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Support for Students

*Best Practices for Creating a Website with Resources for
Western Oregon Students, Current and Future*

By
Rylie L. Horrall

An Honors Thesis Submitted in Partial Fulfillment of the
Requirements for Graduation from the
Western Oregon University Honors Program

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June 2022

Acknowledgements

I'd like to thank my friends and family — especially my mom, Karly, Allie, and Lucia — for listening to my stress rambles for the past year about what I was doing. It was probably more than they needed to hear, but I'm grateful for their support every step of the way, you guys have been my rocks through this entire project.

Thank you to my student media family for providing me with a strong support system and people I could count on; walking into Terry House and seeing your smiling faces really helped me persevere through a tough year.

Thank you to my student media advisor, William, for his never-ending support and assistance not only with this project, but also with various academic and work-related issues, I have appreciated it immensely.

Lastly, thank you to my thesis advisor, Luke, for dealing with my sporadic updates through this entire year. Your support and encouragement have been wonderful while I've been trying to sort everything out, and I can't thank you enough.

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Abstract

In this thesis, I will be providing research on the best practices for a website, and the implementation process for a website for Western Oregon University students that compiles both online materials they may use frequently in addition to relevant WOU-related resources. Students can struggle to find resources for writing papers, projects, etc., or could have a difficult time trying to navigate life as a WOU student and staying up-to-date with things going on at the university, so a website that's easy for students to figure out and access the things they need would be beneficial. This could be things ranging from style guides for writing to social media pages related to clubs and organizations. WOU has a page similar to this called the WOU Portal, which serves as a reference or guideline for the website as mentioned. In addition to research on implementation tactics, graphics and icons displaying the previously mentioned design tactics will be shown, along with a web page mock-up.

Background

Websites are a dominant feature of present-day society — from small businesses to big corporations, independent entrepreneurs to small start-up teams, or online games to scholarly publications available for all to use, a website can be found virtually in any of these components. Their use ranges widely, “[becoming] the most important public communication portal for most, if not all, businesses and organizations” (Garrett et al. 1) for instance — anyone can utilize their practicality to their advantage. For students, the internet has become a basic need and is used in their day-to-day life, whether it’s for finding information about undergraduate and graduate programs, looking for style guides for writing, staying up to date with the community or events, job searching, or even just browsing through various social media feeds.

Students use the internet for a plethora of tasks; this could be related to a campus event they wish to participate in, finding useful sources for an essay that is due in the coming weeks, or perhaps they need to learn a new writing style they have never encountered before. As a student myself, I have spent many of my college years doing these things, and it’s incredibly frustrating to search for hours and never find the exact information that is needed at that moment. Because of this — and similar struggles that I have seen my friends and peers experience — I began to brainstorm what would later become my thesis project.

I started by looking at Western Oregon University's Portal page — which is used by all of the students for classes, events, and the like — and analyzing the layout of the website as a whole. There are a variety of programs that students have access to, however their purpose was mildly unclear in some instances. For instance, the Virtual Desktop application is something I have seen on this page since my first year, yet there was no explanation given as to what they do, and I found that clicking on the icons themselves didn't provide much further information. Another instance is the presence of the assessment tool, Tk20; this is a channel present on the page, but it's not for students to use and no access is granted once selected.

This isn't to say that the Portal is designed poorly — its intended purpose is to be a central location for staff and students to conduct any university-related business, but an issue arises when there are programs not intended for students visible and taking space. For example, Tk20 is a program that students don't use, yet it's meant to be shown on every page. There is no information given as to what it is, and this isn't the only program with this issue — the Virtual Desktop is meant to be a useful source, but there is no description as to what it is. That being said, there are many tools and programs available that students at WOU can use readily and daily — such as links to Canvas, scholarships, and DegreeTracks, a heavily useful program for students to use to keep track of

credits and during registration (see figure 1). By viewing these issues and successes, I can see what, in terms of design, could be clarified and what should be kept simple.

