Group Project Part 3

Group #13

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Component 1: Cognitive Walkthrough

Task: Ask a professor how long the project report should be. Do so anonymously. To test out the features, try swearing and misspelling words in the post.
Start with a ‘Discussions & Search’ Page.

Action Sequence	**Does the user know what to do given the action?**	**Can the user find the right interface component to perform this action?**	**Can the user associate the feedback from the interface to the correct action they perform?**	**Does the user understand the feedback so that they know where they are in the task after performing the correct action?**	**Additional user feedback.**
1. Find the button to see your discussions page.	Yes, the user did understand what he/she needed to do.	User was able to correctly choose and push the button because it was the only button available on the starting page.	User was confused because the button looks like an “edit” button rather than “my discussions” button.	It was easy for users to understand the feedback because of the “My Discussions” label on top of My Discussion page.	User was confused about the starting page because there is no indication what kind of page it is and what the purpose of it.
2. Create a new discussion.	Yes, the action was clear to the user.	User was able to identify the right button to create a new discussion.	According to the user the name of the button (“+ Create New”) was clearly showing what to expect from it.	It was easy for users to understand the feedback because of the “Create a discussion” label on top of the	

				Create page.	
3. Input the question.	Action was clear to the user.	User was able to find the correct place to input text.	User was a bit confused because our prototype already has text in the question input window.	User understands that after inputting text into the text window he/she can proceed with other tasks.	User thinks that an app spellcheck is not necessary because every phone has a built-in spell check. Additionally, users thought that the “Format” button would automatically correct all mistakes and sensitive words.
4. Configure discussion to be published today.	Action was clear to the user.	User was able to find the calendar icon. However, he/she would prefer to use a textbox to input data, which is not supported by our prototype.	User was able to associate feedback with action but found the calendar is too small for finger input. Also, the format of the calendar seems bad for phone or tablet.	User understands that after choosing a date in the calendar he/she can proceed with other tasks.	
5.Make sure you are anonymo	Action was clear to the user.	User was able to find the correct part of the interface.	User found the status of the anonymous	User understands that after checking	

us.		However, it took some time for the user to find it because it was placed in the right top corner, while he /she was looking for it after the text input box.	toggle switch is clear. However, he/she suggested to put it into off state as default.	the Anonymous state he/she can proceed with other tasks.	
6. Publish a Discussion.	Action was clear to the user.	User was a bit confused by the name “Submit”. He/she suggested rename it to “Publish”, which is also used in popup windows.	User was confused by the 2nd popup window because it did not suggest what the user should do to publish the discussion. He/she suggested to provide message: “For successful publishing please remove any sensitive words”	After not being able to publish the discussion (as was expected by the design of this task) users endup at the “Create a discussion” window. That made sense for him/her as he/she understood that sensitive words should be corrected in order to successfully publish the discussion.	It is better to move and change the default state of anonymous toggle because users can miss this option and submit anonymous discussion without knowing it. Also, user suggested to rename

Cognitive Walkthrough Summary:

Design of an interface proposed by our team was presented to a user in the form of a Vertical Medium-Fidelity Prototype, which offers limited functionality. As a result of a Cognitive Walkthrough session with a target user (who is a student), we have identified the following important points regarding the Discussion Board interface.

Weaknesses:

- Button design was confusing to a user. Specifically, the design of the ‘My Discussions’ button on the main screen was suggestive of actions related to Editing or Setting Management instead. Additionally, it was not usual for the user to see the ‘Publish’ button named as ‘Submit’.
- Some functional element states in a proposed design were set up differently from what the user would expect. First, selecting the publishing date is more convenient in the text format, rather than doing so on a visual calendar (which also appeared to be too small to interact with). Second, the default state of ‘Anonymous’ toggle was ‘ON’, this increases friction and makes the user interact with components that are not necessary to achieving the desired outcome. Specifically, users have to manage the system every time they post a discussion.

Strengths:

- Performing actions representative of Cognitive Walkthrough task was straightforward to a user, which confirms the overall usability of our interface.
- The transitions between screens following actions taken were generally clear to a user. Also, the user understood if the actions were successfully completed (switching screens and toggles) or unsuccessful (publishing a post containing swear words), since different states were communicated clearly.

Improvement Suggestions:

- Based on the comments of the user, we would redesign some elements of the prototype in order to make it more intuitive to the end user. The focus will be on the elements such as buttons and pop-up windows, which will provide better feedback to the end user. Examples of it would be to rename the “Submit” button to “Publish” (suggested by user) to help user to recall it’s functionality rather than to learn it from scratch as well as redesigning the “My Discussions” button to be more associative to the page it is leading to.
- Additionally, improvements should be made regarding the functionality to help the user associate the functions, rather than get used to a new interpretation. For example, the function of the ‘Format’ button is not straightforward (User expected it to correct the misspelled words and remove the swear words, while the intended function was to allow the user to customize the text).

Component 2: Reflection

Collaboration:
Collaboration is inevitable in our future work environment. Sometimes we can work with people that we know, but most of the time we have to collaborate with new friends who we haven't met before. Our group is made of four boys from all over the world. We are going to share some lessons about collaboration:

First of all, a group contract is necessary before start. The first meeting we have is to let every group member come up with a group contract which includes what we should do and what shouldn't and sign our names on it. It is the basis of collaboration, just like the constitution of a country. Because of the contract, we have a very good experience during collaboration and everyone is happy about the product 's result.

