What the **metaverse** means for **language learning** and how you can **prepare** for it

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Thrive with EdTech!

Let's start with a story

The story of a language learner

Overview

◇ The story of a language learner

◇ Definitions

◇ What's all this buzz about the metaverse?

◇ What's the difference between XR/MR/AR/VR?

◇ 'Corners' of the metaverse

◇ (Re)emerging technology

◇ Why should you care?

◇ How you can prepare

Definitions

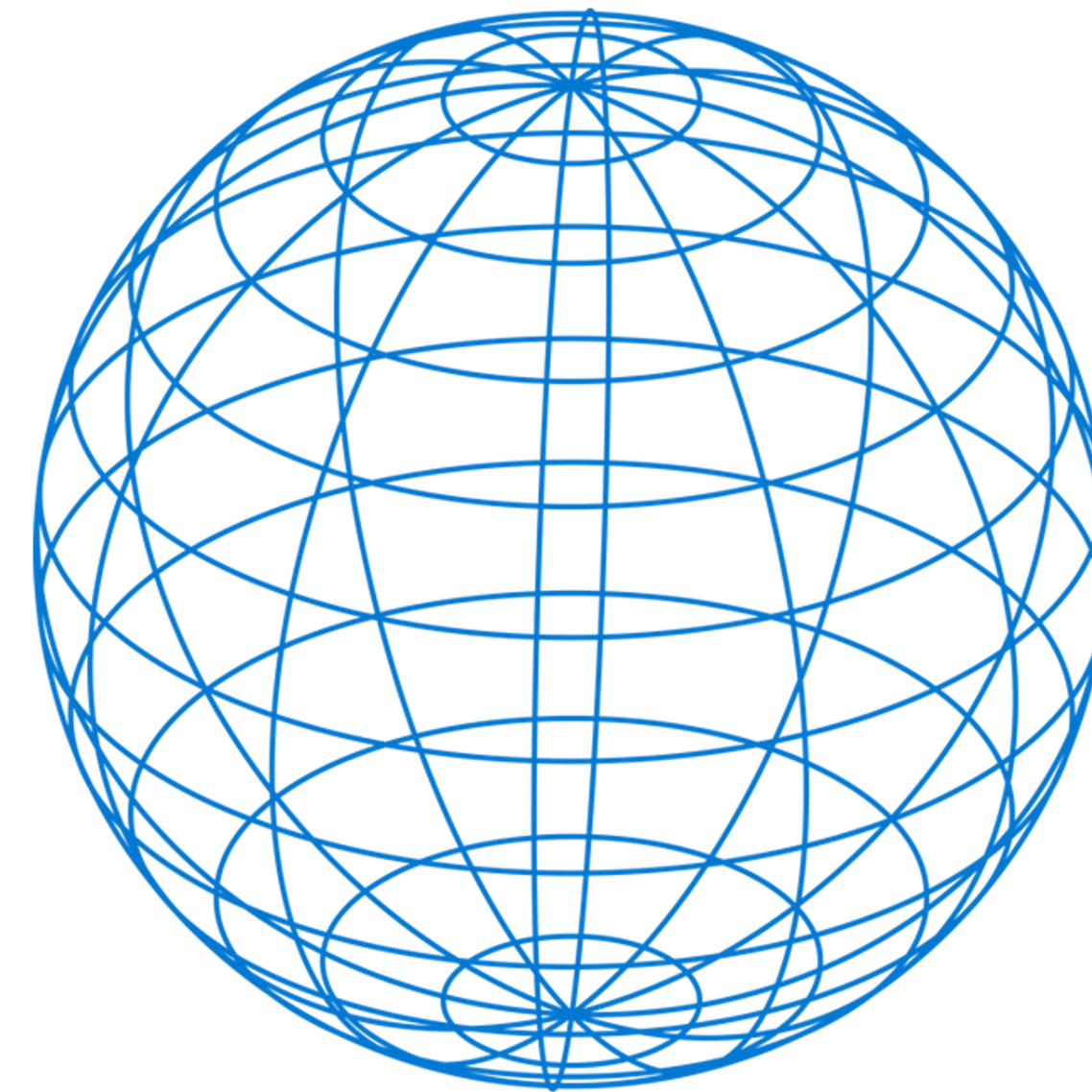# The short(est) definition(s)

