

Learning Across Worlds: An Action Research Study of Online Teaching in Teams and Metaverse Environments

Postgraduate Certificate in Academic Practice (Art, Design, and Communication) 25-26
Action Research Project

Hannah Kane, Lecturer in Fashion Marketing
Fashion Business School, London College of Fashion

Context & Rationale



Context

- Rapid shift toward **online and hybrid learning models** (Hodges et al., 2020; UNESCO, 2020)
- **Experiential learning and engagement** are key drivers of student attraction and retention in post-secondary education (Peisachovich et al., 2021)
- The **metaverse** offers **immersive, collaborative, and interactive environments** for education and social connection (Chen et al., 2022)
- The **Edu-Metaverse** is emerging as a future teaching and learning trend, reducing barriers of **time, space, cost, and physical risk** (Chen et al., 2023)
- The metaverse also shows potential to **address discrimination and social inequalities** related to identity and access (Dwivedi et al., 2022)
- However, how the Edu-Metaverse also has potential to highlight areas of digital inequity (Zallio and Clarkson, 2023)

Image by Barbora Dostalova via Unsplash

Research Questions

1. What differences, if any, do students perceive in their **learning experience** and **engagement** across Teams and Metaverse sessions covering equivalent content?
2. How does the sense of **belonging** and **inclusion** compare across online and Metaverse classrooms?
3. How do students experience **barriers to access** differently in online and Metaverse teaching environments?

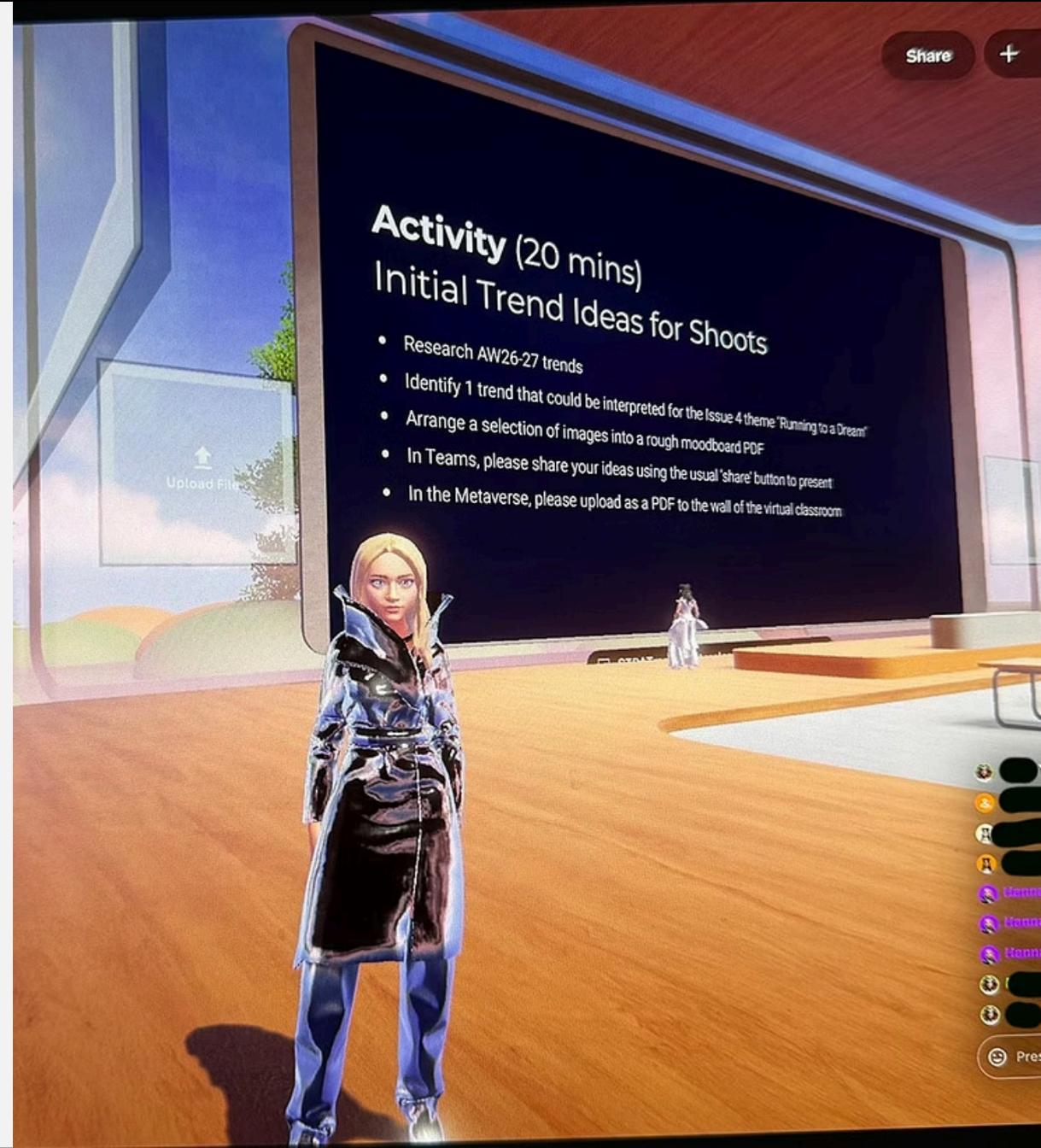


Rationale

- Researcher positionality
- From practice to enquiry
- Aligns with **UAL's Five Strategic Pillars**
- Research gap (Chen et al, 2023)
- Timeliness (Litan, 2022)

Positioning the study

This action research examines whether immersive technologies enhance learning equitably or risk reproducing new forms of exclusion.



