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CS 1980 Capstone

### Website Redesign and Content Integration for Inclusive Teaching

Our Capstone project to redesign the website for Inclusive Teaching is significantly progressing, especially with strides made in prototyping different layouts and initiating user testing to discern the needs and preferences of the site's users. Following the presentation of several design drafts to our sponsor, consensus was reached on a final design to be implemented for live hosting. This user testing phase is expected to conclude by the week of 3/24, which will allow us to begin alterations to the site. Despite encountering some delays, the team remains on track to complete the project within the established timeline, although we may need to slightly accelerate the process to counteract earlier setbacks.

The process of redesigning and developing the website has followed our timeline, for the most part. We began the process by assessing the website, compiling all issues, and going over it with our sponsor. During this process, we discovered some flaws that went previously unidentified. The next step of our project was making various mockups of design and navigation changes we were considering making, and having our sponsor give feedback and choose which ones might fit the website best. After that, we started looking into alternative website hosting and forming our user testing methodology. We built a prototype and began reaching out to users to schedule testing. Once the testing started, we made small tweaks to the testing process and rebuilt the prototype to best fit our needs. We are now in the phase of analyzing user testing data that will inform any other changes we should make.

During the development phase of the website, we've encountered several challenges that warrant attention. Our current platform, WordPress, offers various packages, each with its own set of features and limitations. Unfortunately, the package we're currently utilizing imposes restrictions on the use of custom code, preventing us from implementing certain functionalities for the site such as custom CSS. Despite our efforts to secure financial support for a more advanced plan that will allow for custom coding, we were not able to get the approval for necessary funding. This predicament introduces a significant risk factor, as it may prevent us from integrating code during the ongoing development of this project. We also have to make changes to the live website, rather than having a draft that is published once everything is finalized and approved. This process is essential to expedite our progress, ensuring effective time management and the timely completion of all tasks. One solution would be to integrate plugins, which would enable us to include the necessary features for the project.

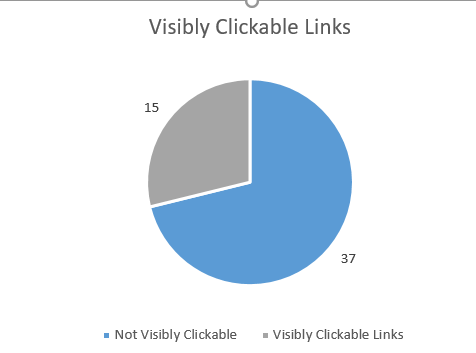
A notable shift in the project's execution arose in response to a recommendation from the sponsor, Marcia Rapchak. Initially, the team planned to edit the site on WordPress by cloning it, allowing for modifications without impacting the live site. However, Marcia recommended exploring the possibility of hosting the site on the University of Pittsburgh’s official website hosting service. This pivot caused a delay in the project's progression, as approval for hosting had to be secured. We reached out to the necessary channels to begin hosting it at Pitt, and began to plan out what the process would look like to migrate the entire website’s infrastructure to a different host. However, after meeting with Rosta Farzan, the Dean of Diversity, Equity, and Inclusion, we were instead redirected to keep our website on WordPress. Our priority at the moment is user testing, and because of this delay we have had to come up with an alternative solution to complete the testing. We created an interactive protype on PowerPoint with the new design layout of the website. This approach allows us to gather feedback on the newer version of the website without requiring access to the live site. We ran into a few functionality issues with the PowerPoint prototype, causing us to build a second prototype in Figma.

On the other hand, identifying and engaging users that align with the project's user stories has proven to be more straightforward than anticipated. We were concerned that participants might be hesitant to engage in the testing process, so there was a suggestion to offer incentives that did not pan out due to funding and time constraints. However, individuals were eager to participate and willingly proceeded with testing the website. Finding suitable users easily for testing has likely contributed to the project maintaining its trajectory toward the intended outcomes. We have begun testing students, PhD students, teaching assistants, and some professors in the School of Computing and Information. Testing with a diverse user base will enable us to gather a variety of data, which we can analyze and use to incorporate specific features suitable for all users. We did run into some issues with scheduling and availability with users, as many we reached out to did not respond initially or did not follow up to schedule a testing session. We still managed to test 10 users, which is an acceptable number for thinkaloud analysis.

Testing with users during the thinkaloud process went relatively smoothly. Some users did not articulate their thoughts completely, however our data of the sessions still provides us with useful information. We recorded each session while the users completed tasks within the prototype, allowing us to transcribe and reference the session. We have begun analyzing the data for critical incidents showing places the users struggled or hesitated, giving us better ideas on how to structure the website and name pages.

