## 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 underexplored due to their novelty. Our research base on this theory to explore different planform real-time communication for VR interactive.

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