

How to alleviate negative emotions such as anxiety and stress when users use video conferencing software?

Yuqing Zhang

Abstract

With the widespread use of videoconferencing software for business and school, "Zoom Fatigue" has become a hot topic. When utilising video conferencing software, users often report feeling unpleasant feelings including worry, anxiety, and exhaustion. Through design enhancements, this study seeks to solve this problem and maximise the user experience of videoconferencing software in order to reduce the cognitive burden, self-focus, and unfavourable emotions that may result from protracted videoconferencing.

Introduction

Today, video conferencing software has shown to have a number of benefits and is utilised extensively. However, a problem known as "Zoom Fatigue" has also developed at the same time and is brought on by things like users' **extended close-up looking at screens, elevated cognitive load, obsessive self-evaluation, and onstraints on physical mobility** (Bailenson, 2021) . This study's objectives are to thoroughly examine these issues and enhance user satisfaction through design improvements that lessen any unfavourable feelings users could have when using videoconferencing software.

Study Process

Based on the literature review, this project used **interviews and focus groups** as a research methodology. The primary goals were to ascertain whether customers had any of the aforementioned issues when using video conferencing software, to characterise the pain points based on their experiences, and to evaluate the functional needs.

Low-fidelity prototyping stage:

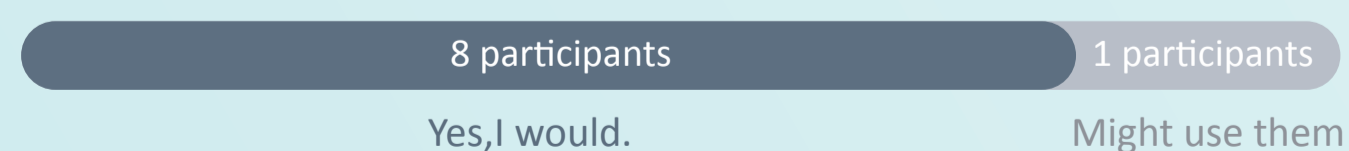
- 6 participants took part in **User usability testing** and **A/B testing**, two of whom also used ECG in comparative experiments to observe their heart rate variability and experience using real-world data.
- After testing, modify problematic functionality and information architecture in the project.

High-fidelity prototyping stage:

- 9 participants took part in **User usability testing**. Three of the participants were new, and six of the participants had previously done the low-fidelity exam.
- Conduct testing and then make final changes to problematic functionality and information architecture

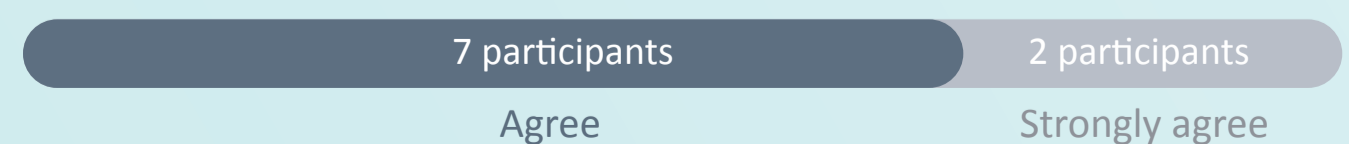
Research Result

- *In the ECG test, participants' heart rates fluctuated more when they saw actual faces than when they saw 3D special effects faces.*
- Whether or not you would want to actively use these features while video conferencing?



Only one male participant thought he might use because he thought appearance didn't matter.

- Compared to the usual video conferencing, these functions will make me feel more relaxed.

