

Is there any role for virtual reality in EAP?



David Read and Laurie Wilson, ELTC, University of Sheffield

Overview



Current state of VR



Language learning and VR - the research



Delivering an English course in VR - research aims and examples



Our research and reflections - opportunities and challenges

What do we mean by Virtual Reality?



Immersive headsets



Current state of VR



Commercial VR - 2014 onwards...



2014



- Cheap and available
- Wireless
- Limited immersion
- Occasional use
- Experiences (pictures/video)



2016



- Very expensive
- Needed space
- Not wireless
- Incredibly immersive
- Games

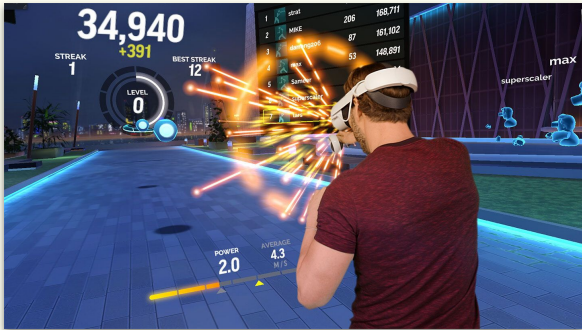


2019



- Affordable (£300)
- Wireless
- Decent immersion
- Games and experiences

Current state of VR



Current state of VR

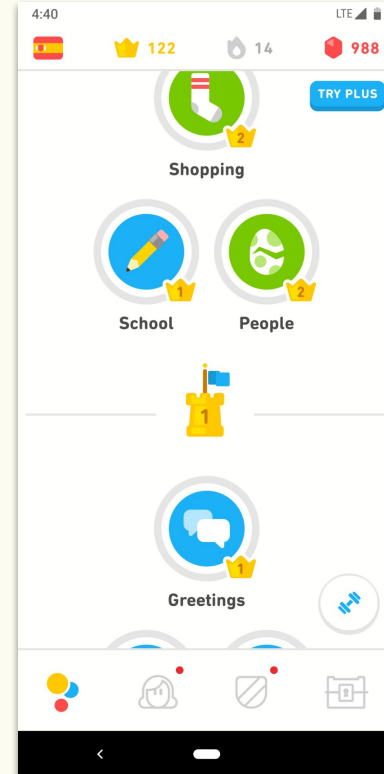


Language learning in VR: self-study apps

Mondly



Duolingo



Current state of VR



Language learning in VR: social apps



VRChat



Rec Room



Altspace

Current state of VR



Language learning in VR:



Current state of VR



Language learning in VR:



Research into language learning and VR



Positive features

Transfer and contextualisation

(Dalgarno and Lee, 2010; Lan, 2020; Scavarelli, Arya and Teather, 2021)

Vocabulary recall

(Legault *et al.*, 2019; Alfadil, 2020; Tai, Chen and Todd, 2020)

Engagement and motivation

Dalgarno and Lee, 2010; Faiola *et al.*, 2013; Chen, Hung and Yeh, 2021)

Reduction in anxiety

(Huang *et al.*, 2021)

Research into language learning and VR



Research gaps and issues

Novelty factor

(Tai, Chen and Todd, 2020)

Lack of real world studies

(Scavarelli, Arya and Teather, 2021)

Almost no research into use of VR in EAP

EAP and VR research



Language learning in VR: action research

Could VR be used to practice EAP productive speaking skills?

Does learning in VR encourage students to speak more freely?

Does communicating via an avatar reduce nerves and anxiety?

Does VR help them remember vocabulary and language better?

Does VR help them concentrate better than online or face to face classes?