The next version of the internet

Flat Web

Spatial Web

Web 2.0

Web 3.0

More complete technical definition

*'The Metaverse is a **massively scaled** and **interoperable network of real-time rendered 3D virtual worlds** which can be **experienced synchronously** and **persistently** by an **effectively unlimited number of users** with an **individual sense of presence**, and with **continuity of data**, such as identity, history, entitlements, objects, communications, and payments.'*

(Mathew Balls, 2021)

What's all this buzz about the metaverse?

a_ _ _ i_ _ _

a_ _ _ r_ _ _

cr_ _ _ c_ _ _

m_ _ _ r _ _ _

3_ v_ _ _ w_ _ _

v_ _ _ r_ _ _

a_ _ _

N_ _ _

d_ _ _ t_ _ _

e_ _ _ r_ _ _

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What's all this buzz about the metaverse?

artificial intelligence (AI)

augmented reality (AR)

cryptocurrency

mixed reality (MR)

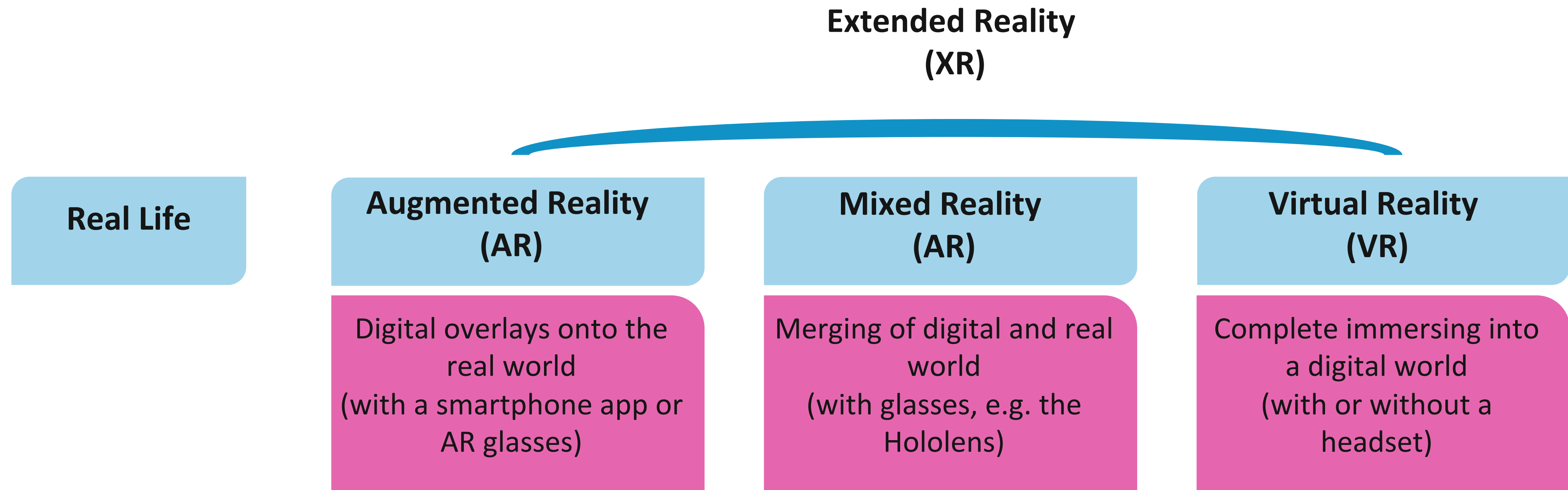3D virtual worlds

virtual reality (VR)

avatars

NFTs

digital twins

extended reality (XR)

holograms

What's the difference between XR/MR/AR/VR?