Reflection on Research Design

Structured according to Saunders et al, 2023

Philosophy

Interpretivist epistemology with a pragmatic orientation

Approach

Inductive-deductive

Strategy

Action research (survey + narrative enquiry) (Macdonald, 2012)

Choice

Mixed methods (Johnson, R. B., & Onwuegbuzie, A. J., 2004)

Time horizon

Cross sectional

Techniques and procedures

- 2 lessons of equivalent content (Fashion Journalism and Fashion Editorial)
- Voluntary sample of students (MA Fashion Marketing)
- Sample split into 2 groups: A and B. Each group attended a lesson in Microsoft Teams and the Spatial metaverse

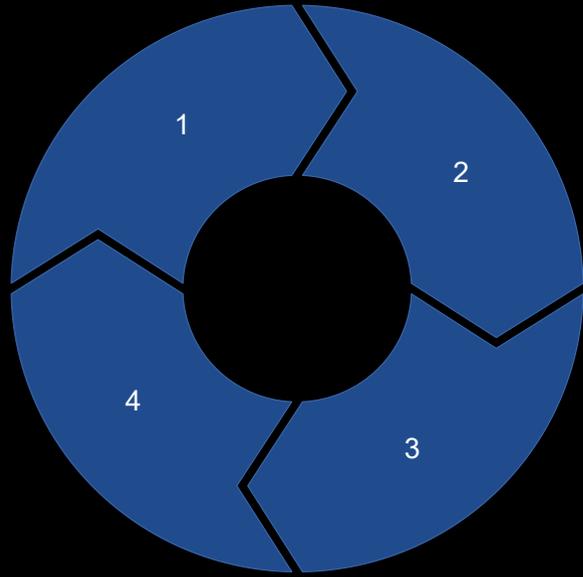
Quantitative: survey after each session covering topics relating to research questions. Likert scale design. Converted to percentages and analysed descriptively.

Qualitative: 4 semi-structured interviews to explore student experience. Analysed using reflexive thematic analysis (Braun and Clarke, 2006).

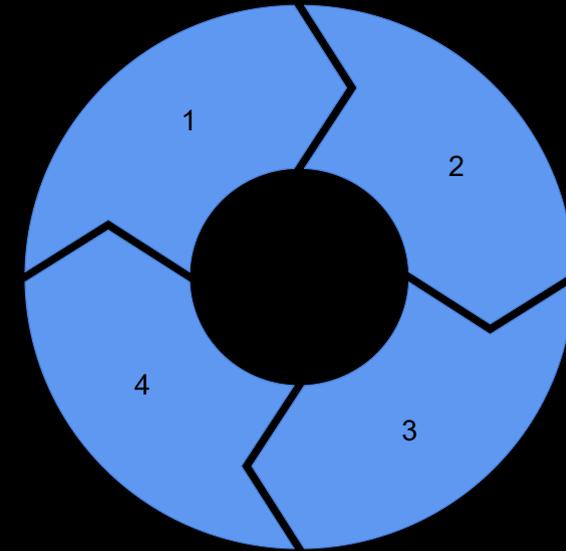
Action Research Cycle

Cycles 1 and 2

Figure 1. Adapted from Saunders *et al*, 2015

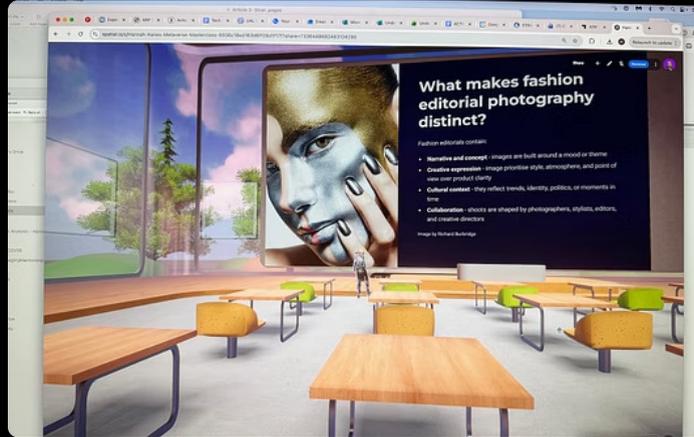
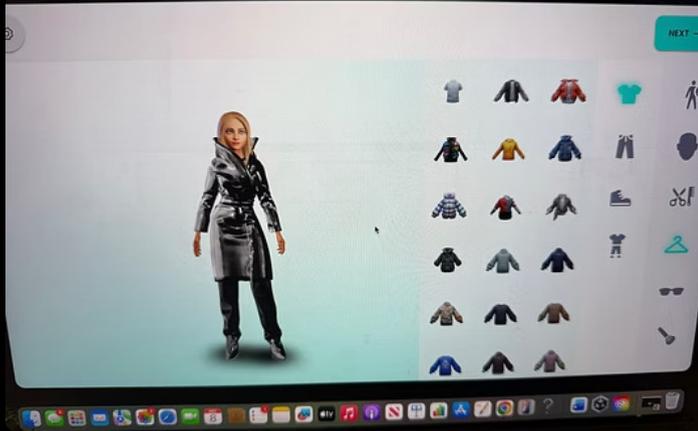


