When writing a paragraph on a paper, make sure you can answer the question “how does this relates to my work?” If you can’t, consider not including it.

Social

In present, VR technology is used in many fields. The analysis and discussion of a lot of empirical studies show that VR technology has great potential and application prospects in learning to support and teach students[1]. In our article we focus on virtual museums. This field is also closely related to reality education, Katifori[2] research has emphasized the importance of social interactions in museums as they tend to contribute to collaborative learning through discussions, debates which lead to deeper reflections on the subject. However, due to the size, price, and characteristics of the VR device, the multiplayer interaction experience is very poor. Yue et al. design an interactive way which users initiated conversations and engage in interactions in a hybrid virtual environment using a combination of Virtual Reality (VR) and Augmented Reality (AR) devices[3]. It is a way to make the interactive easily. ﻿Our work is closely related to Yue et al.’s mix AR/VR we apply a similar approach to visualize the virtual world, but we focus mainly on interaction between different planform. ﻿Social Presence in VR[4] by Jan et al, consider asymmetric interactions are under-explored due to their novelty. Our research base on this theory to explore different planform real-time communication for VR interactive.

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[2] A. Katifori *et al.*, “Cultivating mobile-mediated social interaction in the museum: Towards group-based digital storytelling experiences,” *MW2016 Museums Web 2016*, no. April, 2016, [Online]. Available: http://mw2016.museumsandtheweb.com/paper/cultivating-mobile-mediated-social-interaction-in-the-museum-towards-group-based-digital-storytelling-experiences/%0Ahttp://eprints.gla.ac.uk/143241/.

[3] Y. Li, E. Ch’Ng, S. Cai, and S. See, “Multiuser Interaction with Hybrid VR and AR for Cultural Heritage Objects,” *Proc. 2018 3rd Digit. Herit. Int. Congr. Digit. Herit. 2018 - Held jointly with 2018 24th Int. Conf. Virtual Syst. Multimedia, VSMM 2018*, 2018, doi: 10.1109/DigitalHeritage.2018.8810126.

[4] A. Yassien, P. Elagroudy, E. Makled, and S. Abdennadher, “A Design Space for Social Presence in VR,” *ACM Int. Conf. Proceeding Ser.*, 2020, doi: 10.1145/3419249.3420112.