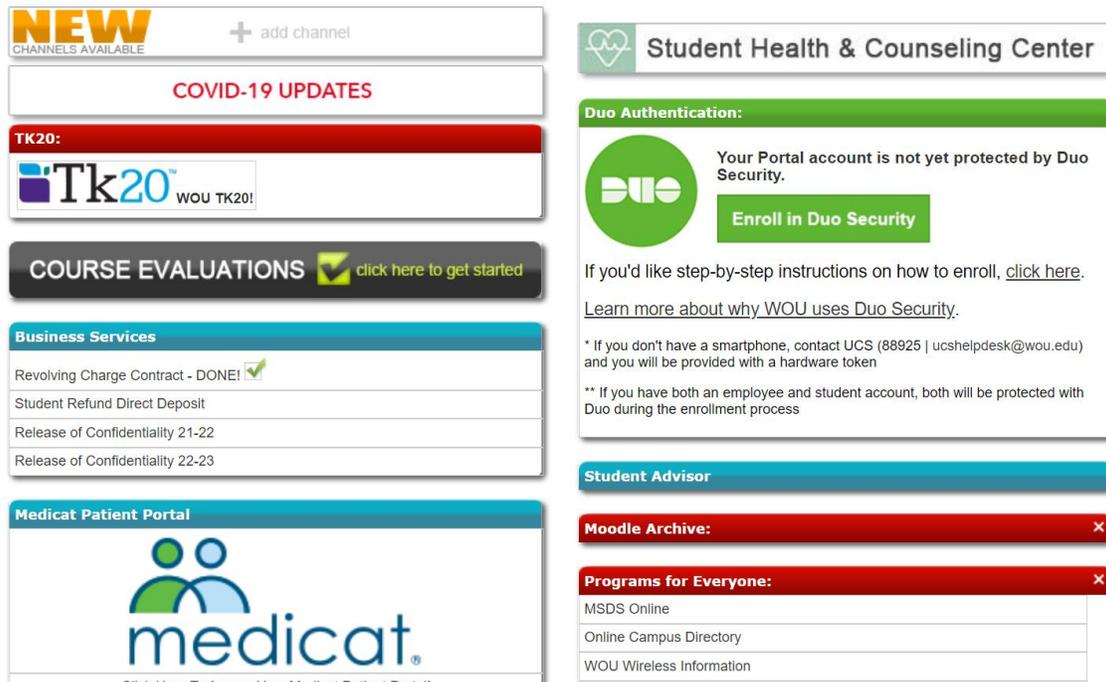


Figure 1. WOU Portal page as seen from a student perspective.

To continue my research, I began thinking about what basic resources students should have at the ready in one space; “The Impact of School Resources on Students” states that the “resources tapped in the majority of studies are selected on an ad hoc basis” (Spady 136). Style guides, citation generators, places that have textbooks for free or cheap, where to find scholarly resources with ease other than the Google Scholar — these are all tools and sources that many students use consistently throughout their time at university on a varying basis. In addition, WOU students may need easy access to programs, clubs, and such for

courses or just as a way to get involved in their campus community. While many of these things can be found through the Presence icon on the Portal page or by searching through Western's main website, some things can only be found through social media — for instance, the release parties for The Northwest Passage occur each term, and information regarding those events is consistently found through their Instagram page.

With the extensive number of ways to become involved on campus, one can imagine that there is a vast amount of social media pages to be found related to programs and clubs, but they are difficult to find. What about the accounts that are student-run only, such as The Western Howl and The Northwest Passage? Or the pages that are used merely as a way for students to laugh about things related to our university, like the WOU Squirrels Instagram? These should be all available for students to find in one space for convenience, and by incorporating social media, it increases user visitation and engagement (Garett et al. 5)

This led me to ponder: how would I create a website similar to what I was describing, what elements would I incorporate? While I've built websites through convenient website builders, it still left me wondering what I would do for something that would be useful to a specific campus. From help with assignments

to details about what's happening on campus, it could be something that many, if not all, students could find useful.

The next section discusses how this could be achieved by analyzing what research has defined as “best design practices,” and how to properly implement a website that takes these techniques into consideration for students to take advantage of.

Basic Design and Accessibility

Designing a website is not without its struggles; if it were easy to create an effective website that looks good as well, I might not have anything to research really. With building a website, multiple things need to be put into consideration, especially when it comes to accessibility.

In the article “Web Design for Accessibility: Policies and Practice,” Foley and Reagan say that accessibility is incredibly important in the web design process, and express that “[accessibility] creates pages that are often [easier on the eyes], more readable, easier to navigate and faster to download” (5). I myself work as a web designer for a small floral business in my hometown, Flora Designs, and these are things that I already think of and take into consideration when making any changes or updates to our website. For example, when I am adding new products that are in stock, I make sure the description is large enough that it’s easily read, and that the text color is darker and stands out against the background color of the site. If the page isn’t clean and simple, it can be difficult to understand what’s going on, which would confuse customers and defeat the purpose of easy online navigation and ordering of our products.