- 1 Diagnosing
Diagnosed potential tensions of innovation and equity of student learning
- 2 Planning
Planned lesson delivery and research design
- 3 Action
Actions: Day 1, delivered the same lesson twice: once in Teams and once in the metaverse
- 4 Evaluating
Evaluated survey data



- 1 Diagnosing
Diagnosed the need to capture more evidence around participation in the metaverse
- 2 Planning
Planned a new interactive task to test experience in the 3D space
- 3 Action
Actions: Day 2, delivered the same lesson twice: once in Teams and once in the metaverse
- 4 Evaluating
Evaluated survey data and conducted and analysed interviews

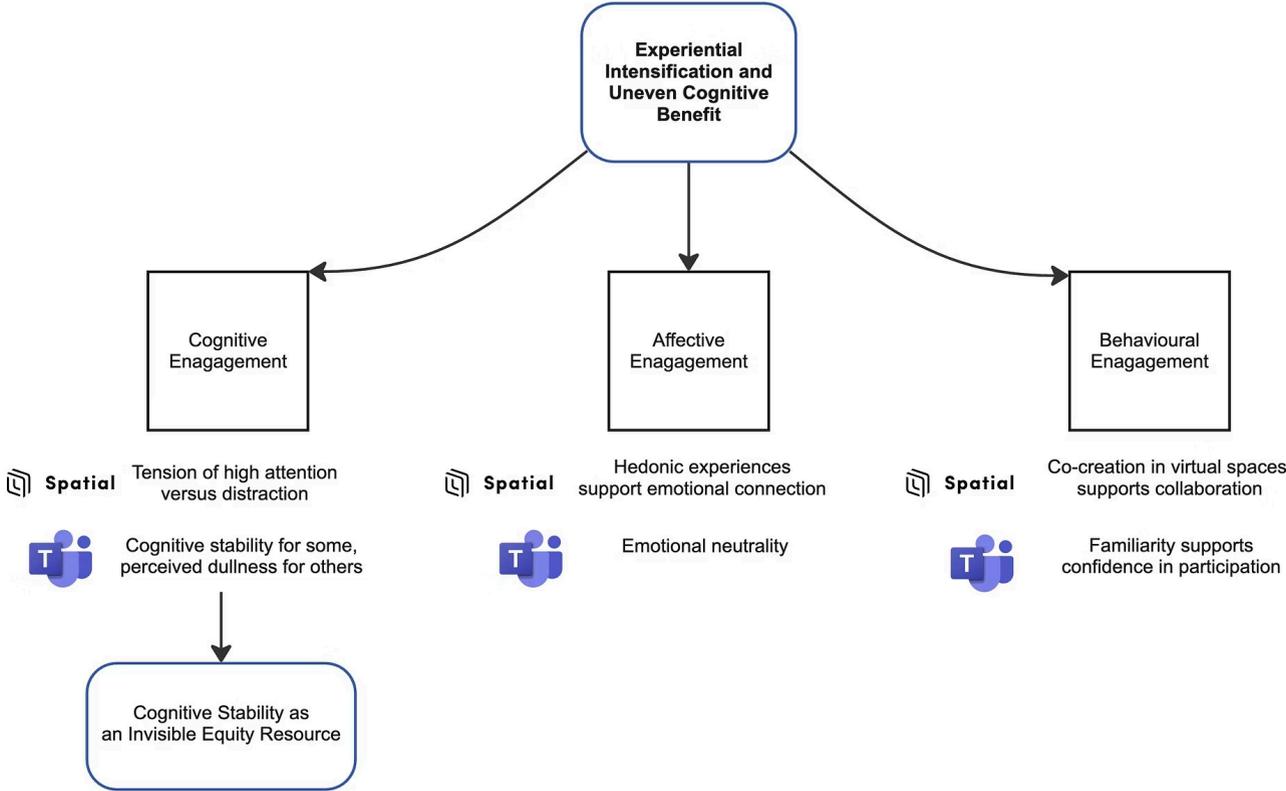
Images of the Intervention



Findings & Analysis

Research Question 1

What differences, if any, do students perceive in their **learning experience** and **engagement** across Teams and Metaverse sessions covering equivalent content?



“ It is a very thin line between the real world and the virtual world. In the Metaverse class, you kind of feel like you are in a real setting”

Participant 4

“ The metaverse gave me a feeling of freshness... referring to what attracts me for a lesson, I would say it should be pretty. It should be a great environment for me to stay in and keep focus on it.”

Participant 2

“ Metaverse didn't feel as regimented and rigid as Teams can feel. In Teams, I'd say I felt pretty neutral. In the metaverse, I would say. I was more interested and excited to be to be using a new platform... I think eventually I would prefer the metaverse in terms of what it can offer.”

