Experiential Learning and Design Thinking on Potential Technology Use and Impact at Workplace

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Abstract

In this TREO Talk, we would like to share our preliminary findings on a research project that investigates the potential impact of technology use at workplace. This project adopts design thinking methodology to facilitate team based experiential learning that involves students, faculty, and industry design experts.

Design Thinking is a well-established methodology for cultivating innovation and creativity (Brown, 2008). Its process typically consists of 5 stages: understand, define, ideate, prototype, and test. The “understand” stage focuses on gaining empathic insights into realistic user needs and pain points, and the “define” stage aims to reach common understanding on the set of core problems to be addressed. During the “ideate” stage, the design thinkers will brainstorm, prioritize, and settle on the set of best solutions to be carried into the prototyping phase. Finally, the “prototype” and “test” phases intend to model the solutions in a tangible and inexpensive way in order to effectively test them with users.

During the “understand” phase of the project, we interviewed (face-to-face or conference call) over 50 users from US, Europe, India, and China. The interviewee profiles include project designers, software developers, consultants, project/product managers, corporate administrators/executives, and undergraduate/graduate students. Their industry experience varies from less than a year to two or three decades. The length of the interviews varies from 20 minutes to about 90 minutes.

During the interviews, we asked users to explain their reactions to various scenarios of data collection and technology use at their workplaces, including voice data through conversational UI, facial expression data through video capture, biometric data through wearable technology, and brainwave data through EEG headsets. In general, users have privacy concerns about company collecting their personal data at the workplace. This view is particularly prominent among US workers. Some users argue that once the data is collected, they simply cannot trust that their employer would not mishandle their data: “See what Facebook and Google have done!” Other users are most worried about that employer would use their personal data to judge their work performance: “I would not want to be removed from work because my heart beats too fast”. Under certain circumstances, if they believe that data collection could potentially benefit them by reducing mental load and improving their job performance, they are more likely to be acceptable to limited use of voice or biometric data. In general, users would like to know why the data need to be collected for what purposes. And they would like to have full control of their own personal data.

Besides user interviews, our project team also visited technology companies, attended workshops, events, and conferences, and discussed this subject with industry leaders and experts. Based on the various user research insights, we are currently going through the design thinking cycle and trying to prototype a solution that uses blockchain technology to enhance user privacy at their workplace. We find that the experiential learning and design thinking nature of this project makes it creative, enjoyable, and meaningful for our students and faculty.

References