Foley and Reagan point out that about 19% of the United States population classifies themselves of having a disability of some sort — ranging from physical to mental impairments, these can include limited vision, hearing

problems, and even temporary ailments such as broken bones (3). Postsecondary institutions, such as WOU, must have their content accessible under Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act, which state that all services must be equally effective, granting equal opportunity to obtain the same achievements and results amongst students (“Legal Obligations for Accessibility”). There are students on WOU’s campus that fit into these categories, so a website that would be useful to all students would need to keep considerations such as touch screen accessibility, alternative text, and images in mind; one mode of implementation doesn’t always translate well into another.

As previously mentioned, someone who has vision impairments — whether that would be poor vision or complete lack thereof — would benefit from legible, easy-to-read text. This can be enforced by having dark text on a light background, making it stand out rather than blend in, along with proper sizing. According to Craig and Scala in *Designing with Type: The Essential Guide to Typography*, there is a clear preference when it comes to typography, readability, and legibility, stating that “we prefer what is familiar: black type on white paper, roman typefaces in regular weight, and set in uppercase and lowercase” (62). The thought process behind the benefit of a simple typography design can be summed up in one of their passages:

We generally expect to be able to read entire passages effortlessly, without being distracted by poorly designed type or self-conscious typography. In other words, the type should not call attention to itself, intruding between the reader and the thought [expressed].

(Craig and Scala 62)

There's also the circumstance of image use, as this creates a problem for those who use a screen reader, such as the legally blind. As reported by Foley and Reagan, it's important to add text descriptions, also known as "alt" text, in order for a screen reader to properly function, as it only picks up text, nothing more (3). For videos or animations with sound, captions are equally important for those who are hard of hearing or deaf. Alt text and captioning can be implemented in an easy manner, even as an optional recourse that users can turn on and off at will.

In order to attempt to create an accessible website, a person needs to have "an understanding of the issues relevant to individuals with disabilities, the benefits of accessible design and the importance of accessibility" (Foley and Reagan 2); if the importance of accessibility is not understood, nothing can be properly implemented. For example, many websites utilize the "rollovers, dropdown menus and interactive simulations [that rely on a] mouse" (Foley and Reagan 3).

While this could be viewed as not an issue, one has to look at the possibilities that a user could be unable to use a mouse for a variety of reasons, including limited mobility due to an injury or disability, or due to the fact that they are accessing the site on a mobile device such as a tablet or smartphone. Users that have these limitations are unable to access what seems to be a simple feature, and when people cannot utilize a site or navigate it properly, they are more likely to leave the site rather than explore as intended, according to Garrett et al., “A Literature Review: Web Design and User Engagement.”

Furthermore, in “Trends in the Design, Development, and Use of Digital Curriculum Materials,” the authors state that “educational institutions should ‘cater to the demands of their consumers’” (Choppin and Borys 663). WOU should be focused on these accessibility necessities for their students — the student population has a variety of students from multiple backgrounds, and an accessibility issue can be the use of the English language with the assumption that every person speaks or reads it fluently. There are a fair amount of international students in attendance, and a large number of Deaf students and faculty on campus; if it is not a person’s first language, reading a source fluently written in that language can bring about difficulties, so it’s important to pair type legibility and readability with ‘plain language’:

Plain language is 1) readable, in that the reader can make sense of the writing with minimal effort, 2) intelligible, in that the message is clear, relevant, coherent, and cohesive, and 3) usable, in that it is effective and appropriate for conveying the message. (C. McKeown and J. McKeown 510)

Conceptual Framework

With all of this information in mind, I want to address the construction of a website that would be beneficial to college students — in this case, this would be a website for WOU students in particular, however it would be serviceable to both current and future students.

A college student is consistently busy with schoolwork, their social life, maintaining a job (or multiple), and likely spends the majority of their time on the internet in some capacity. This could involve trying to track down more information related to campus events, or scrambling to locate a guide that provides details about writing in a format that has not been used since they were attending middle school — or better yet, one that they have never used in their entire life.

