Virtual reality from the perspective of Saudi faculty

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Abstract. Nowadays, we live in an ever-evolving technological world. There is thus a growing need to explore the use of modern technology in education in general, and in higher education in particular. The present paper investigates the use and effectiveness of Virtual Reality (VR) in higher education from the perspective of Saudi faculty at the College of Languages and Translation, King Khalid University (KKU). A mixed-method research design was applied. A questionnaire and focus group interviews were used to collect quantitative and qualitative data. Results indicated a limited use of VR among faculty due to lack of facilities, insufficient support (particularly for junior faculty), and lack of female technicians for the female-only campus and cultural aspects (e.g. female privacy). It is important to consider the need for high-speed internet and enhanced facilities for both students and faculty alike.

Keywords: virtual reality, faculty, perspective.

1. Introduction

Recently, it has been evident that a number of developing countries, including the Kingdom of Saudi Arabia (KSA) are implementing big changes to higher education. The key objective of these changes is to enhance educational standards and economic development and stability. The KSA government's attempts to accomplish this objective have been relatively successful. Educational technology advancements and information technology investment in Saudi universities are a major and positive result of the national development that aims to ensure quality education and communication. Sarkar (2012) explains that improving the educational system is a key aim of educational technology. By employing

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more effective and efficient technology, the quality of education can be enhanced (Alfarani, 2016).

The present paper aims to explore the use of VR in higher education institutions and its effectiveness from Saudi faculty's viewpoints. According to Getso and Bakon (2017), VR means a digital environment (world) where students can engage in and interact with each other and with other objects and it supports multiple learning styles such as ImmerseMe, Expeditions, Mondly, FluentU, and Cardboard.

2. The use of learning technology in Saudi Arabia

Over the last decade, higher education in KSA has witnessed major developments and the Saudi government has spent vast amounts of time and money for improving the educational sector (Alamri, 2011).

According to Al-Asmari and Rabb Khan (2014), there is a lack of information about the use of educational technology in KSA and other Middle-Eastern countries, where the official usage of web-based technologies is significantly slower than the Western countries. Nonetheless, Alfarani (2016) refers to a number of reports showing an increase in the use of tablets, smartphones, and mobile devices in higher education classes in KSA. Moreover, Daggett (2014) stresses that the application of technology in education is still a new concept, thus governments and authorities do not have a great deal of experience in this field.

3. Method

The current paper aims to investigate the use and effectiveness of VR in higher education from the perspective of Saudi faculty at the College of Languages and Translation, KKU. To achieve this objective, a mixed-method approach (qualitative and quantitative) was employed. A case study is adopted to explore a specific target population (academic members) in a specified place (KKU in KSA). It is the best method since it helps generate a rich insight into the topic.

3.1. Tools

The questionnaire (a quantitative questionnaire and an open-ended qualitative questionnaire) and focus groups were utilized to collect the required data.

3.2. Data collection

Arabic is the national language of KSA, thus the tools were presented in English with an Arabic translation to avoid misunderstanding. The questionnaire comprised 12 items distributed to two domains: perceptions of VR (eight items) and challenges in taking up VR (four items), see supplementary materials.

As for social science research and educational studies, focus groups are deemed a highly beneficial tool of exploring opinions, perspectives and experiences of participants (Cohen, Manion, & Morrison, 2007). In the present paper, focus groups were used to create interpersonal relations among the participants to generate rich information that supports or undermines the implementation of VR. Participants were distributed to three focus groups, each of which consisted of five females. Thematic analysis was used to analyse the data collected from the focus groups by reading the data and defining the emerging themes using a word-based technique, inspection techniques, and coding.

In May 2018, the questionnaire was distributed online in English and Arabic to male and female faculties (see Table 1). It remained open for four months to allow most faculties to participate.

Table 1. Sample and questionnaire items

Participants			**Questionnaire**	
Gender	Male	female	Domain	Item
	68	59		
Focus group	15 females		Perceptions of VR	8
			Challenges in taking up VR	4
Total	127		Total	12

4. Discussion

The results indicate that (96%) of participants use one or more type of VR technology in teaching. In addition, (75%) of participants agree that VR technologies are easy to be employed in the teaching and learning process. There were no significant gender differences evident in the questionnaire responses regarding the use of VR in education. However, the findings of qualitative analysis indicate that fewer facilities and services are available on female campuses. For this reason, subsequent focus groups concentrated on females to identify the

causes behind the results of this research and other studies in KSA relating to the implementation of VR.

Similar opinions reported by both genders may be a result of being governed by university regulations which are exclusively created from a male perspective. In this context, women have a limited power and do not participate actively in the decision-making process. Alfarani's (2016) findings support this result indicating that females were more often afraid to make decisions due to fear of losing their job if they did not agree with the prevailing opinions. Women therefore commonly repeated the majority opinion and stuck to the university's general resolutions in order to safeguard their own jobs. This was very much the case until April 2016, when the Crown Prince Muhammed Bin Salman announced the new Saudi Vision 2030, in which women would be afforded more rights, and would be made into stronger and more influential society members.

Furthermore, information obtained from the focus group indicated that the lack of information and communications technology knowledge that junior faculties possess could be a major factor hindering the use of VR in their classrooms. Arabic language as well was considered to be one of the barriers in using VR and this also confirmed by Albalooshi, Mohamed, and Al-Jaroodi (2011).

Therefore, students and faculty should attend training courses to assist them with such technology. When student and faculty can understand the great potential of VR and are able to use it effectively, then their knowledge will be improved and they can use this powerful tool in their classrooms.

Besides holding training and ensuring resources, it is important to raise students' as well as faculties' awareness about the importance of employing VR in education. One participant indicated that VR should be promoted and students should be informed about its potential to assist in specific subject areas. The functions most appropriate for each topic of study should be pointed out, particularly for foreign languages education. If used properly, VR may aid in enhancing the performance of students as well as faculty.

5. Conclusions

To sum up, Saudi faculties agree that employing VR could have a pivotal position in teaching and learning, especially for foreign languages education. However, there are several problems associated with VR. Nonetheless, the participants

appear to have hope and enthusiasm when it comes to using modern technology, particularly VR, which can enhance foreign language education and improve students' motivation.

There appears to be an optimistic future for the use of VR in higher education, however it is crucial to address any relevant drawbacks such as the potential costs. Future studies may explore the use of modern technology and its advantages for faculty and students. They may also explore the benefits and drawbacks of using a variety of technologies in different contexts and cultures.

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7. Supplementary materials

https://research-publishing.box.com/s/27d2ver2o1nd4k5ps0vkocnl3j3gg6k6

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