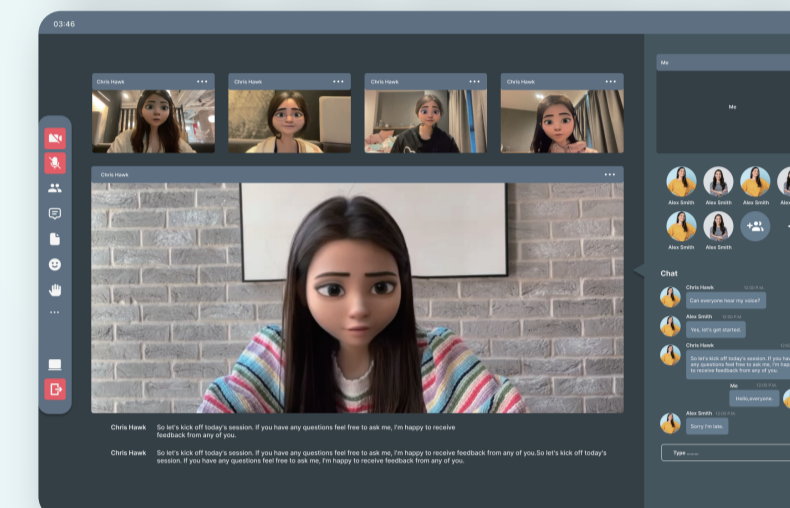


All of the participants think these functions will make them feel more relaxed.