Participant 1”

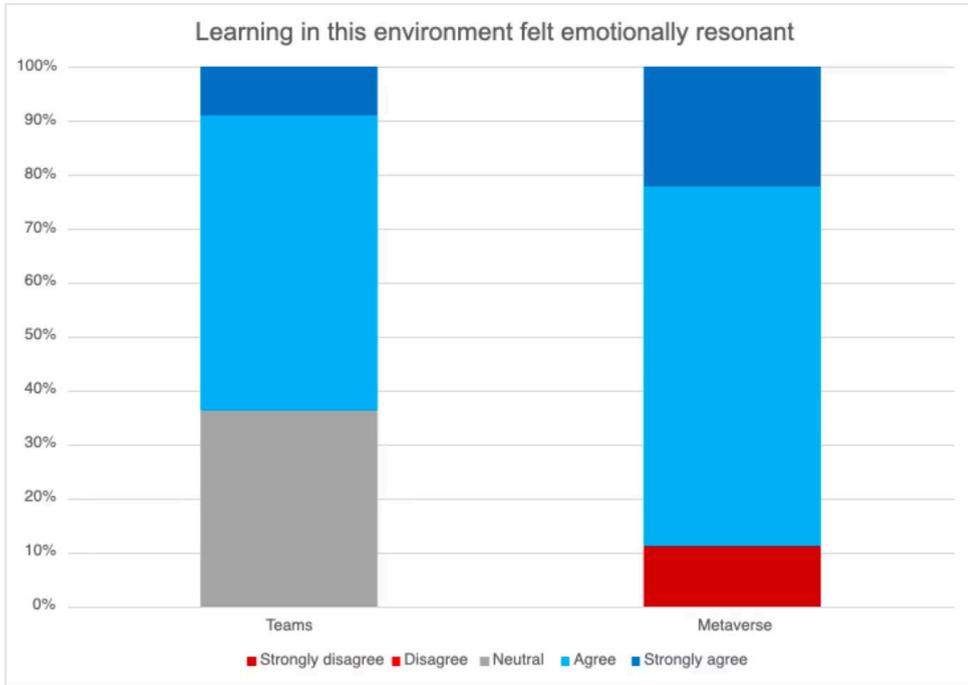


Figure 2. The metaverse provoked stronger feelings than Teams, both positive and negative

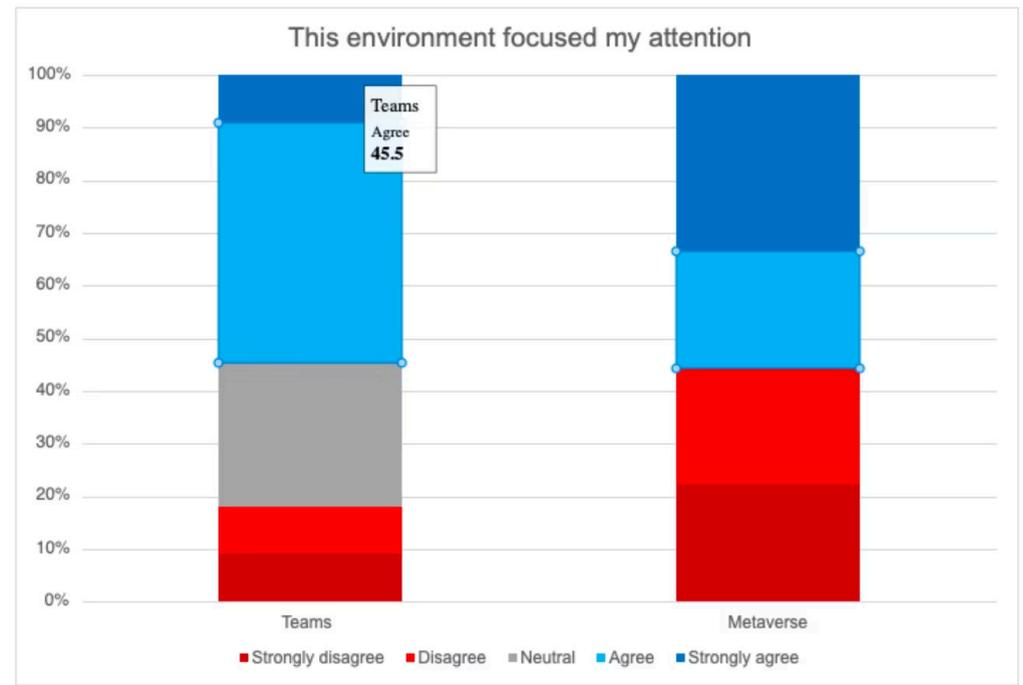
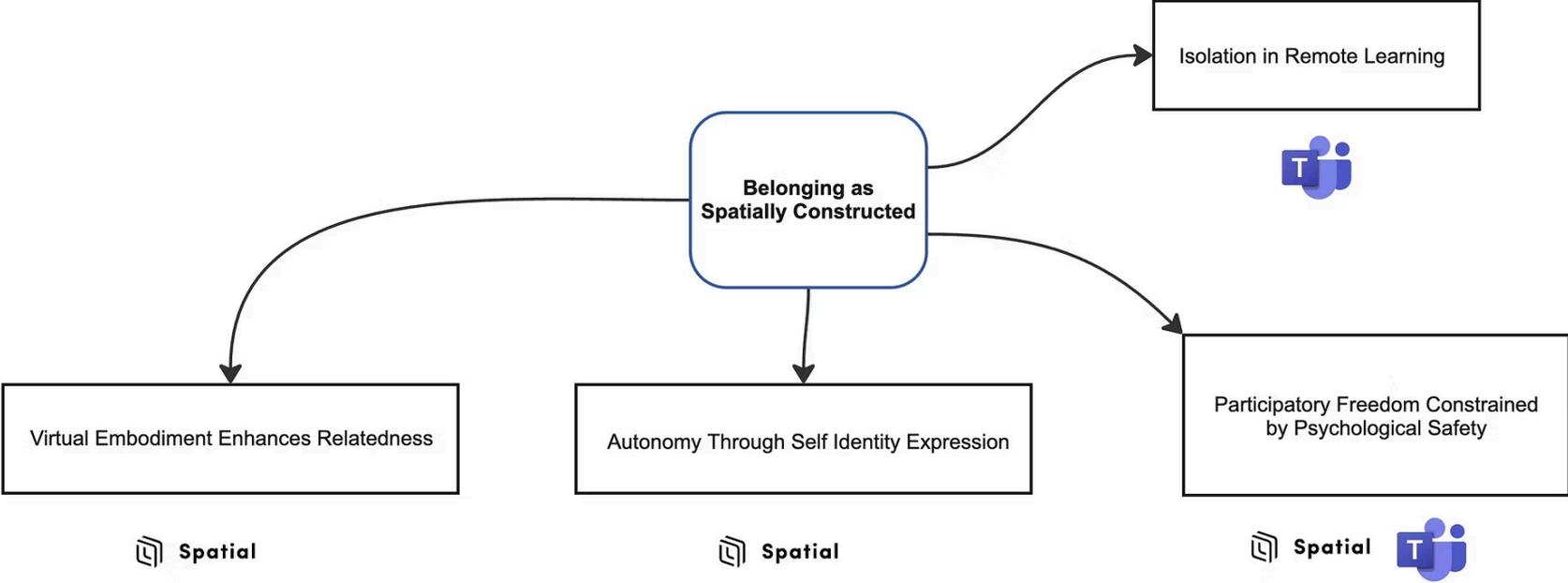