Extended Reality (XR)

Real Life	Augmented Reality (AR)	Mixed Reality (AR)	Virtual Reality (VR)
	Digital overlays onto the real world (with a smartphone app or AR glasses)	Merging of digital and real world (with glasses, e.g. the Hololens)	Complete immersing into a digital world (with or without a headset)

Based on Milgram and Kishino's 'Mixed Reality on the Reality-Virtuality Continuum' .[Milgram and Kishino 1994]

'Corners' of the metaverse

Some metaverse/ VR platforms already exist and are used by educators — not interconnected yet

Second Life (Lindan Labs)

AltspaceVR (Microsoft)

VR Chat / vTime XR

Mozilla Hubs - Mozilla (Mozilla > Firefox)

Virbela / FrameVR - virtual campus, classrooms or scenes

Engage - training and development

Horizon Worlds (Meta)

Recroom, Roblox, Fortnite (social gaming platforms)

(Re)emerging technology

The future is already here.

(Re)emerging technology

The future *has* is already *been* here.
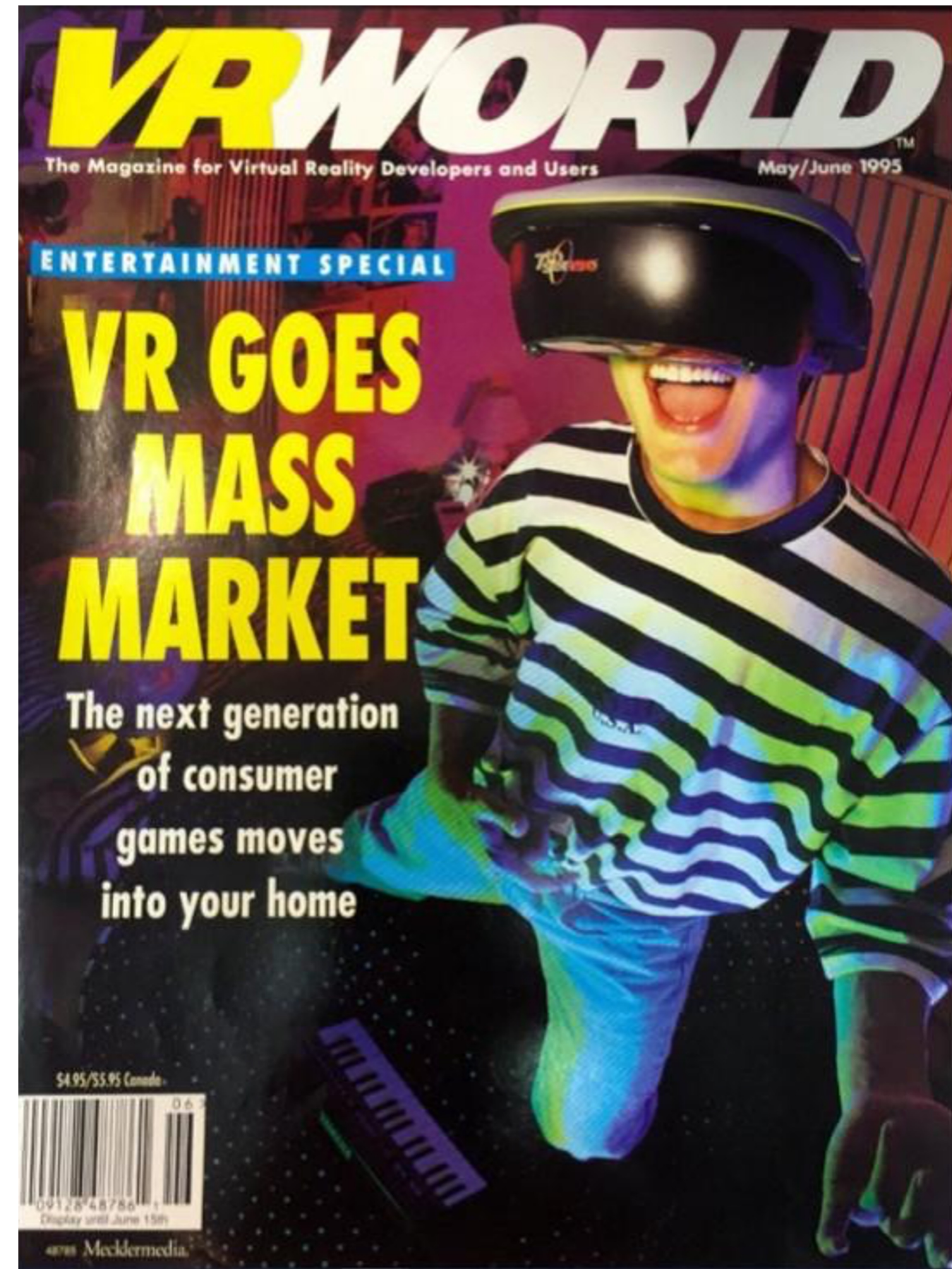
VR World Magazine — May 1995