As previously stated, writing related resources such as style guides are tools that a student will consistently use during their college years for papers, dissertations, theses projects — you name it. Facebook, Instagram, Twitter, or TikTok accounts for students to follow are created in order to stay up-to-date with club activities and what organizations are up to — and sometimes those can be more reliable than waiting for an email or web page to update. Students can become vexed when being unable to find what they need, which is why a website

catered to easing those frustrations with clear communication would be valuable
(Choppin and Borys 664).

Visuals and Layouts

According to Garrett et al. in “A Literature Review: Website Design and User Engagement,” some of the design elements that are frequently discussed in their usefulness are organization, navigation, utilization of icons and colors, simplicity, readability, strong user control capabilities, and learnability (3). The latter two in the list play into the accessibility requirements previously mentioned; if a website is not user friendly or visitors have trouble learning how it works, it can’t be classified as effective and accessible. In addition, users who become frustrated with the website will exit before they have a chance to explore the site to its full potential (Garrett, 1).

In “Trends in the Design, Development, and Use of Digital Curriculum Materials,” a beneficial website design for students is defined as one where “digital materials have the potential to transform learning experiences for students by being relevant and interactive” (Choppin and Borys 664). Take Canvas for example, it’s relatively easy to inspect and use, with clear labels and navigation for students and professors alike (see figure 2).

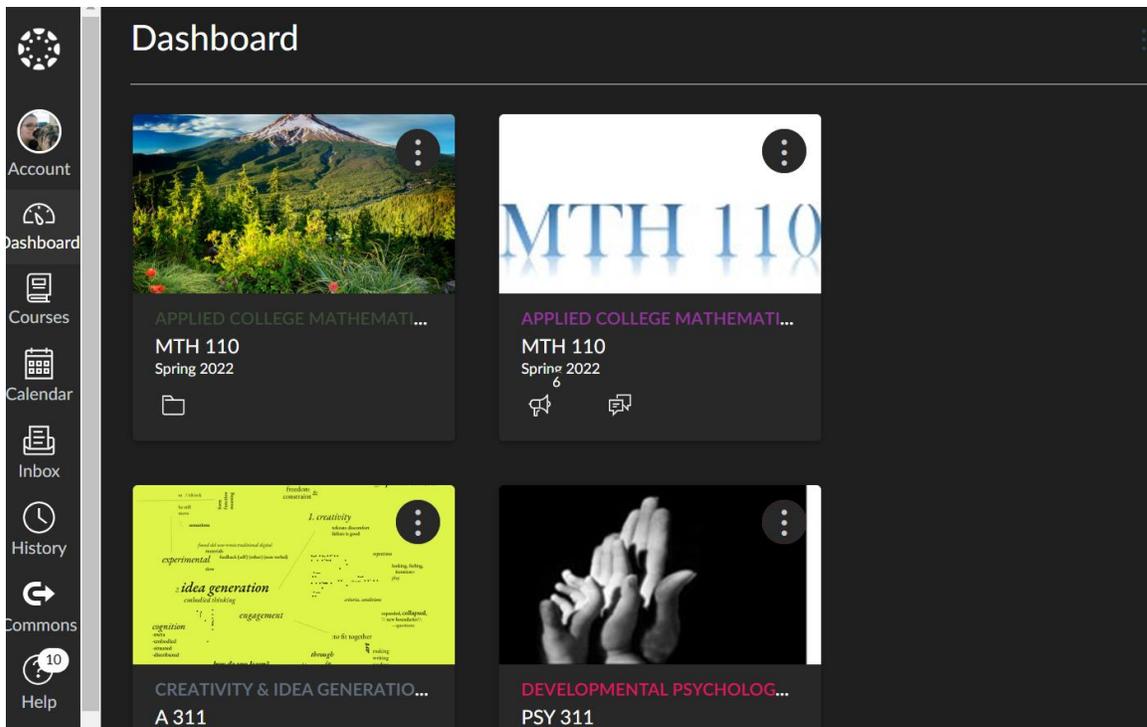


Figure 2. Canvas dashboard and menu, student perspective.

The side panel has simple icons and corresponding text that indicates its function, keeping the design clear. Furthermore, there are modules of class materials, organizational elements for assignments by desired category — content, assignment type, or due date, to name a few — and various other section-like structures. The clear design keeps students from becoming frustrated and less likely to abandon the website (Sherwin).

