Virtual Reality and Avatars in Education

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Abstract : Virtual Reality (VR) and 3D videos are the most current generation of learning technology today. Virtual Reality and 3D videos are being used in professional offices and Schools now for marketing and education. Technology in the field of design has progress from two dimensional drawings to 3D models, using computers and sophisticated software. Virtual Reality is being used as collaborative means to allow designers and others to meet and communicate inside models or VR platforms using avatars. This research proposes to teach students from different backgrounds how to take a digital model into a 3D video, then into VR, and finally VR with multiple avatars communicating with each other in real time. The next step would be to develop the model where people from three or more different locations can meet as avatars in real time, in the same model and talk to each other. This research is longitudinal, studying the use of 3D videos in graduate design and Virtual Reality in XR (Extended Reality) courses. The research methodology is a combination of quantitative and qualitative methods. The qualitative methods begin with the literature review and case studies. The quantitative methods come by way of student's 3D videos, survey, and Extended Reality (XR) course work. The end product is to develop a VR platform with multiple avatars being able to communicate in real time. This research is important because it will allow multiple users to remotely enter your model or VR platform from any location in the world and effectively communicate in real time. This research will lead to improved learning and training using Virtual Reality and Avatars; and is generalizable because most Colleges, Universities, and many citizens own VR equipment and computer labs. This research did produce a VR platform with multiple avatars having the ability to move and speak to each other in real time. Major implications of the research include but not limited to improved: learning, teaching, communication, marketing, designing, planning, etc. Both hardware and software played a major role in project success.

Keywords : virtual reality, avatars, education, XR

Conference Title : ICTHSS 2022 : International Conference on Trends in Humanities and Social Sciences

Conference Location : Bangkok, Thailand

Conference Dates : November 29-30, 2022