contrast that to its background color as opposed to Yale, the simplicity of it makes the font still clear and easy to see. The only argument here would be how some older people aren't really able to differentiate gray and black.

Yale has extreme considerable contrast between the font color and background color. The problem with the site is that it uses too much color. There are over 10 background and font colors and the combination of different ones placed side by side causes distortion to the eye. Content is hard to interpret and users have trouble knowing what are actually links are clickable.

3.3   Is the text an appropriate size? Will the content be relevant to the reader?
Both sites have average size texts, though Yale's is a little bit on the smaller end. For most users, they should have no problem reading. However, for elderly and those with eyesight impairments, the paragraphs on both sites would be difficult to see. As a result, a suggestion would be for both web pages to add a zoom in or text-enlargement option on the top.

Also, both have pretty relevant content as the first section for the reader. Stanford's interface features news, events, upcoming exhibitions, and provides reasons why to study art at Stanford and some Department work, which boosts their credibility and helps the reader decide if they want to pursue art as a career. Yale does a similar job, but focuses more on talking about their program.

3.4   Is the content concise yet still useful?
Overall, Stanford's page actually doesn't have a lot of text. They're able to keep it very short, concise, and simple. More useful information can be found through their usage of hyperlinks and webpage directions.

Yale's content is useful, but not concise. There's just simply too much going on and they can condense their information to something shorter either by combining some sections or eliminating some extra text.

3.5   Does the overall design make content easy to find?
Stanford's simple layout follows the standard design protocols we see today. The navigation bar is on top with dropdown bars and a search bar is included for users to find

what they want if they can't by navigating through the site. Hyperlinks are also very apparent and visible.

Yale, however, has excessive images and varying background colors that cause it to be very cluttered. Content is not easy to find, as hyperlinks are not very clear where they will guide the user. Furthermore the page is very long, so it may possibly take the reader a long time to find what they are searching for. For instance, if they are looking for newsletters, they'll have to scroll for a long time until they reach it at the bottom of the page.

4   Interface aesthetics values

4.1   Alignment of website's style and brand in terms of colors, graphics and feel, as well as style consistency throughout the website.

When first looking at the Stanford website, you can tell that there is definitely a theme of colors that the website designers are trying to follow. The website shares the same two-three fonts and all use font colors found in the school's logo.
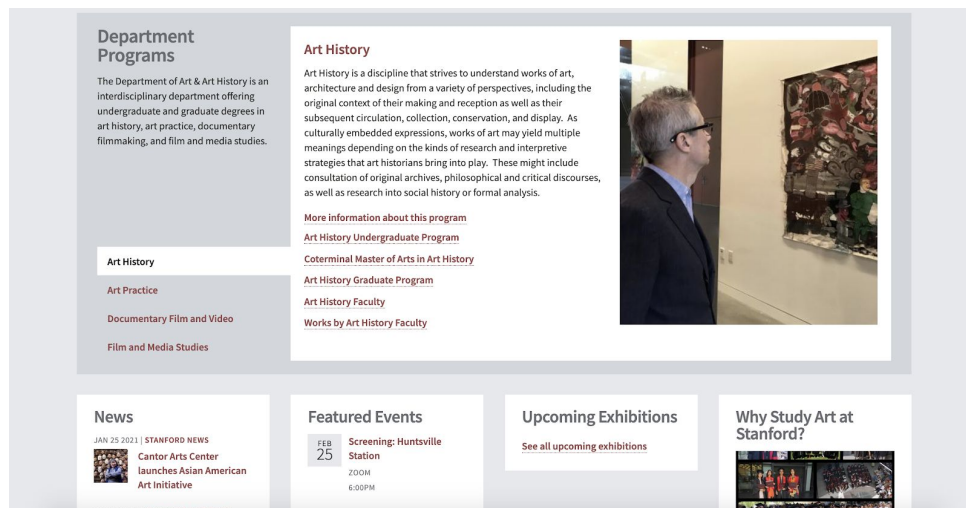
Fig. 7. The desktop layout of Stanford's site [3]

With Yale's website, the use of colors is all over the place. Each subpage, accessible through the navigation bar, uses a different palette of colors. The picture used in the background also does not clearly relate to each subpage either. Even though it can be argued that the website's style aligns with the brand in terms of being an art school, the

design of the website is still all over the place and inconsistent. Furthermore, Yale's website actually allows students to change the homepage background and add projects. There is a sense of webpage interaction, but it also means that the page is not consistent, asit looks different to everyone depending on what they do to the webpage.

Fig. 7. The desktop layout of Yale's site [4]

4.2   Suitability of website style and targeted audience.

The style of the both websites suits the targeted audience. As both websites are meant for art students, they both suit their targeted audience in their own way. Stanford's website was meant to be more professional and more of an official website that is meant for prospective students to search for information about the school. The Yale website is supposed to represent the Yale Art School's community as it was more of a community collage that is editable by members of the community.

4.3   Website clutter and how it is viewed

The Stanford website has good spacing that scales along with the width of the browser that website is viewed from. The alignment of features towards the center of the browser allow the site to look formal and orderly. Information is spaced well and separated well to not feel crowded or sparse.

On the desktop version, Yale's whole website is not centered on the screen, but to the left which leaves a large empty space on the right of the page and causes all the content to be cluttered on the left.

4.4   Decorative touches and photos that distract from message

Compared to Stanford's website, the background on Yale's page is definitely the first thing that the user notices when visiting. The repetition of an image and also its animation distracts the user from the content of the page. Moreover, the various different highlighting of text makes it hard to know what information is important and what is not. Each element is jumping out at the user, making it difficult to know where to look.

5   SEO and social networking

5.1   ALT tags usage

The Yale website has alt tags for all images that are relevant and explains to the reader what the image is about. The Stanford website, however, does not contain any ALT tags on the front page but some subsequent pages do have ALT tags for images.

5.2   Code efficiency

Stanford's webpage source code is written very efficiently and clean, without any excessive lines of coding. Since all of the information on Stanford's art page is essential for most users, there is no extra line of code that needs to be eliminated.

Fig. 7. Developer Source Code for Stanford's Page

When we compare Yale's webpage source code with Stanford's code, we notice that there's a big difference in overall coding length. Stanford's source code only has 731 lines while Yale's has 1329 lines, almost twice the amount. As a result, it's clear that Yale's code is less efficient and filled with more useless information. Extra spacing can be eliminated and combining scripts into one will make the code more organized, readable, and flow. Because some of the content on Yale's webpage is not really essential, the information can be removed from the source code to provide structure and clarity overall.

Fig. 8. Developer Source Code for Yale's Page

5.3   Usage of relevant keywords in title tags, heading tags, meta-descriptions and site map

Stanford's source code uses relevant keywords in most of their tags such as a "bottom-logo" id selector for their bottom-logo, which is a pretty good name for the object. Although the keywords can definitely be made more specific and unique, Stanford does a great job of keeping the keywords relevant. However the page lacks a site map to help visitors navigate.

Yale, however, uses keywords that are difficult to decipher, read, and interpret. For instance, "mmi-27992" is used as their id selector for their scrolling text module. This is hard for developers to understand and Yale seems to have their own keyword system. However the Yale website does have a comprehensive site map that lists all the important pages contained in the site. The site map is well organized, with indents showing pages

that fall under similar categories. Most importantly, it is also organized so that important information is listed at the top such as study areas in the Yale program.

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