**Prototype And UI Evaluation Report**

**Questions Answered From Chosen Evaluation Methods - William O'Hanlon**

There were many questions we wanted answered both from our heuristic and user evaluation.

Firstly, we wanted to get feedback on the accessibility of our website. This was determined by means of both our heuristic and user evaluations. There are many factors that contribute to determining the accessibility of a site, and unfortunately it is not possible for us to account for all these factors. For these reasons we narrowed the scope of our accessibility evaluation, and focused on feedback from students in the group allocated to us and feedback from general accessibility tools, such as colour contrast and colour blindness extension tools. Moreover, we wanted to get feedback on whether or not our website meets W3C standards. This was achieved by means of web accessibility tools.

Secondly, questions on the navigational difficulty of our site were of high priority to us. This could only be determined by means of user evaluation, especially due to our personal bias for our own website. High navigational difficulty is something which is a huge disadvantage for other learning management platforms, such as Loop. Low navigational difficulty is a highly desired feature, and correlates directly to the success and adoption of a website. Therefore, the extent of this feature for our website is something we wanted from our evaluation.

Furthermore, the users impression of the implementation of our website was another feature we wished to get feedback on. As this website is one which is meant to emulate and improve on a website used on a daily basis, it is important that the user base have a good impression of the website. Other web based learning management systems, namely Loop, have left bad impressions of their users, and this is something we wish to avoid. In conclusion, we wish to learn the impression our website leaves on users from the evaluation.

Moreover, how aesthetically appealing a website correlates with the impression a website leaves on a user. Although not a functional requirement of our website, the aesthetic of a website has a direct impact on the impression it leaves on a user. For instance, Blackboard is considered to have an outdated appearance, as concluded from our survey. Therefore, we wish to determine the how appealing our website is to our users from the evaluation.

In addition, we wish to get feedback on the coverage of desired user features. We want our website to contain all the relevant features desired by the majority of our user base. Therefore, our evaluation will provide user feedback on any missing features.

Furthermore, we would also like to determine how users feel our website compares to the learning management platform used by DCU, namely Loop. The essence of our project was to develop a website which would learn from the mishaps of other learning management systems, and improve on their successes. Therefore, it is crucial that we meet this requirement and the success of our implementation will be based on how the users feel our website compares.

In conclusion, there are many questions we need answered from the user evaluation in order to determine the success of our prototype.

**Conduction of The Evaluation - Ethan Sharkey**

We chose as a group to carry out both a heuristic evaluation and a user evaluation. There were many reasons as to why we chose to do both types of evaluations.

Beginning with the heuristic evaluation, we chose to include this as it would help to deduce any errors throughout our prototype. Examples of what we done for this is using a colour contraster. This was to ensure our colour selection contrasted each other correctly. It also helped to make sure there were no clashes in the colour scheme. We also used a web accessibility tool. This highlighted any errors that was present within our html, CSS and javascript. It also made sure our website was up to W3C web standards. One of our final tests in our heuristic evaluation was to ensure the colour scheme was visibly accessible to all forms of colour blindness This was done using a chrome extension which simulated colour blindness. This was beneficial as we were able to then see if the prototype was visibly accessible or not for all forms of colour blindness. Our final test before giving the prototype over for the user evaluation was to test that the website was accessible without the use of a mouse. We corrected anything that was not accessible by exclusively using the keyboard only.

Moving onto the conduction of the user evaluation. This took place after we were satisfied with our heuristic evaluation on the prototype. The reason we chose for a user evaluation to take place upon our prototype along with our heuristic evaluation is in regards to the possibility of bias being present in our judgement of our prototype. However, the reason for the two evaluations to take place was for the fact that we were not getting users to evaluate a broken website. This would have been solved in the conduction of the heuristic evaluation. The reason mentioned above referring to bias taking place is why a user evaluation had to take place after the heuristic evaluation. We needed a group of users to evaluate our prototype objectively as they would be able to more accurately find problems throughout the prototype. The user evaluation was conducted through an electronic survey as mentioned below.

**What did we learn from the evaluation - Eoin McKeever**

What was learned from the evaluation was that the UI was very easy to use, and it was very visually appealing the sample user found it a 2 out of 5 in difficulty in finding the third weeks course notes. The sample user found no particular difficulties when using the UI. From the evaluation we noticed the user found minimal difficulty accessing the timetable they graded it a 2 out of 5 on average. The average was able to get to the to the assignments page with minimal effort they found it clear and easy to navigate to. From our evaluation report the user thought our UI was more visually appealing than the previous website that is currently being used by the college they are enrolled in. Another thing we learned from the evaluation was that the average user found the page we created much easier to navigate then the page that their college/university used as of present. They rated the ease of navigation a 4 out of 5 which is to be considered quite high in our opinion. One thing the user did complain about was that when they accessed the home page, they couldn’t see what deadline was due only when the deadline was due. Something to add was that none of the user involved had any medical conditions which impeded their ability to use the site compared to a typical user. None of the user had any extra comments to add. Overall from the evaluation our group learned that our website is very user friendly and easy to navigate. The users who worked with it seemed to have an enjoyable time using it with no major complaints. Something that worked well we found was the nav bar and its simplicity any user that used the site could clearly see the nav bar and this helped them navigate through the site with ease. We were n happy with our results from the evaluation they showed we had developed a UI that any user could use on their first attempt and have no trouble navigating or understanding. In summary the things what we found out worked was the simple navigation and clear information of the site. What didn’t work was the UI and it’s mobile compatibility the average user thought his was a downfall of the UI and mentioned it in the evaluation .

