COMP2213 - Interaction Design

Reflection 3: Ideation and Prototyping Techniques for Better Interaction Design

Daniel Braghis
ddb1u20@soton.ac.uk
UoS ID: 32161204
30/11/2022

In this section of the course, we have started the prototyping phase of the interaction design workflow. The workshop that our group wrongly labeled as a brainstorming session, a fact I will address shortly, aimed to build on our previous understanding of the user concerns regarding Trust, Transparency and Control during data collection and requirements definition to ideate and start developing design prototypes.

Our group worked on improving MyMed - a digital medical record storage application, by addressing the user security and trust concerns previously identified. The first step of this process was a group idea generation session followed by an individual introspection and prioritisation. The remaining time we devoted to sketching a low fidelity prototype of the ideas we found most promising.

Working as a group during the ideation phase of the workshop was beneficial, and we later agreed that this approach generated original ideas with everyone in the design team feeling heard and motivated. However, retrospectively, I started questioning if there might be better approaches to the ideation phase. Researching the topic confirmed that academic literature shared my sentiment, criticising the classical brainstorming process with the Paulus et al.[1] paper catching my attention. The authors analysed group performance during brainwriting activities. The key difference between brainwriting and brainstorming is that the ideas should not be discussed during the idea generation phase and that was specified in our task description. However, this aspect was not emphasised, and our group engaged in commentating the ideas proposed which might have affected our performance.

Moreover, it was observed that alternating between ideating as a group and individually increased individual quantity and quality of the ideas by 36% to 71%. Also, switching between group and individual review was shown to increase the number of ideas (Paulus et al., 2015). While for academic purposes the idea quality was of secondary concern and brainstorming is a more familiar and natural concept to students, the exercise and later research pointed out to me the variety and subtle differences between methodologies and their wide effect on design team performance in a professional setting.

Following the ideation phase, we openly discussed and voted a couple ideas to further develop. This stage involved low fidelity prototyping because of its obvious advantages over high fidelity for a workshop environment. Taking time constraints into consideration, the sketches were an effective way to communicate our ideas and cycle revisions quickly (Sharp et al., 2019, p. 346). We also were able to integrate some other small ideas previously suggested improving our selected ones – a much more expensive process with high fidelity prototypes (Sharp et a.l, 2019, p. 349). The result of our approach would be considered in a professional environment "evolutionary prototyping" where an idea evolves rather than being viewed as an expendable steppingstone in the design process (Sharp et al., 2019, p. 349).

Finally, by the end of the workshop we had sketches of two design features for MyMed. One deleting the shared data from other user phones when the owner removes it from the app and another displaying information on how the stored data is used by the patient's doctor, surgery and others with raw medical data being available for users viewing. While satisfied with the resulting ideas, following the Accessibility lecture I noticed that our prototypes failed at addressing accessibility in their design. This, in my opinion, would be a critical oversight for a medical application used by a wide age group with potential impairments.

Somaesthetics (an interdisciplinary field of inquiry related to bodily perception, performance, and presentation) is relatively unexplored in HCI, but research suggests that heightening the designer's attention to their own sensibility of haptic, dynamic, and invisible qualities of movements early in the design process offers a more effective experience prototyping interaction with moving products (Wonjun et al., 2014, p. 1055). While the study used somaesthetic exercises (e.g., body scanning) during the design session of interactive products (Wonjun et al., 2014), I propose that similar sensory exercises that heighten somatic awareness would be beneficial for a team designing software solutions with accessibility in mind. Such mindset coupled with the asynchronous brainstorming approach discussed earlier I believe would improve on the ideation process we practiced during the workshop.

---

1. Asynchronous Brainstorming in an Industrial Setting: Exploratory Studies. Human Factors, 57(6), Paulus, P. B., Korde, R. M., Dickson, J. J., Carmeli, A., & Cohen-Meitar, R. (2015), Pages 1076–1094, https://doi.org/10.1177/0018720815570374

2. Interaction Design: Beyond Human-Computer Interaction, Helen Sharp, Fifth edition, 2019,Wiley Indianapolis, IN, 1119547350

3. DIS '14: Proceedings of the 2014 conference on Designing interactive systems, Wonjun Lee et al, June 2014, Pages 1055–1064, https://doi.org/10.1145/2598510.2598561