

Session 1D – Paper

Dag 1: 12.50-13.40 Lokale: 107 ODEON

The Use of Virtual Reality Headsets in Higher Education

Program text

Based on a review of relevant research and experiences from a classroom study, this presentation will discuss the few benefits and many challenges of using VR headsets in higher education.

Abstract

Introduction

In the light of substantial improvements to the quality and availability of virtual reality (VR) hardware since 2013, this project seeks to update our knowledge about the use of VR headsets in education. This proposed paper presentation is primarily based on a review published in November 2017 (Jensen & Konradsen, 2017) but also includes insights from a pilot study at the Department of Public Health (UCPH) and a best-practice report about VR in Higher Ed (Jensen, 2017).

Methods

The review is a literature review of post-2013 publications reporting on experimental studies of the use of VR headsets in an educational context. Following a comprehensive search 21 papers were identified, quality assessed, and analysed.

Results

A quality assessment showed that the study quality was low. The review identified a number of situations where the use of VR headsets can be useful for skills acquisition. These include cognitive skills related to understanding spatial and visual information and knowledge; psychomotor skills related to head-movement, such as visual scanning or observational skills; and affective skills related to controlling your emotional response to stressful or difficult situations. Outside of these, the VR headsets had no advantage vis-a-vis less immersive technologies or traditional instruction and in some cases even proved counterproductive because of cybersickness, tech challenges, or because the immersive experience distracted from the learning task.

Discussion

Wild claims about advantages and possibilities of VR in education have been pushed by the VR business, often backed with 'scientific proof' that this or that product increases learning. However, independent research tells another story of more limited benefits and unsolved issues. Does this mean we should stop investigating the use of VR in education? Or can the research help us focus on learning situations where VR is most likely to be useful for instructors and learners?

Author

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Literature

Jensen, L. (2017). Virtual Reality in Higher Education - Using Head-Mounted Displays in the Classroom. Retrieved from https://cobl.ku.dk/news/2017/virtual-fieldtrips/VR_Report.pdf

Jensen, L., & Konradsen, F. (2017). A review of the use of virtual reality head-mounted displays in education and training. Education and Information Technologies. doi:10.1007/s10639-017-9676-0