

Analysis of the Application of Virtual Reality (VR) in the University Studies Election Processes.

Abstract

Objective: This paper is aimed at analysing academic studies on emerging virtual reality (VR) technologies in university guidance processes. The study aims to shed light about how is the approach of the presented papers and the main results of this emerging methodology in its application to this field of study.

Design/methodology: The design of the research is based on an exploratory analysis of the work, addressing the aspects of vocational guidance and VR. The intention is to get a feel for the interest on the subject from a bibliographic review, while obtaining information on the different methodologies used and the results obtained. At the same time, it is aimed at analysing the methodologies for applying VR to the different studies and degree families.

Results: The results show firstly that, despite the important implications and effects of VR technologies on university orientation, it has not been assessed in depth. On the other hand, most studies show that students who received a VR orientation express more favourable opinions about the technology, improve their university programme knowledge scores compared to students who have not received this orientation, and generally feel more confident about their chosen degree while avoiding drop-out rates.

Limitations/implications: The results obtained have important implications when it comes to guiding students in their choice of university studies. On the one hand, the use of VR can improve guidance test results and provide students with an experience that is closer to their future career. In this way, the drop-out rate from university can be reduced. The main limitations of the study stem precisely from the lack of studies on the phenomenon and the possibility of extending the results obtained to the wide range of university degrees on offer.

Originality/contribution: The originality of the study is based on the analysis of the different proposals for applying VR on the orientation processes to choose university studies. An in-depth knowledge of its application on university guidance can reduce drop-out or university failure rates.

Keywords: Virtual Reality; Career Orientation; Virtual Environments; Education; Technology.

Literature review

The university orientation has been of paramount importance over the years (Gil, 2002). Nowadays, and given the changes that society in general and the university, in particular, are going through, this orientation process has become a key factor for new university students to be able to make effective decisions about the studies they will undertake.

As it is pointed out (Echevarria et al., 2008), professional orientation seeks to encourage the discovery of personal possibilities through the identification, choice and/or redirection of academic, professional and personal alternatives, accordingly to the potential and life project of people, and contrasted with those offered by the milieu.

Within this context, this academic orientation should allow students to face a large number of information inputs about the study offers, to decide which ones are closer to their expectations, lifestyles and personal projects. In this sense, the guidance should offer systematic help so that young people and adults at the university can meet all the requirements of their personal and social development, and not only those related to their academic results (Gil et al., 2001).

For its part, virtual reality (VR) is an emerging technology that has already found a successful application in a variety of different fields, including simulation, training, education and games (Beti, Al-Khatib & Cook, 2019).

VR is used by means of a combination of technologies that enable multi-sensorial and three-dimensional interaction with a virtual environment. The large number of scenarios that VR can represent makes it extensively applicable to many areas of education, enabling effective and immersive learning (Christou, 2010).

As Valenti, et al. (2020) indicate, the application of virtual reality (VR) in learning environments is currently a subject of research in several educational settings. However, despite its positive effects, the impact of this technology as a tool for the orientation of new students in the university has not been examined in detail.

On this point it should be noted that, according to the U-Ranking study (2019), 33% of students do not finish the degree they started and 21% leave without completing university studies, while 12% decide to change studies. Although the drop-out rates are due to different causes, one of the main ones, according to the study, is due to the lack of guidance and previous training of the students. Dropout is concentrated in the first year, but also in posterior years.

Virtual reality is presented as an immersive and a practical tool for learning, and can play a unique role for approaching these educational challenges. Virtual reality gives rise to new opportunities that support students (Hu and Lee, 2017).

Conclusions

The world of education faces great challenges owing to the transition from the Information Age to the Age of Experience (Wadhera, 2016).

VR allows new undergraduates to develop a professional guidance work. Thanks to these tools, young people can engage in immersive learning, where they can try out the practice of a profession. In short, it allows students to experience what it would be like to practice that profession in a more real way and to avoid, to a certain extent, university drop-out rates. Results from some studies indicate that students who have received a VR orientation express more optimistic views about technology, improving their knowledge about their programme and chosen career. Besides, they show a small decrease in anxiety about the programme compared to other students who received the information through other standard ways.

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