Glimpse Inside a Metaverse: The Virtual World of Second Life

The story of a language teacher

Virtual Worlds and
Language Learning

A six-week expedition from account
creation to peer teaching in a virtual world

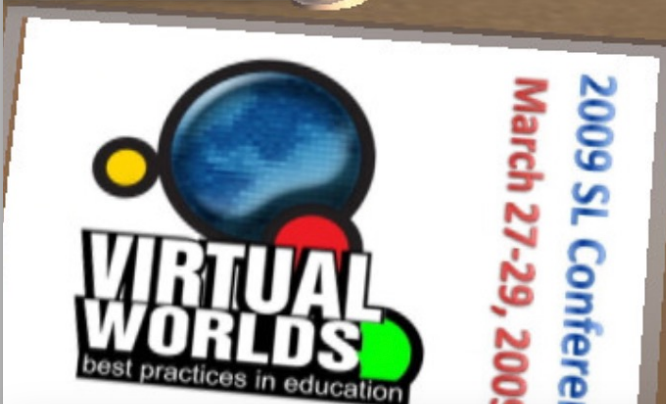Graham Stanley
Nick Noakes
Nergiz Kern
Dennis Newson

2009 SL Conference
March 27-29, 2009

VIRTUAL WORLDS
best practices in education

IMMERSE

The world's first language immersion platform in the metaverse

Why should you care?

Because…

◇ the metaverse has benefits for language learning

◇ we want to prepare our students for the 'real' world (skills training, new jobs, new ways of socialising, etc.)

◇ we want to be ready for future teaching jobs

◇ it's not going to go away

Benefits for language learning

'...if the internet is beneficial to learning in its current state, what kinds of things could we do with the metaverse?'
(EU Business School, Feb 10, 2022)

Immersive learning

Active, experiential, task-based and problem-solving based learning

Doings things together 'physically' to create experiences and learning that are memorable

VR language lessons are much **more like physical, face-to-face lessons** than online 'Zoom' lessons.

Have experiences rather than reading or watching other people's experiences.

Go on field trips, collaborate with others on hands-on project work, meet and chat with strangers, participate in role-plays and simulations in contextualised realistic environments.