English course in VR



Pilot course



- 5 weeks - 10 hours
- 9 Japanese students - 2 classes
- Focus on speaking
- Not specifically academic
- 5 agreed to take part in research
- Surveys during course and longer interview at the end

English course in VR



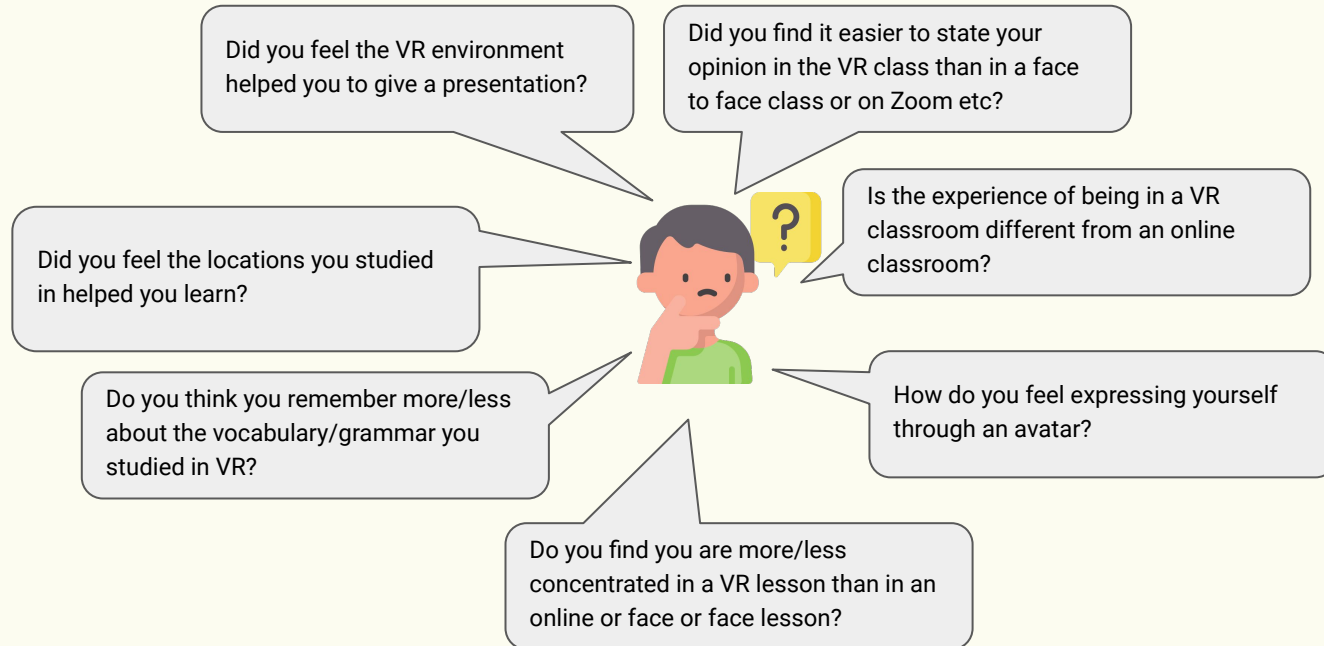
Examples from the course



English course in VR



Questions we asked:



English course in VR



Student responses:

communication



"I'm feel free to speak talk English - because I don't look others face"
(student 2)



"It was more interesting talk in VR with other student or with you [the teacher], because it's characters" **(student 3)**



"It is so comfortable, because maybe I can speak more in VR. I feel [people] not looking at me."
(student 4)



"I feel comfortable, I speak English without being embarrassed..but sometimes I couldn't figure out the right timing to start speaking"
(student 1)

English course in VR



Student responses:

Presentations/discussions



"So there is a part that they're not real human. They're not staring at you. In that case, I wasn't nervous as usual. And I don't know, I'm the avatars face looks nice. So I think they're not grumpy or they're not making a fat face."

(student 2)



"Giving a presentation in VR have both merits and demerits. I'm not nervous compared with a face to face because I can't see other people's faces. And standing on VR stage is quite fun. However, what I should speak without gesture is a demerit. What I can't see their reaction is also a demerit."

(student 1)



"Yeah. presentation. I don't feel nervous. I feel I carefully could talk. It's good. class to practice. Yeah. presentation."