Figure 3. Similarly, students found the metaverse more distracting or more focusing than the more neutral Teams environment

Research Question 2

How does the sense of **belonging** and **inclusion** compare across online and Metaverse classrooms?



Students' willingness to participate remains shaped by fear of judgement, shyness, and perceived norms

I felt like Metaverse was the platform where I felt I could freely express myself again. It was through avatars, but in Teams I would say it is more freeing because of the navigation controls.

Participant 4

In Teams, I feel like it's it's near nearly to zero connection with other students because we don't see each other... it's like everyone is just a name in the Teams environment, but in Metaverse I would say everyone has their virtual figure representation of themselves.

Participant 2

In Teams, I think I prefer like keep quiet... I think if I open my mic and just answer [a question] immediately, it's going be bit rude or bit impolite, but in the metaverse I think it's more cosy.

Participant 3

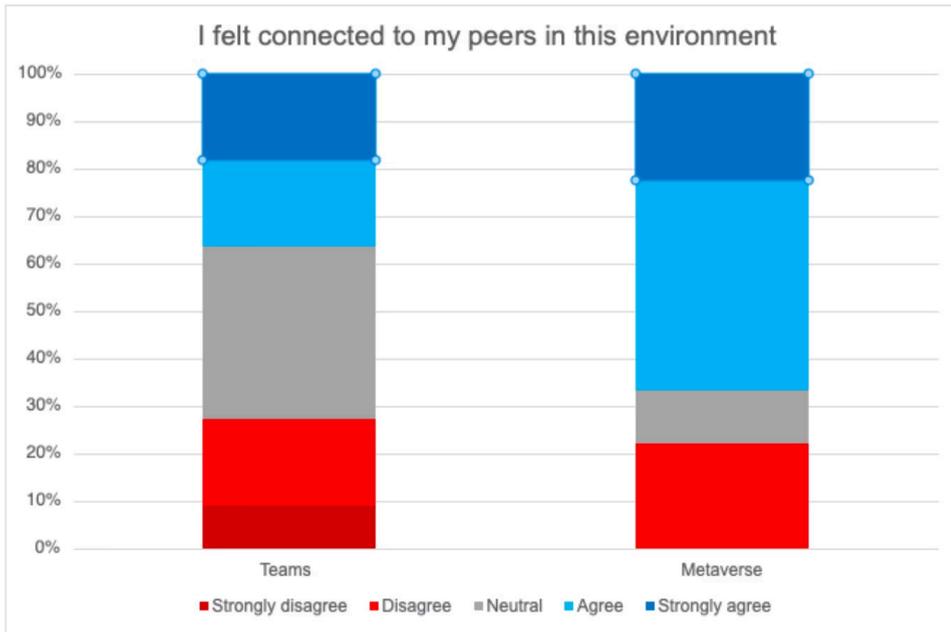


Figure 4. More students felt connected in the metaverse

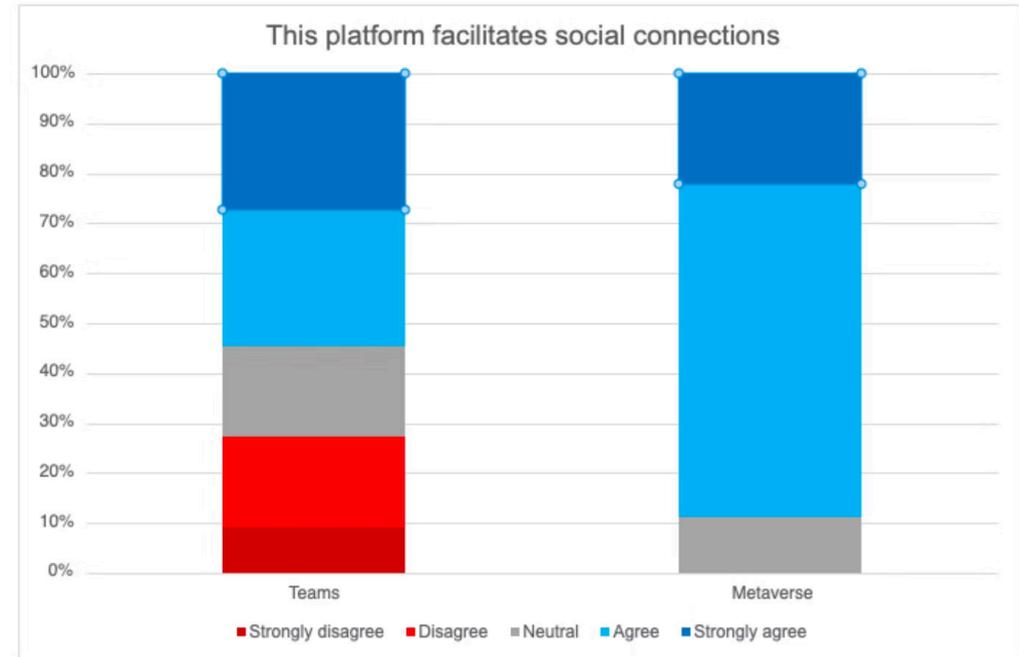
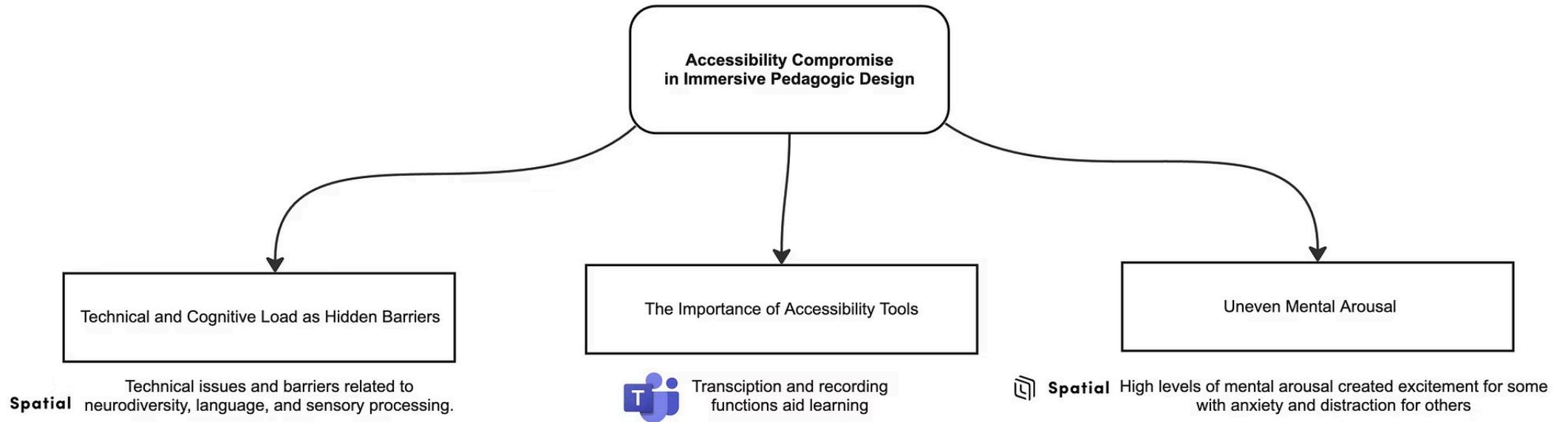


Figure 5. The metaverse was considered more social

Research Question 3

How do students experience **barriers to access** differently in online and Metaverse teaching environments?



In terms of learning new concepts, I don't think the metaverse was particularly helpful for me. I'm dyslexic and for me, I think visually being overwhelmed doesn't help my learning.

Participant 1

I was anxious during metaverse because I thought maybe the camera is on, or maybe the mic is not opening, or did I type in something wrong, or am I visible.

Participant 4

I think I love metaverse... but think the voice in metaverse is actually not good because sometimes when I hear your voice or other classmates voices, there's always some echo.. maybe it's my internet connection.