'The metaverse is an embodied internet where you're never alone. Unlike a Zoom call that is scheduled and disappears when you're done, the metaverse is "always on" and affords social interactions with peers.'
(WorldBankGroup, Open Learning Campus)

'...from the perspective of the metaverse, the aim of language learning is more than a course or a learning activity; instead, it aims to enable EFL learners to have another life, a living environment using English for working, learning, social events and entertainment, just as if they were native English speakers.'
(Hwang and Chien, 2022)

Research

Affordances

- immersion
- sense of presence
- interactivity
- emotions
- embodiment
- multisensory stimuli
- social learning

Can lead to:

- higher motivation and engagement
- better learning outcomes
- retention / memory
- better performance (incl. in assessment)
- improved confidence
- more authentic communication

Prepare students for the real world

XR is already used…

◇ in the workplace (onboarding and training, meetings)

◇ current and future jobs (VR developer, 3D artist, immersive learning experience designer, XR technical specialist, Chief Metaverse Officer…)

◇ at many universities, K-12 and language schools

Be ready for future teaching job

Have the ability to understand the metaverse for social, work and educational purposes so we can talk about these in the classroom.

Job requirement:

Senior Fellow, HEA
nt, and innovative engagement in one or more of the following areas
earning (especially pedagogical uses of VR/AR/MR/AI/mobiles)
Learning
riting centre development and the provision of online and other form

Traditional teaching and content development might be replaced by AI systems.

More authentic assessment: the end of paper-based assessment?

It's not going to go away

This is where we are headed.

Businesses, gaming industry, banks, entertainment, fashion… everybody is heavily investing into the metaverse.

Education often lags behind. We don't need to be early adopters but at least be informed what is happening and participate in the shaping of it (education-first apps, ethical use, privacy)

If you think the internet is useful and necessary (remember 2020?) for language teaching, and the metaverse is the future internet, you cannot ignore it.

How you can prepare

◇ Watch the film Ready Player One (or read the book) for a dystopian view of the metaverse 😄

◇ My website (blog posts, articles, curated content) https://nergizkern.com/virtual-reality/

◇ Follow me on Linkedin https://www.linkedin.com/in/nergizkern/

◇ Join a community of practice and try it out for yourself

◇ Read what research says about immersive learning

Research – meta analyses and systematic reviews

◇ Huang, X., Zou, D., Cheng, G., Xie, H. (2021). A systematic review of AR and VR enhanced language learning. *Sustainability, 13*(4639). 1-28. https://doi.org/10.3390/su13094639

◇ Qiu, X. Y., Chiu, C. K., Zhao, L. L., Sun, C. F., & Chen, S. J. (2021). Trends in VR/AR technology-supporting language learning from 2008 to 2019: a research perspective. *Interactive Learning Environments,* 1-25. https://doi.org/10.1080/10494820.2021.1874999

◇ Parmaxi, A. (2020). Virtual reality in language learning: a systematic review and implications for research and practice. *Interactive Learning Environments,* 1-12. Retrieved from ResearchGate.

◇ Dhimolea, T. K., Kaplan-Rakowski, R., & Lin, L. (2022). A systematic review of research on high-immersion virtual reality for language learning. *Tech Trends,* 1-15. https://doi.org/10.1007/s11528-022-00717-w

◇ Chen, B., Wang, Y., & Wang. L. (2022). The effects of virtual reality-assisted language learning: A meta-analysis. *Sustainability, 14*(6), 3147. https://doi.org/10.3390/su14063147

References

◇ Ball, M. (2021, Jun 29). Framework for the Metaverse. MatthewBall.vc. https://www.matthewball.vc/all/forwardtothemetaverseprimer

◇ EU Business school https://www.euruni.edu/blog/how-can-the-metaverse-be-used-in-education/

◇ Hwang G.-J. & Chien S.-Y. (2022). Definition, roles, and potential research issues of the metaverse in education: An artificial intelligence perspective, Computers and Education. Artificial Intelligence. 3(100082). doi: https://doi.org/10.1016/j.caeai.2022.100082

◇ Milgram, P., & Kishino, F. (1994). A taxonomy of mixed reality visual displays. IEICE - Transactions on Info and Systems, 77(12), 1321–1329.

◇ VR World Magazine — May 1995 https://medium.com/predict/the-metaverse-of-the-1990s-d7d6ac9c3de2

◇ World Bank Group, https://olc.worldbank.org/about-olc/education-meets-the-metaverse-reimagining-the-future-of-learning

Thank you for listening!