Second, The goal of collaboration is to make "1+1>2". Because we as a person are limited in our own view and our thoughts are affected by our growing environment, when we work together we can share different aspects of a subject and fix each other's weakness. For example, during the prototyping phase, Everyone designs one type of Low-Fidelity prototypes and we combine each prototype's strengths into a much more mature medium-fidelity prototype. During the evaluation, we all agreed that we can't create this masterpiece alone, it only comes from the collaboration.

User-center:
We have learned to think from the users side. Before we gather requirements and specifications. We have imagined two users who are going to use our product: Xiao Ming and David Jordan. We even created their personality and what they do and what they like. The reason is that we have to put ourselves into users' shoes, so we can be more thoughtful during our design and we can prevent the potential cost of changing versions of design in the future. For example, Xiao Ming is a very quiet first year student. It might be easier for him to ask questions in the discussion board if nobody knows his name. So allowing users to be anonymous becomes one of our requirements.

However it is unavoidable to include some bias if we just used fictional users' identities. So we also ask real users to evaluate after we have finished our prototypes. We choose a real user who is not in our team and ask her to walk through our prototype and provide feedback steps by steps. This is a more realistic way to approach a better design because we avoid bias and our products are more likely to be loved by our real users.

Importance of Prototyping:
From this project, we realized the importance of prototypes to user interface. After requirements gathering and specification, the user interface was still few separated sentences to us. Designing the prototypes brought all requirements we setted up together and showed what our user interface should look like. We designed Low-Fidelity Prototypes, Horizontal Medium-Fidelity Prototypes and Vertical Medium-Fidelity Prototypes for this project, each of them focus on different angles and states a perspective to our design. For example, V-MFP focuses on the details of each part such as how this button would work and H-MFP focuses on the overall process of our user interface. Another advantage of designing prototypes is easy for testing. When we went through the evaluation part of our design, we found that it is very convenient to let testers test on prototypes rather than code. We can easily change the prototypes based on tester advice.

Heuristic Evaluation:
During heuristic evaluation, we have learned a viewpoint of Neilsen's 10 Usability Heuristics . Based on the 10 heuristics,we are able to acknowledge what is good design and what is bad design and how to make improvements. Although we think we are pretty clear about 10 heuristic rules, when we try to apply them into the real design, it gets tricky. When we find bad evidence of the product, Sometimes we can not think of what heuristic it breaks, sometimes it breaks multiple heuristics at one time, sometimes we are confused about 2 similar heuristics. For example, we are confused about the spelling check is Recover from Errors or Error prevention. It looks like it prevents you from typing wrong words but actually it is recovered from errors since you will only do spell check when you have made the error and then recover it.

What I am trying to say is that, when we are always trying to reason about the world, the real world is far more complicated than our rules. However, Based on these rules we can identify what is good and what is bad which is good enough to help us create better design.

After practicing the rule into a real design application, we have a deeper understanding of what is good design and bad design. Only practice makes perfect. Lectures and theory do not.

Requirements Gathering & Specification:
Requirements gathering and specification was very general to us when we started to think about it. There were lots of requirements that could be gathered and that bothered us for a while. We dealt with this problem by determining the group of users and comparing to our current canvas discussion board. For example, one of our functional requirements is users should be allowed to choose to be anonymous or not. We setted up this requirement because the main group of users are university

students, they value privacy and anonymous features do not exist in our current canvas discussion board. Therefore, the lesson we learn from this section is that requirements gathering and specification are based on users and developed from current user interfaces. Absorbing advantages and improving disadvantages from current stuff is way more efficient and effective than starting from a blank paper.

Prototyping:
The most challenging part when we dealt with prototyping is designing Medium-Fidelity Prototypes with Figma. There are lots of features that could not be achieved in Figma because it is new. For example, in our prototype, interactive components should exist for anonymous and following features and we did find the tuition video for that button. However, the version of Figma in the video is a beta version, only a small group of people can use that. The solution to that problem we found is creating three components with the same size and showing different states of the button and using overflow and smart animation in Figma to achieve one interactive component (Figure 1). It is way more complicated compared with the tuition video, but we still learn a lesson from the processing. Focusing more on basic elements and trying to play around with them when you want to achieve complicated stuff using new softwares like Figma because the features of those softwares may not be complete.

Figure 1

Cognitive Walkthrough:
During the Cognitive Walkthrough we have realised that even after all different steps we have taken to eliminate bad design decisions from our prototype, there is still the room for improvement. Even before we have created our task for Cognitive Walkthrough we found out that our vertical prototype does not support some necessary functions for the tasks we have considered. After choosing the most appropriate task, which goes over the most functionalities of our vertical prototype we divided it into a few actions for a user. During the Cognitive Walkthrough, from the beginning we have started to get important user feedback based on the parts of the prototype we have not paid close attention to. This feedback has shown us how it is important to do user testing especially when the user is aware of the design principles. We only wish that we had an opportunity to do a real user testing during all of the stages of our prototyping, so we would be able to get rid of all these mistakes on earlier stages.