The color palette is likely to be the first thing a visitor will see when they open a web page — it’s what encompasses the website as a whole, and is likely to appear before the content itself, which could make or break the first impression. According to usability.gov, colors are important when trying to create

depth, add emphasis, and organize information (“Visual Design Basics”). In addition, as stated in “Color Psychology: Does It Affect How You Feel?,” studies have found that certain colors can elicit different reactions:

Colors in the red area of the color spectrum are known as warm colors and include red, orange, and yellow. These warm colors evoke emotions ranging from feelings of warmth and comfort to feelings of anger and hostility. Colors on the blue side of the spectrum are known as cool colors and include blue, purple, and green. These colors are often described as calm, but can also call to mind feelings of sadness or indifference. (Cherry)

When adding iconography to the mix, minimal color should be used to avoid overwhelming the user. According to Wolf in “A Complete Guide to Iconography,” too many colors can become too complex, and it’s best to stick with around two colors. While this is mainly directed towards the design of an icon itself, it can be applied further to the website as a whole, as too many colors can be disorienting. A simplistic color scheme creates a complementary visual appeal and hierarchy — putting icons and navigation at the top in a single, stand out color to show its prominence and importance, and keeping the rest of the layout and scheme simple to avoid too many distractions (Crestodina).

An icon's design should be informative but simple — too many details will lead to confusion about its use, and could be difficult to see depending on the size. It should be straightforward enough that a visitor will know the purpose it serves and where they will be redirected after clicking on it. As stated in "Icon Usability," if its meaning is "not immediately clear to users, the icon is reduced to mere eye candy — confusing, frustrating, eye candy — and...hinders people from completing a task," stressing the importance of a simplistic design (Harley). When creating multiple icons, the size, detail, and general appearance of it should follow a pattern to create unity, teetering on the edge of illustration while remaining simplistic (Wolf). This avoids such issues of disorganization that make a web page difficult to follow, and minimal details keep the design from becoming cluttered.

While there should not be text on the icon itself, a label should also accompany it to clarify its meaning; there is safety in including a label, for if the design of an icon is altered in the future, users will still understand what it is used for (Harley). WOU already has a clear example of the effectiveness of having text accompany the icon, since the Portal page has icon navigation for students, staff, and faculty at the top of the web page designed by Danielle Gauntz. There have not been design changes to an already existing icon, however there have been new additions or replacements of old programs no longer in use — Presence for

Engage, Canvas for Moodle. Furthermore, the text label should not be hidden as a roll-over or hover option, as this plays into the accessibility issues for those on mobile or touchscreen devices.

Mock-ups and Methodology

With this design language in mind, proper execution is completely viable for the creation of an informative and easy-to-navigate website filled with resources for WOU students. Assets that would be relevant include style guides, citation help, physical and digital textbook reserves, and campus club and organization information. The latter can involve everything from events to social media pages; Presence is already a source for students to find organized, major events, so the idea would be to take a concept like this and expand on it within a website with multiple other assets, rather than just focusing on one idea.

Iconography for resources such as those listed above should be simplified and clear in their design, as noted in the previous section. For the purpose of mock-ups I have created for this thesis-style guide, the color of the icons will be limited to black, gray, and white, however color can be used for the actual production as long as it follows the guidelines to avoid being classified as illustration or becoming too muddled together.

First, let's view some iconography examples (figure 3) that have the design elements that have been brought up.