What are you most curious about?

Bonus information

Types of VR

Media viewing
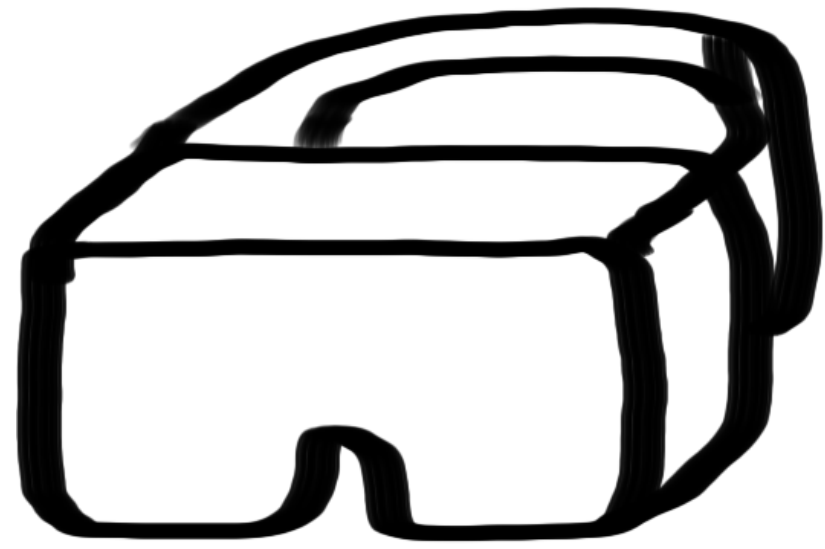360° videos (animations, documentaries, films)

AI apps
chat bots, NPC (Non-Playing Characters)

Social VR
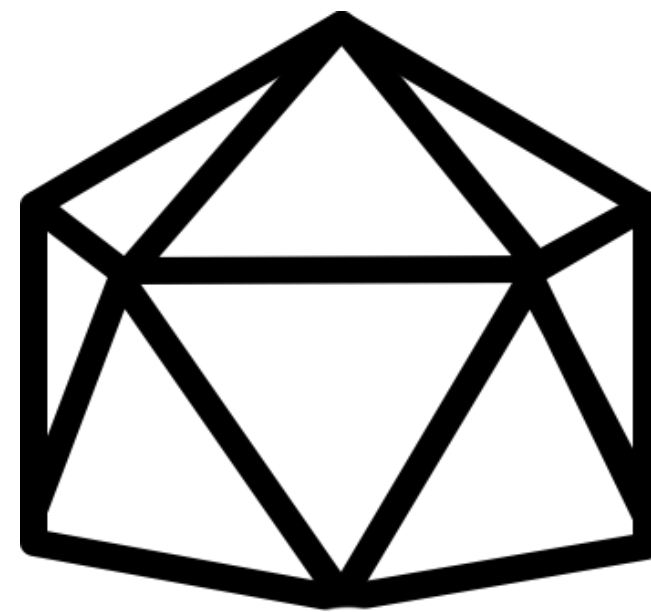multi-player, live in-world interactions

