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Potentials of Virtual Reality Medium for Collaborative Work

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TREO Talk Paper

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Virtual reality (VR) is used in the fields of medicine, biology, engineering, and science to enable experiences that are infeasible, costly, or unsafe otherwise (e.g., Alaraj *et al.*, 2011). Students can attend lectures and engage in group activities in the VR environment (Han *et al.*, 2022). The literature has examined the impact of immersive VR environments on learning outcomes in the aforementioned areas with inconclusive results (Hamilton *et al.*, 2021, Yoshimura & Borst, 2021). The technology learning curve, difficulties of getting accustomed to wearing VR headsets, and incompatibility of VR headsets with other forms of vision accessories (lenses, eyeglasses) are among the factors that may play a role to determine whether the immersive environment will be adopted more widely in educational settings. In a pilot study, we focused on the processes of group work and examined hardware and software dimensions**,** including ease of use, intuitiveness, ease of access to features, perceived productivity gains for groups and individuals, and the potential association those metrics have with the intention to use.

Students working on a group project in a 200-level information systems course were asked to conduct part of their group meetings in a virtual reality environment (Horizon Workrooms on Quest 2). The group work involved brainstorming, working on shared group documents, estimating numbers (in the context of group projects), creating charts, and calculations. Following the assignment, students responded to questions related to ease of use (EOU) and performance (PERF), as well as overall satisfaction with the experience and their intentions to use (El-Gayar *et al.*, 2010) the VR environment for group work in the future. Preliminary data analyses corroborate that overall satisfaction (or lack thereof) was associated with ease of use but not performance measures. Conversely, intention to use was associated with performance and not ease of use. Lack of familiarity with the technology might play a role, therefore we believe that technology maturity may play a role in assessing the fit and should be included in future developments of this work. The current study seeks to contribute to the IS literature insights about the potential fit of VR technology for tasks related to group collaboration.

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