Regarding the website design, we successfully arrived at a design that aligns with the sponsor's specifications. However, uncertainty surrounding the hosting location introduces the possibility of design alterations and potential rework of the entire website. This uncertainty prompts us to consider the necessity of developing two separate websites instead of one. This poses more issues, since the plan that we are using for WordPress allows for the creation of only one website. Additionally, we are contemplating whether specific hosting guidelines need to be adhered to, as any deviations from the initial plan may significantly impact on our project timeline. A solution would have to be remaking the entire site again if the designs are not approved. Adding the design elements that have proven to be successful in user testing phases may not be completely possible, as the website’s subscription tier on WordPress may not allow us to build it to our desired specifications.

Throughout this process, one of our main goals has been to ensure that the website is functional and useful. We have identified major flaws with the website during the assessment and user testing process, such as page titles that do not best represent the contents, many broken links, and ineffective design patterns. After a brief analysis, we have discovered that 28.8% of the 52 outside links on the website are visibly clickable as links (they follow standard design patterns for links such as a different color of text and underline). We also identified that 50% of the links on the website are broken, not clickable, or lead to incorrect pages. Many of the pages do not have consistent designs and menus. These issues lead to a less functional and pleasant website to use, leaving it to ultimately not serve the purpose of being a resource for inclusive teaching for educators. Being able to update these elements to result in a functional website is our main overall priority. Updating the links, pages, and contents will be relatively straightforward. The design patterns will provide more of a challenge within the constraints of the WordPress platform; we are confident that we will be able to make a visually appealing, but we are concerned that we won’t be able to match the prototype as desired.



Overall, the project is advancing towards its goals, supported by the team's adaptability to feedback and changing requirements. While the transition to a new hosting solution has introduced delays, the identification of user needs through testing highlights the project's potential for success. The team's next steps involve completing user testing, implementing site modifications, and addressing the challenge of hosting to ensure the project remains aligned with its timeline and objectives. We are planning on implementing the basic functionality changes as a first step, while researching the best way to incorporate our user tested designs within the WordPress platform. Once we figure out the best method of approach, we are planning on making the major design changes to the website, and if we have the opportunity, testing with users again to ensure that the changes we made were optimal. There is more content that our sponsor wants us to integrate into the website, within the scope of the existing pages. This will allow us to test the improved formatting with additional content. If there are any final changes we need to make informed by the second user testing sessions, then we will implement those. As a final stage of the project, we have plans of conducting bug testing to ensure that the website is functional and free of issues.

## Formatting Requirements

We expect the paper to be at least 3 pages in length, using a relatively standard font and point size (e.g., 12-point Times New Roman or Computer Modern). Judicious use of charts, graphs, and/or illustrations is encouraged, especially if it helps the reader to understand the project and progress so far. Margins should be of standard size (usually 1”).

Include the names of all group members, the name of the project, and the name of the sponsor. Submit once on behalf of your group.

## Details

This update should include an assessment of the current status of the project, what has been changed since the initial proposal, and what is expected for the rest of the term. You should reflect on what has gone well (and what hasn’t) and strategize your approach to the remainder of the project.

Here are some example questions you may consider answering in your update. This does not mean that you need answer all of them, nor that only answers to these questions are needed, but I would recommend that you think about all of them as you reflect on the first half of the project.

1. What is the general status of the project? Are you on track to complete it?
   1. We have begun prototyping with different layouts and also begun user testing in order to figure out what users require from the site. We will be finished with user testing soon next week in which we will begun the alterations of the site. With our current timeline, we are on track to complete it. The process may have to be slightly accelerated now because of some drawbacks we have had.
2. Are there any features/user stories that you have needed to add/remove since the Proposal?
3. Have you made any changes to your *process* since the proposal?
   1. Yes, we initially were going to make edits to the site on word press by cloning the site and making our own edits without affecting the live site. Our sponsor suggested that we try to host the website on Pitt’s official website hosting service, so we have had a drawback there because we have had to wait for approval for the site to be hosted.
4. What parts of the software development process are working *well*? Which ones are working *poorly*?
5. What are major risks to the project?
   1. The platform we are using, word press, and the package plan that we are using for it limits us with some of the features that we can use like adding our own code. This could prevent us from integrating code into the development of the project, but
6. What questions are still outstanding about the project?
7. Do you need to make any further “course adjustments”?
8. What kinds of trade-offs are you making? How are you determining priority?
   1. Our website isn’t fully functional since we have been working on finding a platform to modify it, and our main priority now is user testing so that the website can meet the needs of potential users. So, the tradeoff here is the actual modification and development of the project for user testing. To achieve this, we created an interactive prototype on power point so that we can still get the user testing completed. User testing is a priority since we were given a website that wasn’t fully functional and lacked consistency of visual elements, and with user testing we would be able to adjust the functionality and look of the website to better suit the user's needs.
9. What are the major issues that you have been experiencing?
   1. The major issues we have been experiencing is figuring out the correct starting point, because we initially started working with WordPress, but because our sponsor asked us to look into hosting the site on Pitt Website Hosting, we haven't made much progress in the coding and website alterations portion of the project.
10. What has been *easier* than you thought?
    1. Finding users that fit our user stories have been much easier than we originally thought.

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