**Improvements to UI - Killian Connolly**

Once we conducted the evaluation, we reflected on the results and came up with some improvements that we could implement into our project. The improvements includes, but is not limited to the following.

After completing the evaluation, we concluded that we could improve on the layout of the lectures notes. From the feedback that we got, some participants found the page of notes ”clustered” and “tedious”. We, as a group, understand where they are coming from, since the page of lecture notes is such a vital part of our learning management system, we take that criticism seriously. Using this information, improvements that we would conduct would be focusing on how to make the lecture notes page more legible by spacing out each link, pdf or word document appropriately. Also by enhancing links so can help the user decipher exactly what information they are accessing.

Finally on the page of lecture notes, information we have received from one of the participants in our evaluation stated that the YouTube videos containing information on the topic of that week of lecture notes, were too “bulky” and distracted from the lecturers materials. From this information we can minimise these videos leaving more emphasis on the lecture notes links.

In addition, from the feedback that we received, it has come to our notice that the website can be quite slow at times. This could be caused by the high definition images that our website has, nevertheless, we would look into the runtime and speed rates and decipher how to combat this slow problem.

Other feedback included what we could have implemented into our website that they would have liked seen improved, however, due to time constraints we couldn’t. Such topics include, the timetable. Timetables being a frustrating factor this year academically, the participants mentioned that improvements could have been conducted in this area, however, we kept the scope of our user interface to a realistic level so we did not complete this in our implementation.

After our heuristic evaluation, we improve our website's accessibility after learning that some colours did not contrast very well. We studied what colours went well for accessibility purposes and also aesthetically, as we wished that our website kept its colour scheme throughout. Accessibility is important to include in our implementation so during the duration of our project, we made improvements to colours that are contrasting and access tabs.

One major improvement that we can implement is the removal of the irrelevant tab in the navbar called Modules. This link completes the same task as the Home tab, since the modules are contained on the home page. This problem came to our attention after our heuristic evaluation and tried to remove this from our implementation, however due to time constraints we could not complete this in our final submission.

All these improvements help us obtain a greater understanding of the importance of completing an evaluation with a random group of participants and from this we can get a greater insight and external view of our implementation.

**Reflecting On The Assignment As a Group - Ethan Sharkey**

There are many areas to reflect on as a group throughout this assignment. There are many areas of this assignment that overall, went very well and other aspects of it that needed some work. One area that needed work for our group as a whole was our management of time. If we were doing this assignment once again, allocating more time for it is a must. Throughout the whole assignment, time management was our biggest struggle.

Another area that would be managed differently if we were to do this assignment again would be communication. When it came to implementing the prototype such as creating files, editing files, deleting files etc. on gitlab, it was difficult due to the lack of communication. As a result of this lack of communication, there were many occasions we began editing the same files at the same time and that made creating the prototype as a whole, much more difficult.

**The Nature Of The Evaluation - Alison Kennedy**

The evaluation was originally due to take place in the computer laboratories, in the McNulty building, in DCU. We chose this location as it was a controlled environment , giving as minimal as possible variations that could affect the users’ evaluations. It was also an environment and location our test subjects were familiar with and felt comfortable in.

However, due to geographical constraints not all participants had the ability to partake in the evaluation after being assigned to it. This lead to us altering the evaluation slightly in order to accommodate the participants appropriately.

Originally, upon arrival at DCU, the users were to be given a plain language statement, detailing what the research study was in relation to, who the researchers were, and all additional necessary information such as GDPR compliance, potential benefits of the research project etc. This was sent to the users electronically instead. After reading the plain language statement, the users were to be given consent forms and instructed to inform the principal investigator, Alison Kennedy, of any medical conditions that might impede their ability to complete the evaluation, should they like to do so, when returning the forms. This information would be given to first aiders or paramedics to aid them in helping the user in the event of an emergency. However, as the users were participating in their own homes we found this to be unnecessary and intrusive. Instead, we simply sent the participants the consent form electronically.

In the laboratories upon returning the consent form, users were to be instructed to take a seat at any of the five computers we had set up in the room. The computers in question were to be booted into Linux OpenSuse and had Google Chrome open, with the website to be evaluated and an accompanying survey in the tabs open. Opposed to this, we requested that users boot into Linux on their own personal computers at home and open the link to our website in Google Chrome, along with the link for our survey. The users were instructed to follow the instructions in the survey, and then perform their own independent exploration of the site while answering the questions.

The users were not given a time limit and were instructed to complete the tasks in their own time, before a given date. This was to allow the researchers enough time to complete the evaluation report before submitting it for assessment. They were requested however, not to inform the researchers when they had completed the evaluation via email etc. This was to protect the anonymity of the individuals. This made it impossible to guess which survey response belonged to which user in order of completion.

On the day following the deadline for completion, the participants were sent a thank you message and asked to email the principal investigator, Alison Kennedy, should they have any queries or concerns post evaluation. They were also given information and links to student supports available in DCU should any of the evaluation have affected them personally, for any reason.