(student 2)

English course in VR



Student responses:

Memory and attention



"It [VR] is better for remembering new words than face to face..I can experience good things and I remember." **(student 1)**



"But you know, the difference is, I can't do other things. And I can concentrate in a VR course" **(student 3)**



"I didn't feel like I was paying attention." **(student 4)**

EAP in VR: opportunities



Contextualised and situated learning



Increased confidence and freedom to speak



Reduction in anxiety in assessment practice



Better peer support and collaboration



EAP in VR: challenges



Facial and visual cues



Cost and accessibility (headsets and software)



Student control somewhat limited (e.g. slides)



Issues with access in China due to Facebook



Need for a clear pedagogy of VR delivery
(Parmaxi 2020, Lin 2015, Scavarelli 2021)



References



- Alfadil, M. (2020) 'Effectiveness of virtual reality game in foreign language vocabulary acquisition', *Computers & Education*, 153, p. 103893. doi:10.1016/j.compedu.2020.103893.
- Chen, C., Hung, H. and Yeh, H. (2021) 'Virtual reality in problem-based learning contexts: Effects on the problem-solving performance, vocabulary acquisition and motivation of English language learners', *Journal of Computer Assisted Learning*, 37(3), pp. 851–860. doi:10.1111/jcal.12528.
- Dalgarno, B. and Lee, M.J.W. (2010) 'What are the learning affordances of 3-D virtual environments?: Learning affordances of 3-D virtual environments', *British Journal of Educational Technology*, 41(1), pp. 10–32. doi:10.1111/j.1467-8535.2009.01038.x.
- Faiola, A. *et al.* (2013) 'Correlating the effects of flow and telepresence in virtual worlds: Enhancing our understanding of user behavior in game-based learning', *Computers in Human Behavior*, 29(3), pp. 1113–1121. doi:10.1016/j.chb.2012.10.003.
- Huang, X. *et al.* (2021) 'A Systematic Review of AR and VR Enhanced Language Learning', *Sustainability*, 13(9), p. 4639. doi:10.3390/su13094639.
- Krebt, D.M. (2017) 'The Effectiveness of Role Play Techniques in Teaching Speaking for EFL College Students', *Journal of Language Teaching and Research*, 8(5), p. 863. doi:10.17507/jltr.0805.04.
- Lan, Y.-J. (2020) 'Immersion, interaction, and experience-oriented learning: Bringing virtual reality into FL learning', *Language Learning & Technology*, 24(1), p. 15. doi:10125/44704.
- Legault, J. *et al.* (2019) 'Immersive Virtual Reality as an Effective Tool for Second Language Vocabulary Learning', *Languages*, 4(1), p. 13. doi:10.3390/languages4010013.
- Lin, T.-J. and Lan, K.Y. (2015) 'Language Learning in Virtual Reality Environments: Past, Present, and Future', *Educational Technology & Society*, 18(4), pp. 486–497.
- McBrien, J.L., Jones, P. and Cheng, R. (2009) 'Virtual Spaces: Employing a Synchronous Online Classroom to Facilitate Student Engagement in Online Learning', *International Review of Research in Open and Distance Learning*, 10(3). Available at: <http://eric.ed.gov/?id=EJ847763> (Accessed: 25 August 2021).
- Northcote, M. (2008) 'Sense of Place in Online Learning Environments'.
- Parmaxi, A. (2020) 'Virtual reality in language learning: a systematic review and implications for research and practice', *Interactive Learning Environments*, p. 13.
- Scavarelli, A., Arya, A. and Teather, R.J. (2021) 'Virtual reality and augmented reality in social learning spaces: a literature review', *Virtual Reality*, 25(1), pp. 257–277. doi:10.1007/s10055-020-00444-8.
- Tai, T.-Y., Chen, H.H.-J. and Todd, G. (2020) 'The impact of a virtual reality app on adolescent EFL learners' vocabulary learning', *Computer Assisted Language Learning*, pp. 1–26. doi:10.1080/09588221.2020.1752735.

Any questions