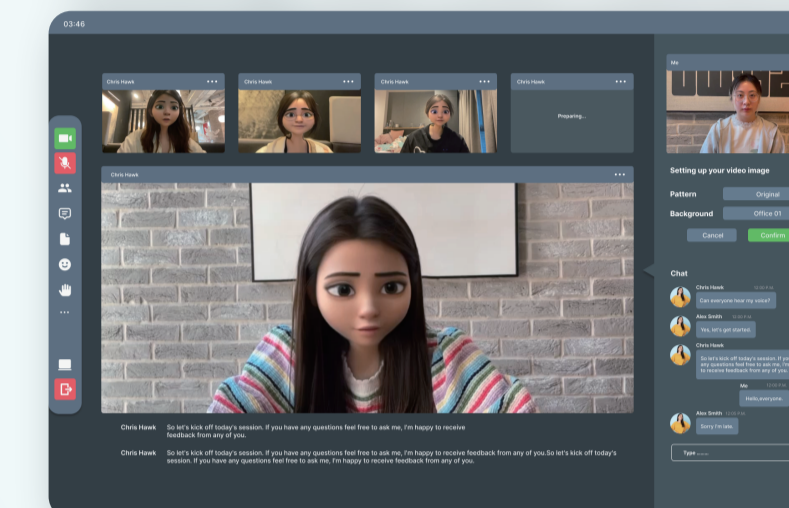


Design

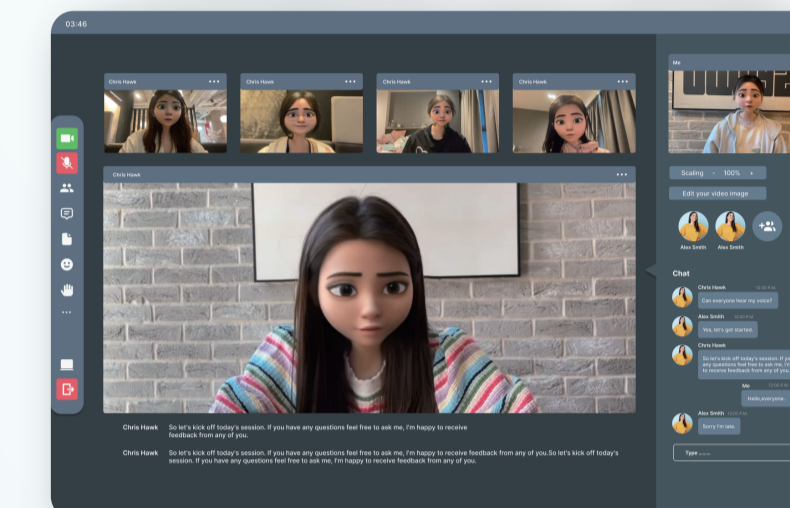
When the camera is off



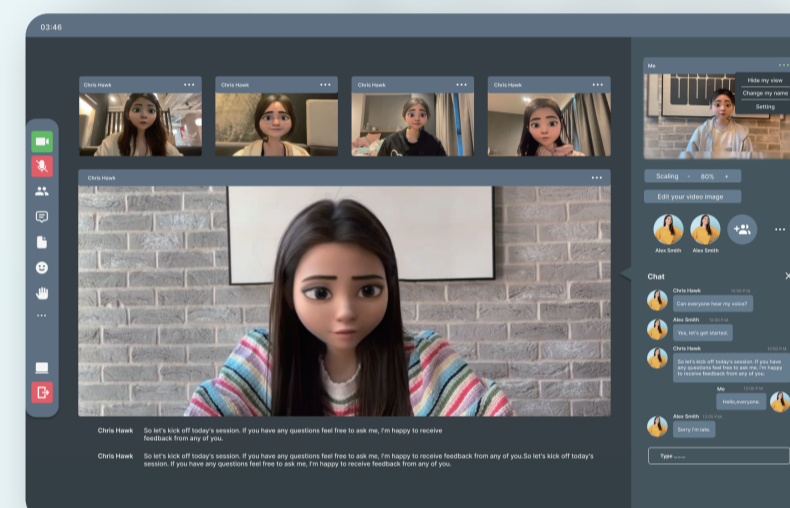
Setting the Live Camera



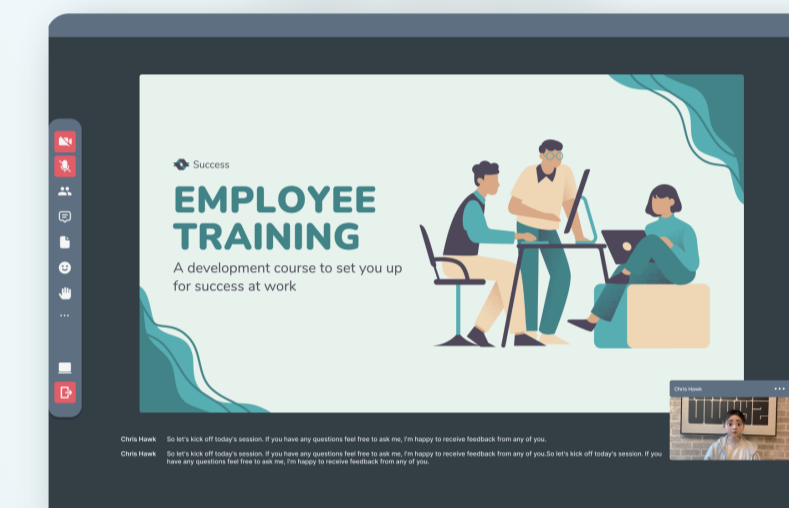
Complete the setup



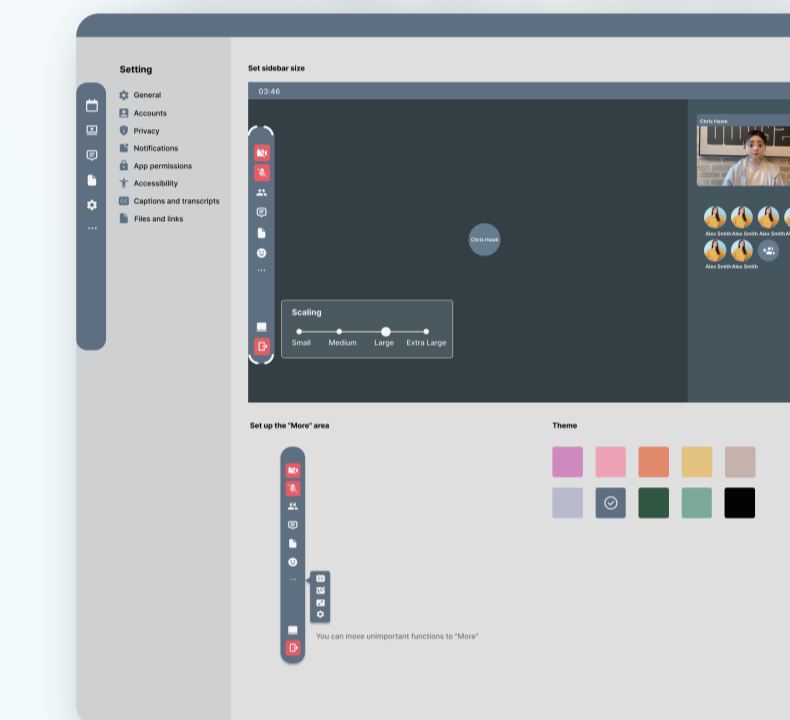
Adjusting the camera



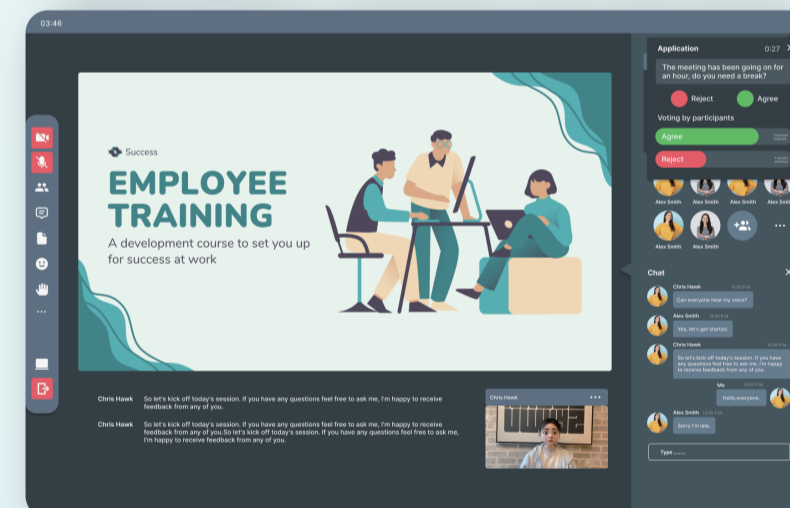
Full screen



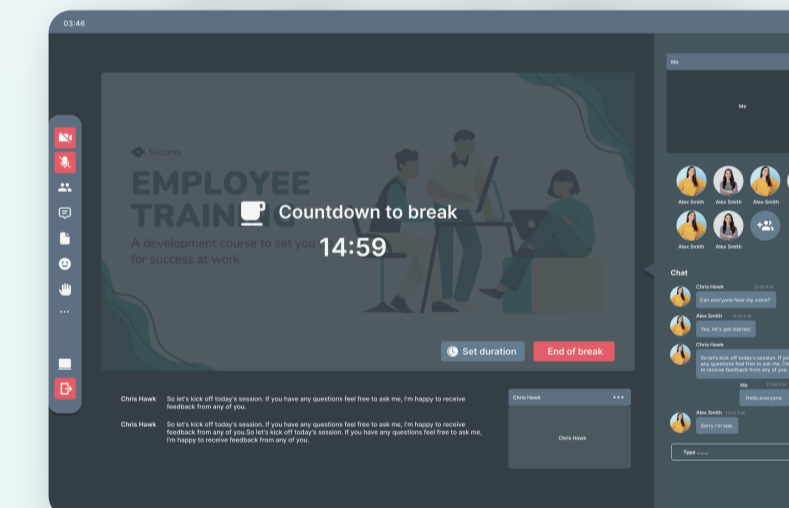
Setting up a sidebar



Speaker votes to break



Break in progress



Conclusion & Future

Users were satisfied with the application's usability based on the findings of the entire testing procedure. The design of the videoconferencing software, which included techniques to turn on the camera and microphone to avoid accidental touches, create avatars, narrow the view to reduce self-focus, and add breaks for long sessions, did aid in reducing the unpleasant emotions of anxiety, fatigue, and stress that users may experience during videoconferencing.

However, there are some relative limitations to this test. As males may exhibit different tendencies in terms of appearance concerns, a larger sample size of participants—especially male participants—would have allowed me to gather richer feedback and develop a better knowledge of the variations between men and women's experiences with videoconferencing.

I'll keep investigating and enhancing the videoconferencing software user interface in the future in an effort to lessen unfavourable user feedback.