TEACHING TEAMWORK IN VIRTUAL REALITY

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KEYWORDS: Virtual reality, teamwork, engagement

Problem

Teamwork and communication skills are highly prized graduate attributes (Coll, Zegwaard & Hodges, 2002), however, many students report that they receive little explicit training in these generic skills (Hansen, 2006). Students tend to dislike group assessments and commonly report feeling anxious, stressed and angry about group work (Neu, 2012).

Plan

Previous research has suggested that including specific team building activities and explicitly teaching conflict resolution techniques can result in improved attitudes toward teamwork and a better student experience (eg. Ekimova & Kokurin, 2015; Hansen, 2006).

For our class, we decided to introduce Virtual Reality (VR) technology to combine the engagement of technology with the real-time feedback from group work in a tutorial. Immersive visual reality has been around since the late ‘80s and the potential for education has been noted (Merchant, Goetz, Cifuentes, Keeney-Kennicutt & Davis, 2014), but as of yet little research has been done in tertiary education settings.

We introduced a new tutorial with a VR component to explicitly address teamwork and conflict resolution skills in a large first year communication skills unit with 700+ students.

Action

In the tutorial, students first completed a series of role-playing scenarios where they had to try and find solutions to common group work problems using conflict resolution techniques. They then worked in small teams to play a problem solving game.

Due to limitations on available VR equipment, most (n=26) groups were provided with a origami puzzle that they needed to work together to solve. The other tutorials (n=10) were given a VR game created specifically for the class. In this game, one student wore a Google Cardboard headset and looked for puzzle pieces in a maze. They were given directions from their teammates, who held the map of the maze and the key for the puzzles.

Students engaged well with the tutorial in both groups. However, tutors reported that students in the VR activity often had to work in slightly larger groups as there were not always enough students in the class with Android phones to make full use of the activity.

Reflection

Overall, although perceptions of the VR were generally positive, it did not appear to be more engaging for students than the simpler origami game. Although Google Cardboard provides a cheap and readily available platform for VR, it still involves a great deal of expertise and expense to set up, especially to create a program that works across multiple phone platforms. Unit coordinators may well consider whether it is worth the effort. However, our activity was only looking at generic skills. The full benefits of VR may only be seen for activities focusing on more specific skills, such as virtual field trips, laboratory preparation or surgical training (eg. Palter & Grantcharov 2014).

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Proceedings of the Australian Conference on Science and Mathematics Education, The University of Queensland, Sept 28th to 30th, 2016, page 168-169, ISBN Number 978-0-9871834-5-3.