

# **3D Virtual Learning Environment's potential in a unique educational environment**

**Jalila Zouhair**

**Prince Sultan University, Saudi Arabia**

## **Abstract**

The education system in Saudi Arabia is unique in that they are separate academic institutions for male and female students; male are strictly forbidden in the solely female institutions. In addition, there are many social conventions that limit female and male interaction in everyday life. Therefore there is clearly a need for social acceptable tools that allows female students the freedom to interact with each other and with their male counterparts at convenient times, to enhance their social and educational skills. The 3D virtual learning environment (3D VLE) could be a compelling solution.

The use of 3D VLE in education has grown in popularity over the past few years because of its ability to facilitate continuous social interaction, immerse students in a topic, and add fun to the educational process. To evaluate the difficulty of implementing such an environment, the level of acceptance to a virtual world, and its benefits socially and educationally for females at Saudi universities, we developed a sample virtual classroom in Second Life (SL), an online, interactive, three-dimensional graphically simulated world. A group of female students were asked to use it for social and academic interactions, and their daily activities were monitored for one month. Additionally, we asked active educators from different local universities, plus randomly selected students, to respond to an online questionnaire in order to evaluate their view of the virtual classroom we created.

The results of this study revealed that, although the development team (four undergraduate computer science students), did not have any previous experience building a virtual world in SL, they were able to develop the virtual environment required for this study. In addition, the interviews and surveys of students and faculty members revealed that they found 3D VLE to be a useful tool for e-learning, and it has promising potential for enhancing education in female communities.

In conclusion, this study shows that developing 3D VLE is relatively simple procedure that can be done by novice SL users. Both instructors and students expressed great enthusiasm for the project, and thought that it could provide great benefits, especially in the unique environment of education in Saudi Arabia.