Participant 3

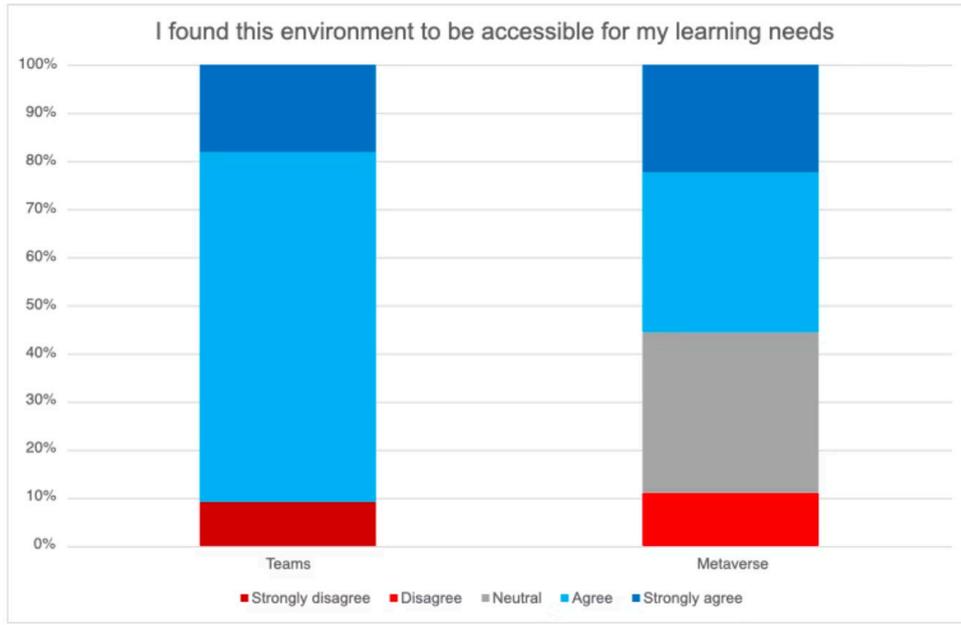


Figure 6. Teams was considered more accessible

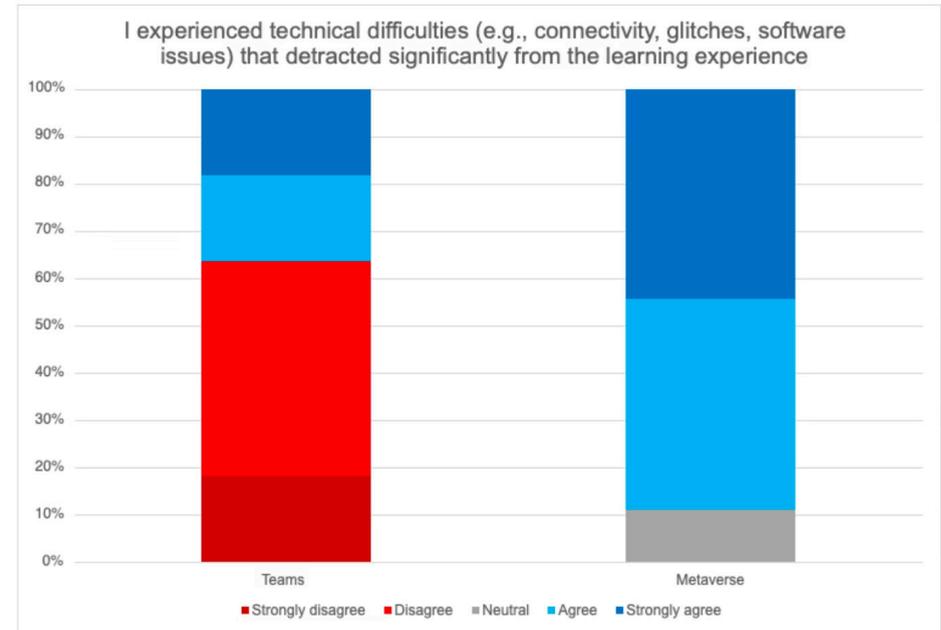
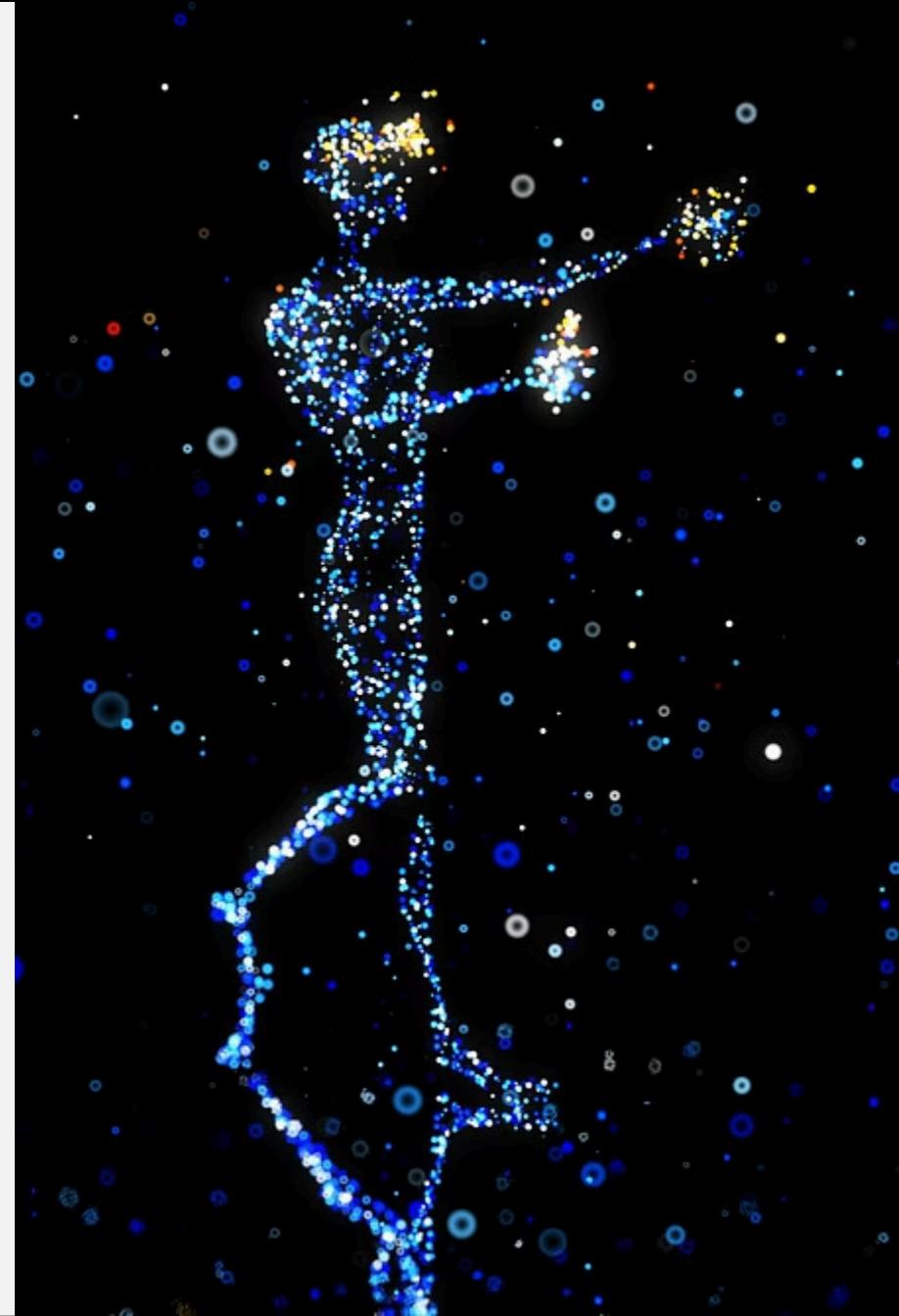


