Evaluating Immersive Experiences

Notes for the SIT-DP module: **Developing Immersive Applications**

Created by: Chek Tien TAN

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Who has watched the pre-class YouTube video? (there is no penalty for saying no 😉)

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Who are we?

- Chek is a researcher in (Immersive) HCI

Centre for
IMMERSIFICATION

- Yet is the Head of Solutions Architect from Meta
- Sean is a Solutions Architect from Meta

- Mud runs a startup in blockchain games and AI, and experience in building XR games

- Jian Jie is a current Senior who has taken this module before.

[recap] Dimensions of RV Continuum

- EWK is how much system understands the real world
- RF is how realistic the assets are
- EPM is how interaction affords realism

https://doi.org/10.1117/12.197321

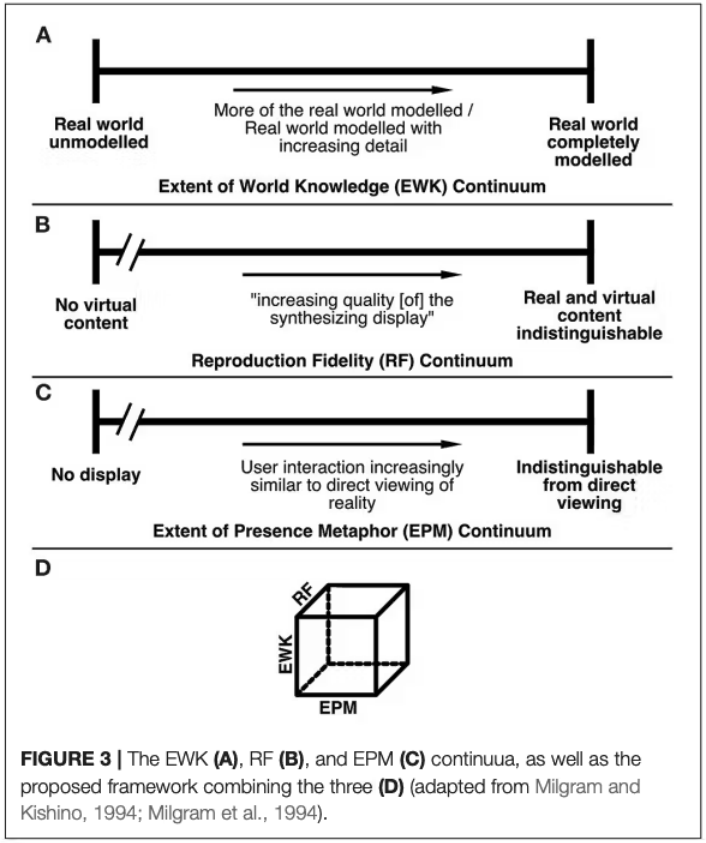

FIGURE 3 | The EWK **(A)**, RF **(B)**, and EPM **(C)** continuua, as well as the proposed framework combining the three **(D)** (adapted from Milgram and Kishino, 1994; Milgram et al., 1994).

[recap] Revisiting the RV Continuum

- combined the RF and EPM into IM (our THE article came before this 😅)
- added CO to represent the user
- note that this but one academic paper
- common perception of MR is different

