‘eduAV’ Showcase

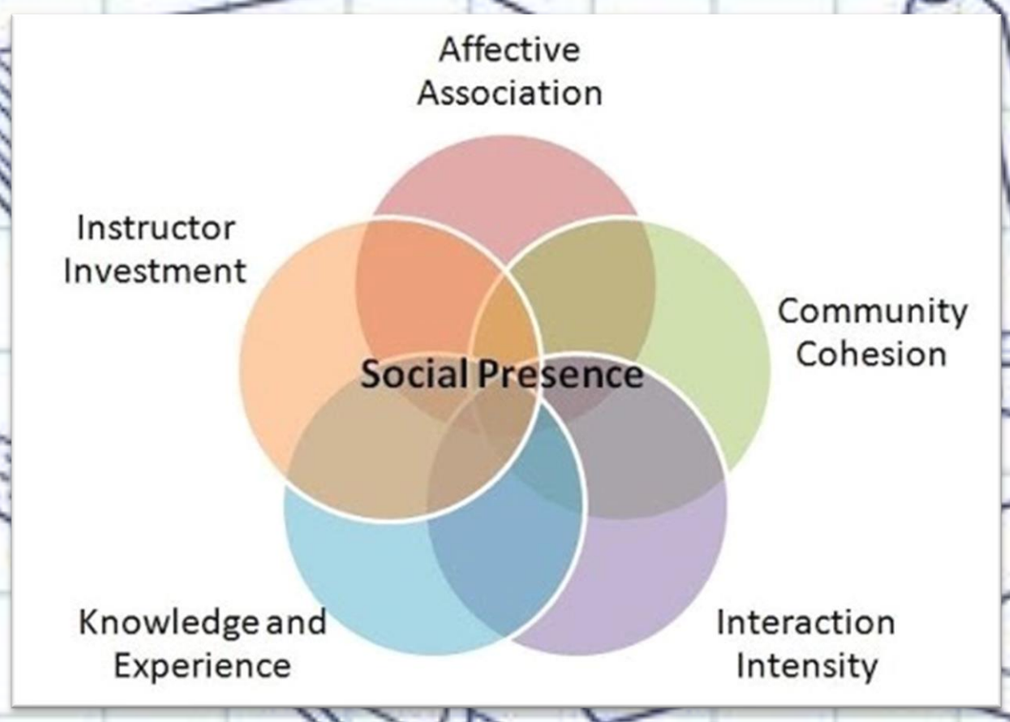
Problem Space

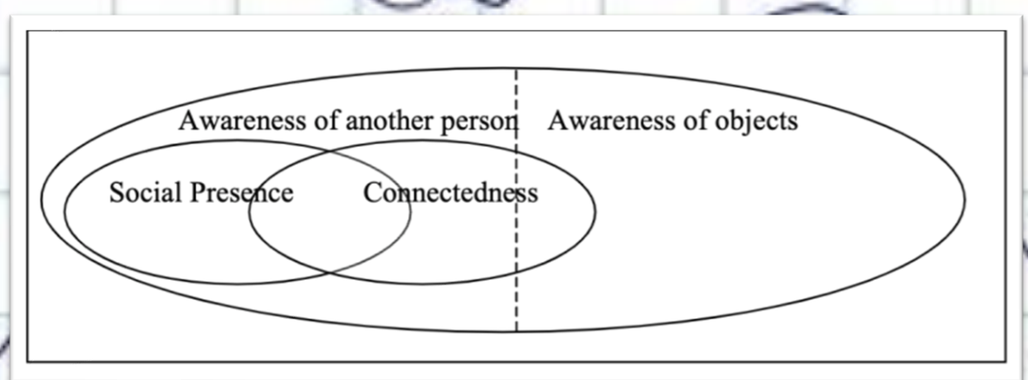
The uptake of online technology has unlocked the possibility of accessing virtual space online, as you would access physical space in the real word. Social and mobile technologies have allowed for synchronous communication even when others are physically distant.

Designers must now optimise their virtual space platforms to best replicate and facilitate the social interacts society is accustomed to. Social presence is an essential factor in this, and arises when every person involved is aware of the social interaction. participants try to gauge the perception of others in a social setting; controlled by the social setting

Recently the COVID-19 pandemic has forced the widespread rollout of lockdowns across the world. A majorly affected industry was education; without physical access to classrooms a solution is required. The most widespread answer to facilitating the required social presence for education has been online video conferencing platforms

From peer reviews paper research, it was determined webcams easily detract from the social presence by creating psychological discomfort in students. Students can be unhappy with their personal appearance and feel embarrassed, their “private space” is revealed in video stream backgrounds.





Whiteside, A. Social Presence Diagram [Image]. Retrieved from http://secure.onlinelearningconsortium.org/effective_practices/integrating-social-presence-model-maximizeblended-and-online-learning-experienc.

Rettie, R. (2003). Connectedness, awareness and social presence. 6Th Annual International Workshop On Presence.

eduAv Solution

An ‘eduAv’ is a personally designed avatar in digital and physical form. An augmented reality avatar replaces the students’ webcam streams, and students receive a physical 3D print of their eduAv. This will eliminate the phycological discomfort identified while facilitating appropriate social presence.

> Students design their personal eduAv from pre-set selections.
> Students use their physical eduAv’s NFC tag to sign in to their online classroom, no links or accounts required.
> Students communicate with teacher and students via audio
> Learning comprehension can be gauged by the teacher through the eduAv animations students trigger
> MC questions can be answered through clicker functionality

Design Process

Peer reviewed papers in the domain of eLearning were thoroughly researched to determine possible problem spaces. Interviews and probes were then utilised to corroborate the chosen problem space of social presence in eLearning.

The first prototype was developed and user tested for the first stand up. From these learnings a new iteration of the prototype was developed and user tested for the second stand up.

From staff advice and user testing findings, the final iteration of the eduAv protype was developed.

Further Reading

Gallup, A., Vasilyev, D., Anderson, N., & Kingstone, A. (2019). Contagious yawning in virtual reality is affected by actual, but not simulated, social presence. Scientific Reports, 9(1). https://doi.org/10.1038/s41598-018-36570-2

Gherheș, V., Șimon, S., & Para, I. (2021). Analysing Students’ Reasons for Keeping Their Webcams on or off during Online Classes. Sustainability, 13(6), 3203. https://doi.org/10.3390/su13063203

Lord, W. (2021). Designing for Social Connectivity (Not Everyone Likes Webcams). Elearn, 2021(4). https://doi.org/10.1145/3462445.3457174

Melo Silveira, R. (2001). VIDEO VS AUDIO: A study on web based teaching-learning environment. International Conference On Engineering Education, 6(D1).