Task-based language teaching in VR versus traditional settings

Koyo Ogawa

Abstract

This study compared Task-Based Language Teaching (TBLT) delivered in virtual reality (VR) and in traditional settings, examining learning gains, transfer, retention, and learner perceptions. 22 participants completed pretests, immediate posttests, transfer tests, and a questionnaire, while 10 of them, selected to balance proficiency across groups based on posttest scores, additionally completed a two-month delayed posttest and follow-up interviews. Wilcoxon signed-rank tests showed significant learning gains in both VR and traditional groups ($p < .001$; $p = .006$, in target discourse and $p = .004$; $p = .008$ in listening tests). ANCOVA indicated no immediate group difference in posttest scores ($p = .205$; $p = .322$) or in transfer measures ($p = .608$). After two months, a Mann–Whitney U test showed the VR group preserved target discourse significantly better than the traditional group ($p = .036$). Mann–Whitney U analyses of Likert-scale responses revealed greater enjoyment ($p = .008$), perceived retention ($p = .009$), reported difficulty ($p = .01$), and motivation ($p = .033$) in the VR group. Interview analyses (in vivo coding) highlighted VR affordances that promote contextualized practice and positive emotional engagement. These results suggest VR-TBLT may enhance long-term retention and learner engagement compared with traditional TBLT.