https://doi.org/10.3389/frvir.2021.647997

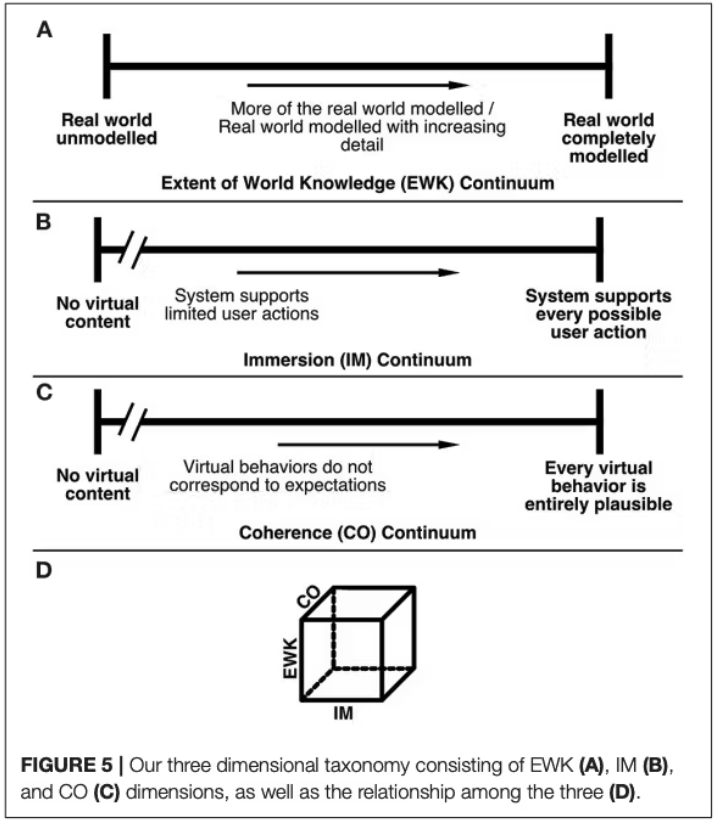

FIGURE 5 | Our three dimensional taxonomy consisting of EWK **(A)**, IM **(B)**, and CO **(C)** dimensions, as well as the relationship among the three **(D)**.

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Which of the following describes immersion from a systems perspective?

- Wide FOV
- Higher spatial presence
- higher place illusion
- 8K resolution display
- lower cybersickness
- 6 DOF (degree of freedom) inside-out tracking

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Which of the following describes immersion from an experiential perspective?

- Wide FOV
- Higher spatial presence
- higher place illusion
- 8K resolution display
- lower cybersickness
- 6 DOF (degree of freedom) inside-out tracking

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What experiential constructs were analysed in the user study in the paper on "Exploring Gameplay Experiences on the Oculus Rift"?

* participants filmed playing game

- Flow
- Presence
- Place Illusion
- Plausibility Illusion

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What quantitative data was analysed in the user study in the paper on "Exploring Gameplay Experiences on the Oculus Rift"?

- Flow
- Presence
- Cybersickness
- Physiological measures

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- User behaviors

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What quantitative data was analysed in the user study in the paper on "Understanding User Experiences Across VR Walking-in-place Locomotion Methods"?

- Flow
- Presence
- Cybersickness
- Physiological measures

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- User behaviors

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What qualitative data was analysed in the user study in the paper on "Understanding User Experiences Across VR Walking-in-place Locomotion Methods"?

- Flow
- Presence
- Cybersickness
- Physiological measures

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- User behaviors

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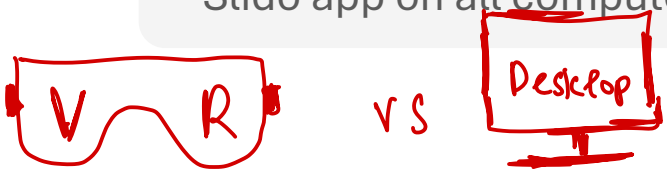

Is the VR version more immersive than the desktop version of my app?

What are appropriate types of data to answer this research question?

- observations
- think-aloud experiences
- validated questionnaire
- post-experience interviews
- physiological sensing

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- telemetry

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what user experiences does the VR classroom intervention afford during the class?

What are appropriate types of data to answer this research question?

- observations
- think-aloud during the experience
- validated questionnaires
- post-experience interviews

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- physiological sensing
- telemetry

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Which of the following is NOT a symptom of cybersickness?

- blurred vision
- eyestrain
- giddiness
- loss of self-consciousness
- vertigo

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"This one feels dizzier than the previous one. " - What dimension of cybersickness is this?

- disorientation
- nausea
- oculomotor
- involvement

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- realness

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"I find it very straining on my eyes to look at stuff in the scene after a short while" - What dimension of cybersickness is this?

- disorientation
- nausea
- oculomotor
- involvement

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- realness

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Which cybersickness questionnaire is best when I need to use the results to inform v2.0 development of my VR application?

- SSQ

- VRSQ / CSQ

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Which cybersickness questionnaire should I use when I need to compare my results with a pool of prior research studies from others?

- SSQ
- CSQ
- VRSQ

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What is the type of experience being described here?

- Presence
- Flow
- Cybersickness

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What is the type of experience being described here?

- Presence
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What is the main affordance on a haptic glove for an experienced VR user?

- reach out to touch things in a virtual environment
- pick up the controller to interact with the virtual environment

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- wave hand in the air
- hug another character in the virtual environment

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Which design provides the right affordance for a door that is meant to be pushed?

- Door with a large handle
- Door with a small handle
- Door with no handle and a flat metal plate
- Door with a twist knob
- Door with large sign that says "PUSH"

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Name one application that do you feel provided you with the best experience, and why?

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Audience Q&A

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