

## 2019年度総合情報基盤センター研究開発報告書

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研究課題	Virtual Reality Technology as Preparation for Overseas Language Experiences	
研究開発期間	2019年04月01日～2020年03月31日	
研究の概要	<p>The aim of this research was to evaluate student and teacher perceptions of virtual reality usage in speaking activities in the classroom. These speaking activities were geared toward helping students become more comfortable in communicating in English for the purpose of having better overseas language experiences.</p> <p>During the first semester of 2019, a VR smartphone activity was trialled twice with an elective Online English class of 10 students. They used two freely available smartphone apps; Google expeditions and Flipgrid. Google Expeditions is a virtual reality application that allows teachers to take students on virtual field trips all over the world. Flipgrid is a video-hosting application.</p> <p>In pairs, the students described their surroundings in VR to their partner. The goal of this activity was to encourage speaking in English. The students recorded and transcribed their conversations. This helped them to become aware of the language they were using while exploring overseas locations.</p> <p>As this class was a small elective class, it was an ideal environment to trial this activity. However, it soon became apparent that technological and ergonomic considerations such as wifi connections, logins, and motion sickness that need to be addressed could easily become disruptive and contribute to apprehension or anxiety, which in turn raises the affective filters of both the students and teachers. This was offset by the novelty of the activity, and the cooperativeness of the students, which contributed to a positive experience.</p> <p>We were fortunate enough to be accepted to present our findings on this particular trial at the Eurocall conference in Belgium and at the JALT national conference in Nagoya. Both of which were excellent opportunities to connect with like-minded researchers in similar fields. We also published our findings on this experiment in the <i>CALL and complexity – short papers from EUROCALL 2019</i>.</p> <p>The second experiment we conducted with the Oculus Quest Virtual Reality (VR) headsets involved six students enrolled in the Domestic Job Training class of the Career English Program. These students were also students who wanted to go on the International Job Training program in the future. Using the VR headsets, students had two interventions using <i>Rec Room</i>, a virtual community building application, where students could interact with other English speakers from all over the world. In the first intervention, students underwent a tutorial of how to use the virtual equipment, how to engage in the virtual world safely, and what language to use when in the virtual world. Students took turns engaging with the VR equipment and familiarizing themselves with the functionality. The second intervention was a task-based speaking activity. Students were supposed to practice <i>invitation language</i> by trying to invite other virtual reality to a Christmas-themed virtual space that the instructors had created. After both interventions, students were surveyed on their attitude towards their virtual experience and select students were interviewed.</p> <p>Based on these findings, we were accepted to present at EUROCALL 2020.</p>	
研究の成果	<p>The results of this research revealed that in both experiments students believed that VR was a beneficial addition to their English studies. The immersion of VR allowed greater interaction with surroundings, greater enjoyment, and was perceived to be a better tool for speaking in English than other technologies currently available. Especially in regards to the second experiment, students believed VR could have a positive effect on their English-speaking because they could</p>	

talk to people outside of their usual lives and they had to communicate in English.

The majority of students in both experiments believed that VR could have a positive effect on their English-speaking because they could talk to people outside of their usual lives and they had to communicate in English. One student mentioned that they felt more confident speaking English in VR because their identity was anonymized. Two students believed that VR was especially beneficial for Japanese students that have no interactions with foreign people, specifically students living in the countryside. VR gives a chance for these students to connect in English from any location. If VR headsets like the Oculus Quest became more affordable, students believed they would buy one to practice their English-speaking at least for an hour once a week.

In terms of the teacher perspective, the instructors who ran these interventions noted the hurdles that VR faces in becoming a mainstream tool of education despite its benefits. These hurdles include space requirements, time limitations due to motion sickness, lack of teacher control in technical difficulties, and training necessities for students to become familiar with usage of VR as well as language preparation.

以上

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