Ways of accessing VR

HMD = head mounted display
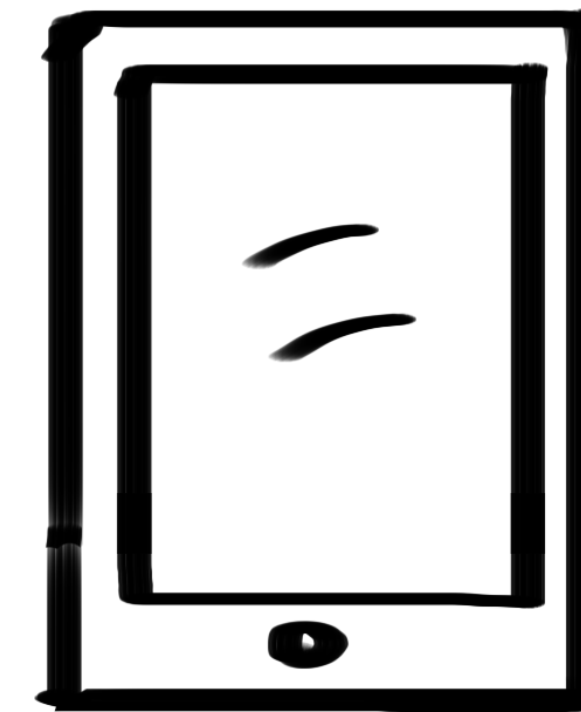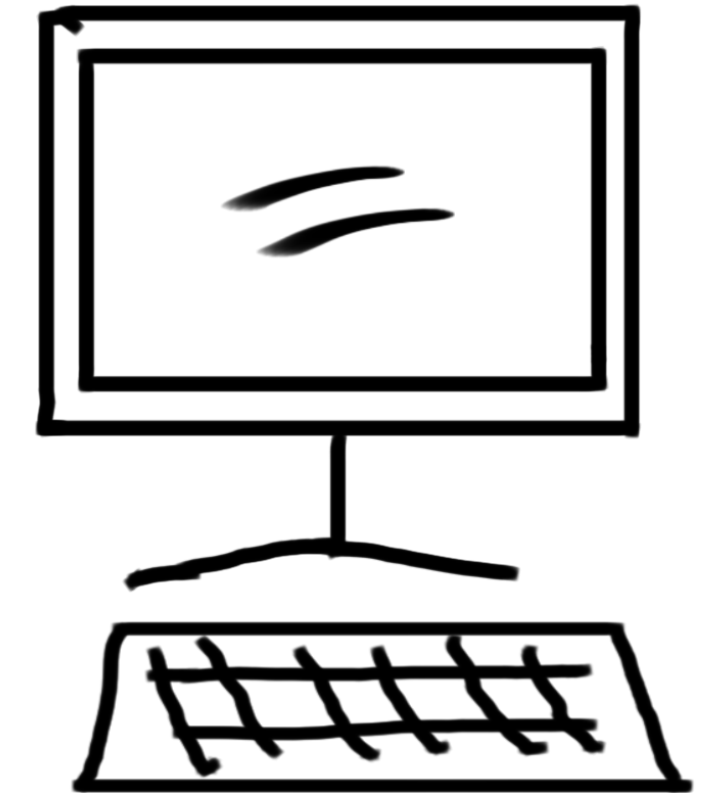
desktop

Cardboard

caves, domes, igloos – full-body suits

tablet

Mode of teaching and learning in VR

online

&

physical classroom

one-to-one

&

groups

synchronous

&

asynchronous

VR activity in ELT

- Flurry of activity between 2007-2012, mostly in Second Life

- Google Cardboard 2014 onwards + Google Tour Creator / Expeditions (shut down in 2021)

- Recently, renewed interest, incl. by major ELT publishers

    - Macmillan: Navio ('Gamified language practice in immersive 3D worlds')

    - Cambridge Assessment English: Adventures in English (Beta) – Minecraft Edu

    - Pearson has just bought Mondly

- Language schools are using Immerse, ImmerseMe, AltspaceVR and other platforms

- Some university ELT/EAP courses moved to Virbela during lockdown

VR apps and platforms for language learning

Mondly - self-study (phone and immersive VR app)

Nown Town - self-study (immersive VR app)

ImmerseMe - self-study (360-degree videos + MCQ + voice recognition)

Immerse - multi-user, synchronous, teacher-led (fully immersive, social VR), first language immersion program – subscribe to Spanish via the Meta Quest 2

Minecraft Edu - Adventures in English by Cambridge & Minecraft

VR4LL - single user, collaborative escape game activities for the classroom (EU project)