Topic

Improving Accessibility of Kiosk through Universal Design

Background of Study

The present study examines the adoption and impact of unmanned payment kiosks, which are unmanned terminals installed in public places to facilitate access to automated and unmanned information services and tasks. The COVID-19 pandemic has accelerated the growth of these kiosks due to an increase in non-face-to-face orders. In addition to reducing labor costs and minimizing errors such as order mistakes, kiosks also offer a more convenient and efficient ordering process for business owners and customers, respectively.
Based on data from the "Domestic Kiosk supply status (estimated)" report released by the Ministry of Science and ICT in 2021, the number of kiosks has increased by approximately 11.1% from 189,000 in 2019 to 210,000 in 2021. Notably, in the private sector, such as restaurants and convenience facilities, the number of units has increased more than threefold from 8,587 units in 2019 to 26,574 units in 2021.
While many individuals have reported positive experiences using order/payment kiosks, certain users still struggle with their use due to limited digital literacy and physical constraints. Nonetheless, the kiosk market continues to grow, and to address these challenges, the government is exploring various strategies, including developing UI/UX guidelines for senior users and supporting the development of barrier-free kiosks for the disabled.

Motivation and Goal

Team “UniK” is comprised of alumni who are interested in the user experience (UX) concerning digital accessibility. The kiosk's usability varies considerably depending on the provider, such as restaurants and cafes. Members of UniK have encountered individuals facing difficulties while using the kiosk in real-life situations. Therefore, we highly relate to the issue and came to embark on this project.
To tackle these challenges, we are conducting research aimed at developing a universal design kiosk that caters to the accessibility needs of all individuals, regardless of their age, gender, or physical constraints. Furthermore, we intend to utilize its development capabilities to create prototypes based on the research findings.

Members

Chaewon Ko, senior student in Business Administration and Software Engineering at SKKU
Donghan Kim, senior student in Department of French and Literature and Computer Engineering at Sungkyunkwan University
Youjin Kang, junior student in Department of Design and Culture&Technology at SKKU
Minji Kim, senior student in Department of Design and Software Engineering at SKKU
Gyuri Kim, sophomore student in Business Administration at SKKU