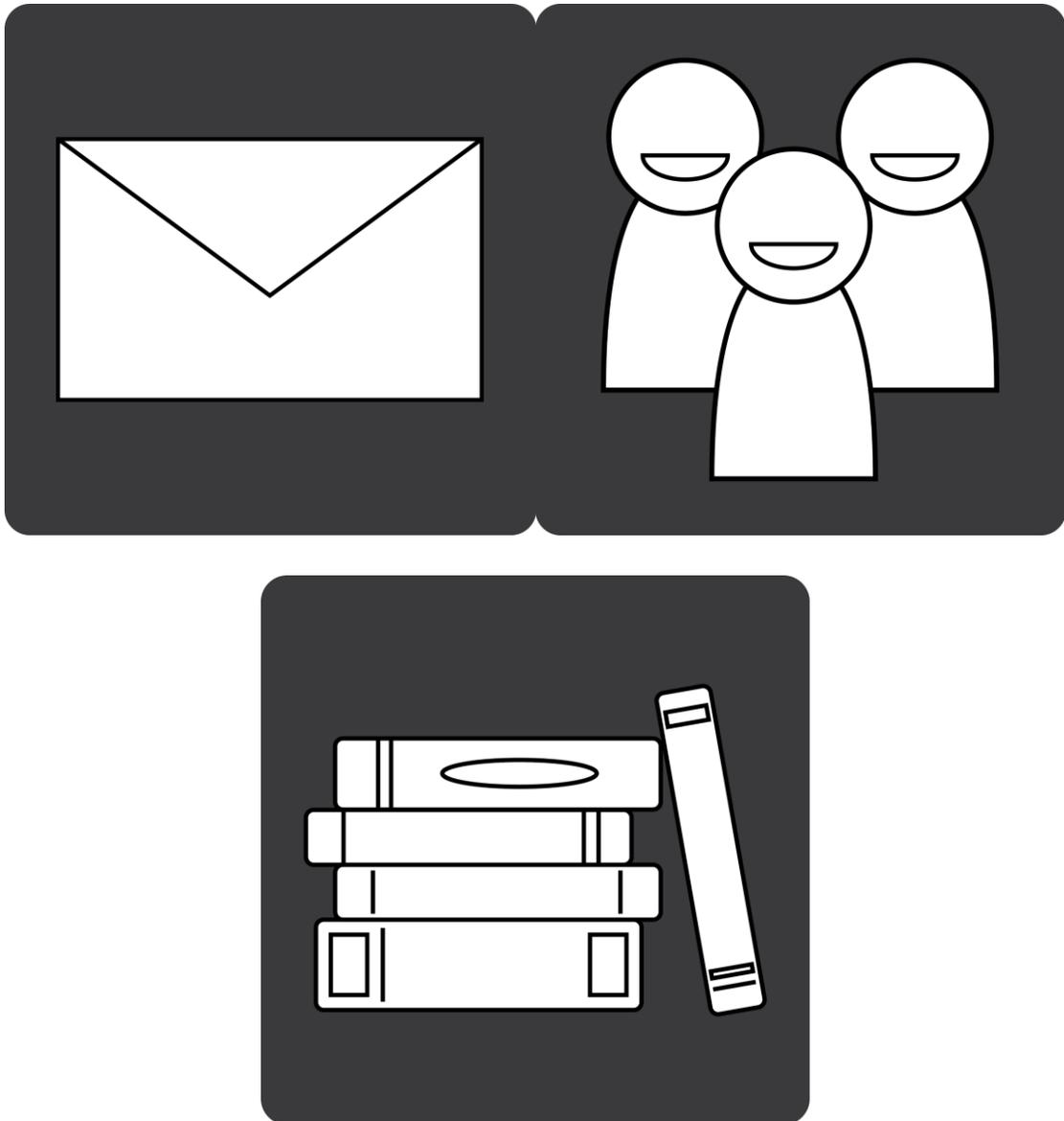


Figure 3. Iconography examples to illustrate best design practices. Meanings from left to right, top to bottom: messaging, social media and events, and textbook sources.

The far left icon is meant to show the meaning that some symbols and icons hold universally; an envelope generally is understood to represent email or messaging of some capacity, therefore something such as this is to potentially be recognized even without an accompanying label.

The far-right icon is a mock-up that depicts access to social media together with clubs and event information. Its label could just be “Social,” and the implication one would have at first glance is likely that it’s for anything social — whether that be in reference to in-person socializing or online, i.e. social media platforms. The bottom icon is for textbook-related information, and would have the purpose of providing sources for students to obtain locations for free or cheap textbooks, either online or in-store. Similar to the first icon, it would be expected to be recognized even in lieu of a label underneath it.

Next, let’s examine two icons that represent the same thing — a link to style guide and citation information (figure 4).

