Social video conferencing

Social behaviour analysis and Experience improvement in open spaces

Goldsmiths
UNIVERSITY OF LONDON

MSC User Experience Engineering
Author: Tian Liu - 33740188
Supervisor: Nicolas Hine

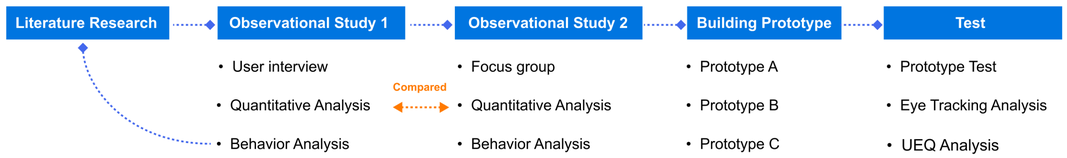
Abstract

This study aims to explore users' social behaviours in open social spaces and ways to improve their conversational experiences in this context. Using a mixed approach of qualitative and quantitative methods including observation, User interview, eye-tracking analysis, and UEQ user experience evaluation. The research finds that while open social spaces increase users' social engagement, differences in participation levels arise due to individual variations. Virtual environments enhance context perception but lack professionalism. Single visual elements like thematic labels or speech-to-text can't fully address conversation gaps. These insights inspire the creation of more efficient, inclusive social conversational platforms in the future.

Introduction & Backgroud

The HCI research community points out that using video conferencing for social communication is an unnatural form of social interaction (Diaz et al., 2022). This is especially true when users employ the 'Breakout rooms' feature for group discussions, facing multiple conversational challenges. Users cannot move freely within the social space, leading to a decline in the vibrancy of social interactions (Mcgrath and Wolstencroft, n.d.). Furthermore, there's a lack of conversational context and background during these interactions (Hu, Azim and Heo, 2022). While some video conferencing platforms have tried to emulate these social interactions by integrating more features, they still find it hard to fully replicate the characteristics of physical spaces (Jacobs and Lindley, 2021).

Study Methodology



01 | Explore the characteristics of group dialogue patterns and the technical status quo of open social spaces through literature research, and propose relevant research hypotheses.

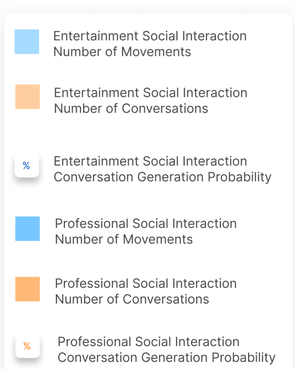
02 | Through observational research methods to identify user social behaviour characteristics, Quantitative analysis is used to examine the effects of technological applications on open social spaces.

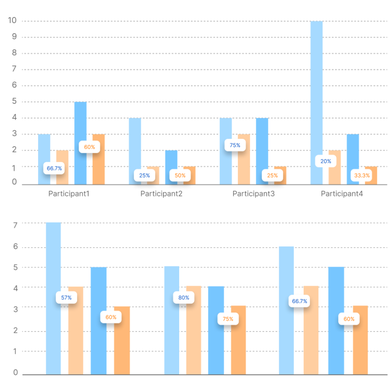
03 | By combining eye-tracking analysis and quantitative user experience evaluation methods, targeted recommendations and reflections on user experience forms in open social spaces are presented.

Observational Study

Observational Study 1- Airmeet

Observational Study 2 - Gather





Behavior Analysis

Camera turn-off

- Hindrance to social communication.
- Ways to join the discussion group.
- Zoom fatigue.
- Device or network malfunction.
- Unable to judge the discussion.
- Reduce conversation interference.

