

Conducting Observations and Interviews, and Analyzing the Data

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Research Goal:

Understanding user experiences with self-checkout kiosks and why kiosks are popular despite user dislike.

Research Objectives:

Self-service checkouts are becoming increasingly popular. We are evaluating various types of kiosks as part of this project. We would

- Recognize user pain points
- Identify usability issues

Targeted Participants:

- Customers who use self-checkout kiosks
- Kiosk assistants

Plan to recruit participants and conduct interview:

1. We plan to recruit 8 participants for our study.
2. We will approach people after self-checkout on kiosks.
3. Tell them our purpose and study goal.
4. Ask them for their consent.
5. Interview them regarding the use of kiosks.

Types of Kiosk evaluated:

- Self-checkout Kiosk at Krogers
- Self-checkout Kiosk at Walmart
- Food ordering self-checkout Kiosk at the Campus center

Data collection methods:

1. By visiting places with kiosks, such as Krogers, Walmart, and Campus Center, and observing how customers interact with them.
2. By conducting semi-structured interviews with kiosk users and kiosk assistants.

Interview Summary:

Our intention was to understand the perspectives of both kiosk users and kiosk assistants. This would give us more insights into the kiosk's usability, effectiveness, and user satisfaction.

We interviewed both kiosk users and assistants as part of the user interview. The background questionnaire focused on demographic information and the nature of shopping for kiosk users and assistants' work and kiosk experience.

The interviews were semi-structured and the users were asked to think out loud. User interview questions for kiosk users focused on drawing insight, pain points, and usability issues. The user interview questions for assistants focussed on their experience assisting kiosk users.

In total 8 customers and 2 assistants were interviewed in person. Along with the interview, their interaction and expression were observed.

Findings from Observations:

While observing users using self-checkout kiosks, we found that most of the people went to self-checkout kiosks rather than cashier counters. Some people felt embarrassed when the kiosk started flashing lights when they committed some mistake. There are times when all kiosks are occupied and other times all are empty. The 'use my bag' feature that allows users to use their own bag at stores didn't work in some instances. We found clear segregation in that people who had a lot of items went to cashier checkout while people with fewer items went to self-checkout. There was a significant difference in time taken between people who came in groups versus people who came alone. Also, older people tend to avoid self-checkout and young people prefer kiosks.

Findings from interviews:

Evidently, the staff is always willing to assist. There may occasionally be a little wait period at kiosks because more individuals favor utilizing them. Some individuals have been using it for a long time with no problems, and it particularly benefits introverts because it spares them

from having to engage with employees. Self-checkout is preferred by those with fewer items. People initially found it a little challenging to get used to the kiosks, but now they are comfortable with them. It was discovered that other kiosks did not offer the ability to pay with cash. Customers continue to use self-checkout despite the issues because it saves them a ton of time. Some customers have complained about issues like a poor visual representation for items without barcodes, the automated voice of the kiosk being too low so people have missed hearing the instruction, and the kiosk being ineffective at accurately detecting customers' bags through the "use my bag" feature. There, the assistants said that they had to be there all the time and helped anywhere between 50% and 60% of the customers each day.