Figure 7. Almost all students experienced some form of technical issue with the metaverse

Conclusion: Key Takeaways

- Metaverse learning environments can significantly enhance emotional and behavioural engagement and belonging, however **benefits are unevenly distributed**
- The Metaverse amplifies experiential learning for some students while introducing **extraneous cognitive load** including **technical barriers** for others (Clark, C. & Kimmons, R. (2023)).
- Familiar platforms such as Teams provide **cognitive stability and accessibility**, supporting equitable participation
- Accessibility emerged as the **central social justice issue**, challenging assumptions that innovation is inherently inclusive
- Action research enabled critical reflection on practice and informed **future pedagogic design** of immersive classrooms as an add-on to existing modes of teaching delivery

Image by Julien Tromeur



Reflective Journey

New Mindset

- **Pivot:** Shifted from 'immersive = better' to a nuanced look at cognitive load vs. engagement.

Professional Development

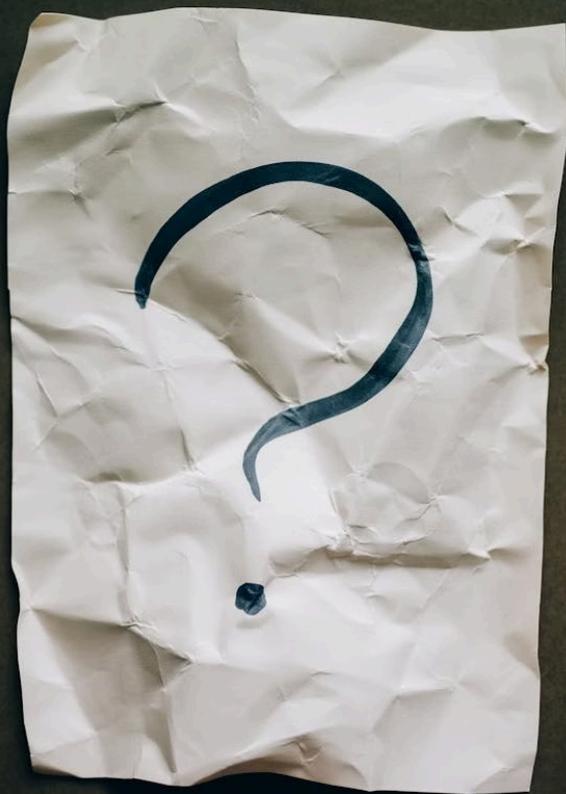
- **The Skills Win:** Successfully executed a **mixed methods** research project to enhance my own teaching of Advanced Research Methods.
- **The Tech Issue:** Learned that while **NVivo** is clunky, it's a powerful thematic organiser.

The Joy of Experimentation

- **Engagement:** Students were genuinely excited by the avatar experience and virtual exploration.
- **Connection:** Regardless of the platform, the data showed students enjoyed their lessons.

Future Horizons

- **Next Steps:** Pursuing further PG research and potential collaboration with **UAL Online**.
- **The Goal:** Using the Metaverse to provide remote students with a sense of **embodied connection**.



Thank you for listening.

Please feel free to ask questions.

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