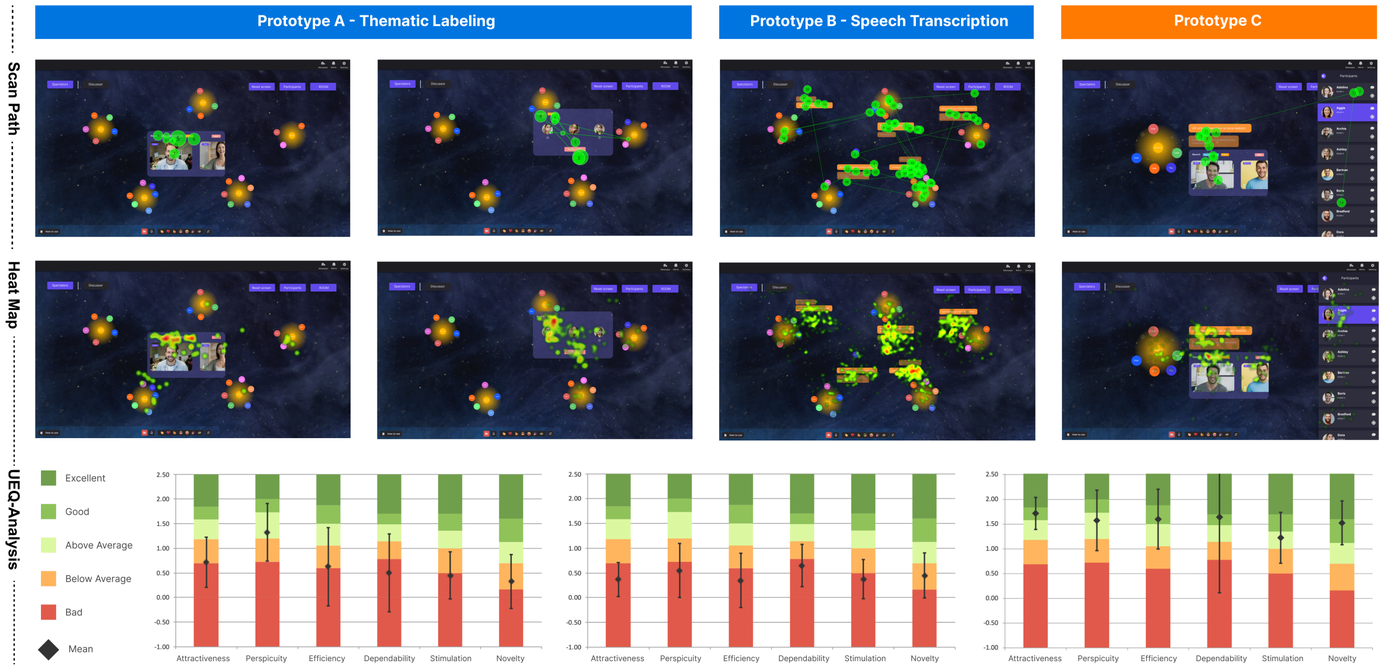
Conversational silence

- Without a clear speaking order, participants give up the opportunity to speak at the same time.
- With a clear speaking order, other participants remain listening.
- Unable to understand the group conversation information before joining, making it hard to integrate into the conversation.

Selection criteria

- Select familiar participants for the dialogue.
- Base discussions on content and thematic relevance.
- Proactively establish communication connections.
- Await communication invitation.

Test & Evaluation



Research Results

01 | The research results show that the open social space can increase the activity of users' social interaction, but it does not mean that the participation of social interaction has been improved. Some social behaviors are mainly affected by the individual differences of the participants and the lack of dialogue environment and lack of information.

02 | The virtual environment and virtual avatar can judge the space environment to a certain extent, but due to the immature development of technology, more professional social meetings cannot be held.

03 | The test results of the topic tagging and voice message transcription functions only revealed that various visual information elements can appropriately compensate for the user's judgement of the dialogue information and environment, and A single information element cannot completely solve the problem of missing dialogue information.

Conclusion & Future Work

This study deeply examined video conferencing platforms, enhancing understanding of user engagement in open social contexts. Innovative suggestions for optimizing online interactions were introduced. Future research should assess individual user impacts on interactions and the long-term effects of open social space. Further improvements can explore virtual environment and visual elements.