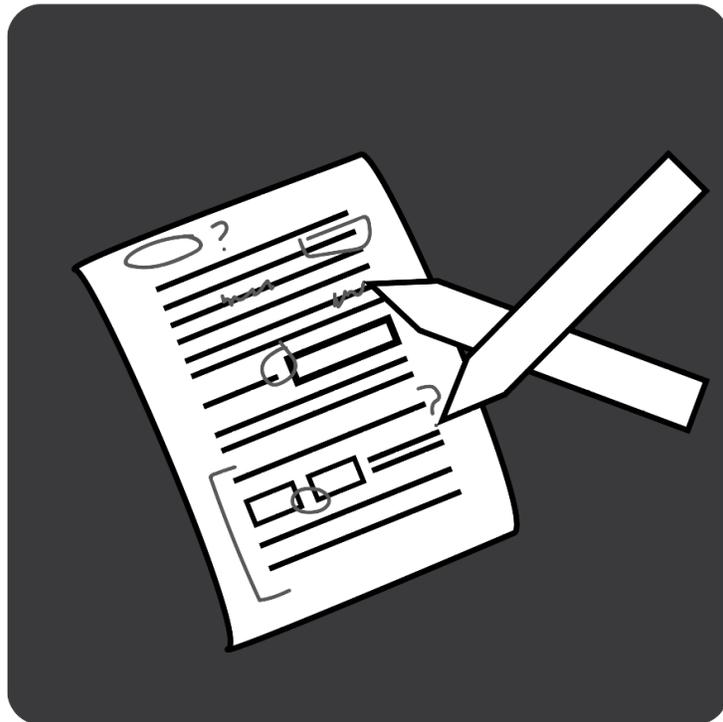


Figure 4. Comparison of two icons meant to represent writing-related information.

The top icon shows its relevance to writing and editing; a label to accompany it would solidify its recognizability to make it an effective icon. The below example has the same concept, however it has too much detail. The editing marks and multiple lines on the paper are too small to be successful in their purpose — while blown up, it can be seen, but the smaller the icon becomes, the more messy the design becomes.

By clicking on this icon, the idea is that students would be redirected to a page that contains guidelines on citing bibliographical sources, as well as various in-text citation methods for varying writing styles. This can serve as a quick reference for students who just need a brief refresher, but then a link to an extensive guide — such as the Owl Purdue Online Writing Lab — towards the bottom of the page could provide further assistance. This serves to keep the layout and design of the page simplistic and readable, but still in some capacity provide the student with what they are looking for. Figure 5 is an example of how this page could look on a mobile device, once again strictly in a monochromatic palette for simplicity.

Website Title



Label 1



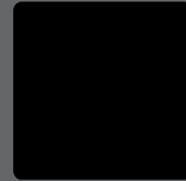
Style Guide



Label 2



Label 3



Label 4

APA

MLA

AP

Chicago

Citations - Reference page

Article

Last Name, F. (Publication Year, Month Day). Title of article. *Magazine title*, Volume #(Issue #), page(s). DOI if applicable (online)

Book

Last Name, F. (Publication Year). *Title of work*. Publisher Name. DOI if applicable

Electronic

Lastname, F. M. (Publication Year, Month Day). *Title of page*. Site name. URL

Film

Director, D. D. (Director) (Date of publication) *Title of*

Figure 5. Sample web page with aforementioned design style that depicts citation information.

The bolded text is to indicate the page of the website the user has selected — this principle applies to the clickable options within the page as well. A font size of 14 for the main body of the text is used for increased readability, along with the selection of a dark color on a lighter background to provide contrast. Boxes of the same size and shape were placed next to the previously mentioned icon to provide a visual for the layout. Implementations for typography, color, and iconography were executed with accessibility in mind; in addition, the icons were given labels for clarification, and no drop-down menus were applied in order to be user friendly to those on touch screen or mobile devices.

The sample page in figure 5 is meant to symbolize the simplicity of the design this website would have, following the best practices guidelines discussed in this thesis — readable typography, limited color palettes, simple icons, and the avoidance of unfriendly accessibility issues such as small, hard-to-discern text, mouse-only attainable features, and confusing navigation.

Conclusion

There has been extensive research done in regards to the most optimal design aesthetics, as evidenced by the sources and information I was able to find myself. However, that doesn't change the importance of properly implementing these guidelines when creating websites. WOU's campus has an abundance of students from varying backgrounds, which is why a website that's meant to cater to their various needs — whether they be academically or socially based — should be produced in such a manner that it's accessible to everyone, rather than just a select few.

This thesis is meant to serve as a guideline for a future mock-up of the website described, providing information to make it as accessible and useful to students of WOU as possible. Should a mock-up receive positive feedback, a complete website can then be implemented and distributed amongst students for use.

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