Joachim B. Møller   71423   jbirkm@ruc.dk

Synopsis of User Experience Design and Digital Nudging in a Decision Making Process (Mejtoft et.al., 2019)

Disclaimer

This paper has been handed in on an ordinary exam.

Approach on oral exam

I would like to approach the oral exam by going through the key concepts and theory of the article. Furthermore, I would like to elaborate on the method, findings, and implications of such, of the paper in a more critical and reflective matter. Lastly, a discussion of the article preferably both in context of theoretical and personal experiences.

Theory

This paper delves into the intersection of digital nudging and User Experience (UX) design within the decision-making process. We will elaborate on the key concepts in this chapter.

Firstly, We will elaborate on the concept of *User Experience* (UX) with reference to the ISO 9241 standard; *Person's perception and responses resulting from the use and/or anticipated use of a product, system or device* (ISO.org, 2010). In essence, UX goes beyond mere *usability*, encapsulating emotions, beliefs, preferences, and various responses occurring before, during, and after product use (ISO.org, 2010). Usability is defined by how users can achieve a certain goal measured by effectiveness, efficiency, and satisfaction (ISO.org, 2010).

Secondly, we will define *nudging*. This helps to understand the concept of digital nudging, which we also will elaborate on. According to Thaler and Sunstein (2008), nudging is a gentle push that guides individuals toward making informed decisions, ultimately leading to improved well-being. According to Thaler & Sunstein (2008) a nudge should result should be that the person is getting richer, happier and/or healthier. One example is strategically placing a fruit stand at the entrance of a shopping mall, nudging customers toward purchasing more fruits and vegetables (Mejtoft, et.al, 2019).

Thirdly, we will define the concept of *digital nudging*. Digital nudging seamlessly aligns with prior concepts, constituting an approach where user tasks are simplified through design elements in the

interface. It guides users, without friction or complexity, towards completing tasks and making optimal decisions (Mejtoft, et.al, 2019).

And lastly, they have used A/B testing to test their design solutions. A/B testing is a method that can be used to see whether Option A or Option B is the best solution. Usually, it's done to measure a certain key performance indicator (KPI) such as conversion rate (Nielsen, 2005).

Discussion

In this chapter we will do a comprehensive discussion on the paper's method, findings, implications and conclusion. Lastly, we will suggest an alternative approach to the method.

Option A demonstrated inadequate UX with digital nudging, whereas Option B exhibited adequate UX with digital nudging (Mejtoft, et.al., 2019). The A/B test, conducted on 10 participants, revealed that those exposed to Option B were more inclined to select the optimal choice and reported an enhanced user experience (Mejtoft et.al., 2019).

However, the study raises implications, notably the use of a small sample size (five participants per test) that challenges the generalizability of results to the broader population.

An additional concern arises from the choosing of participants. Solemnly choosing college students from the University where the experiment is being done can create biases such as if the students are familiar with either the professors and or if they are familiar with the UX and digital nudging theory. This questions the applicability of this study since you could argue that college students are not potential users of buying sockets. This could lead to inadequate results.

Regarding the procedure, the paper mentions interviews conducted one-to-one, resembling usability testing (Kujala, et.al., 2010). According to Kujala et al (2010) a usability test should have potential users as participants. In addition, traditionally an A/B test does not provide *why* you get the measured results, which the researchers are seeking. It merely shows which option is better for a given KPI, such as conversation rate (Nielsen, 2005).
You could argue whether their A/B test is in fact an A/B test or if it is more a usability test. According to Nielsen (2005) A/B testing is not a primary driver for UI-design projects.

In my view, an alternative approach could involve testing with a more diverse sample of everyday individuals in real-life scenarios. Conducting an actual A/B test on an e-commerce platform selling

sockets would provide more authentic data, transcending the confines of an experiment. The distinction between imagined and actual purchase decisions, as discussed by Savoia (2019), may offer a more realistic portrayal of the effectiveness of digital nudging and UX design. Savoia (2019) elaborates that surveys have no evidence because there is no risk of answering either A or B. However, if you were to conduct this experiment in a real-life scenario and see if customers actually did buy the more expensive socket. Then you could argue that digital nudging and adequate UX-design de facto nudged the users in a specific decision.

Finally, the paper mentions already existing major studies on digital nudging and UX design, prompting the question of the authors' objectives for this study.

Conclusion

This paper proves a good general understanding of both UX-design in correlation with digital nudging. I argue that there are some flaws in terms of the number of participants and the authenticity of them in reference to the A/B test. In addition, the results are not convincing since only four out of five participants were likely to choose the more expensive socket even though they used good adequate UX-design and digital nudging. Furthermore, their chosen method, A/B testing, is not suited for this kind of behavior insights, but merely to see whether Option A or Option B is the most beneficial for the organization. Further studies should be done in this field.

Bibliography

ISO 9241-210:2010(en): Ergonomics of human-system interaction — Part 210: Human-centred design for interactive systems:
https://www.iso.org/obp/ui/#iso:std:iso:9241:-210:ed-1:en

Kujala, S., Roto, V., Väänänen-Vainio-Mattila, K., Karapanos, E., & Sinnelä, A. (2011). UX Curve: A method for evaluating long-term user experience. *Interacting with Computers*, *23*(5), 473–483. https://doi.org/10.1016/j.intcom.2011.06.005

Mejtoft, T., Parsjö, E., Norberg, O., & Söderström, U. (2023). Design Friction and Digital Nudging: Impact on the Human Decision-Making Process. *ACM International Conference Proceeding Series*, 183–190. https://doi.org/10.1145/3591156.3591183

Nielsen, Jakob. Putting A/B Testing in Its Place, 14th of August, 2005: https://www.nngroup.com/articles/putting-ab-testing-in-its-place/

Savoia, A. (2019). *The right it : why so many ideas fail and how to make sure yours succeed* (First edition). HarperOne, an imprint of Harper Collins Publishers.

Thaler, R. H., & Sunstein, C. R. (2008). *Nudge improving decisions about health, wealth, and happiness*. Yale Univ. P.