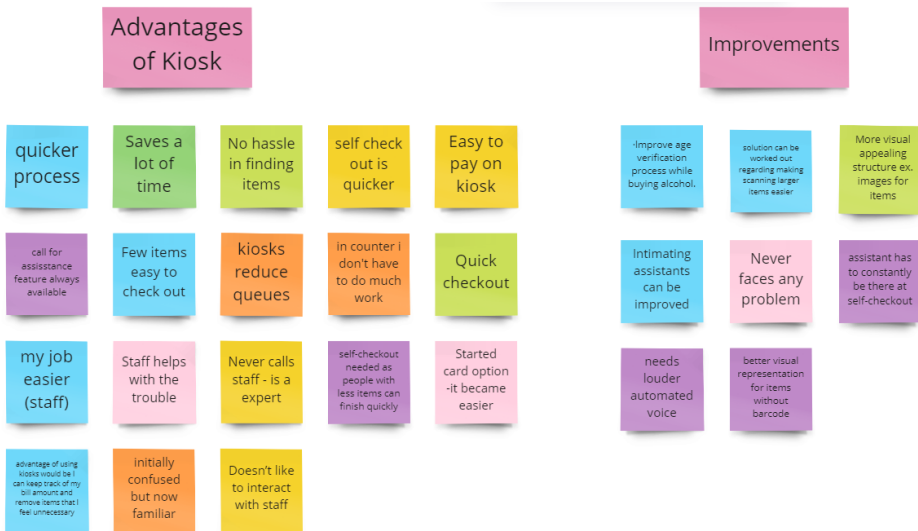
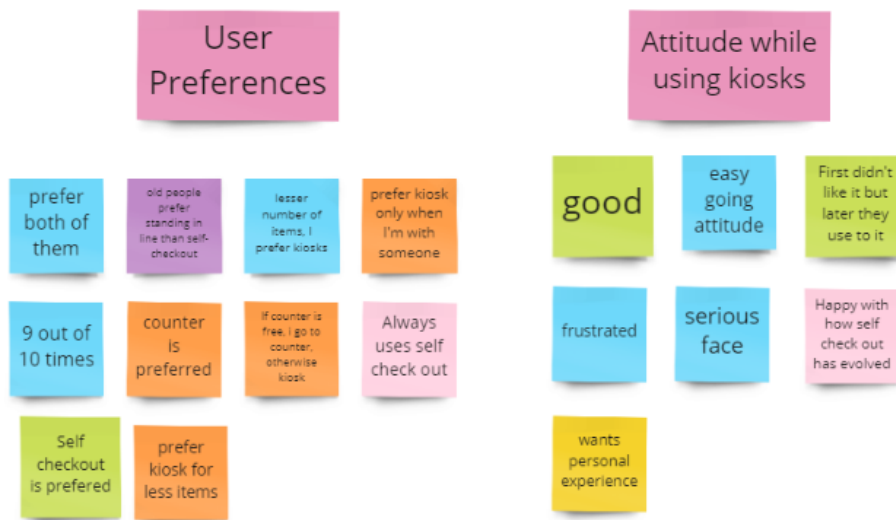
Following are some common findings from our observations and interviews:

- Most people prefer self checkout kiosks over normal checkout
- Some people felt embarrassed in calling for help from the staff
- People who came alone and shop for more items face difficulty in packing and take more time
- Sometimes using the 'my bag feature' doesn't work
- The automated voice of the kiosks is feeble and not audible to some people
- A lot of people face difficulty in choosing the item from pictures of similar products when they don't remember the name
- People tend to wait in line to use kiosks rather than going for normal checkout

Analysis:

We used the Affinity Mapping analysis method to understand our insights from the user interviews and observations. Here are the images obtained after our affinity diagram was completed.

Affinity Diagram:



Procedure:

1. Interview data obtained from interviews was shared with all team members.
2. All key terms were identified from the interviews and were jotted down on a miro board.
3. The cards with similar ideas were grouped together and appropriate title/codes were provided for the grouped cards.

Insights and Findings:

The seven codes that were generated are -

- User Preferences, Attitude while using kiosks, Advantages of Kiosk, Improvements, Pain points, Frequency of Usage, and Staff's perspective.

Synthesizing findings from the different codes -

1. People preferred kiosks only when they needed to buy fewer items or had to wait in line. Self-checkout is not preferred by technophobes.
2. Users were initially confused, but they quickly became accustomed to the usage.
3. Users thought kiosks saved time, were faster, and allowed them to control their purchases independently. The employees stated that their job has become easier.
5. Customers had to wait for a long time to get their age verified when purchasing alcohol. 6. Customers had trouble scanning large items and fragile items.
7. Solo shoppers found it difficult to scan and pack items on their own.
8. Customers found the voice instructions inaudible and difficult to catch voice in the noisy surrounding.

Proposed Solutions:

- To buy alcohol verify your age by scanning the QR code on the kiosk screen through the store app which has the secure Government ID in the profile. The app can do a face scan to match the profile of the user.
- Transcript section on the kiosks for the voice instructions.
- A barcode printer at the fruits and vegetable section generates a code containing details such as name, weight, variety, and price that will be scanned by the kiosk.
- Hand-held notifier for kiosk assistant which displays kiosk number that needs help along with a description of the issue.
- To scan large and fragile items, use multiple barcode scanners at different angles or a hand-held barcode scanner.