

Research in Progress Abstract - Construction Education (Pedagogical Content)

# Using Augmented Panoramic Views as an Online Course Delivery Mechanism

**Masoud Gheisari, Ph.D.**  
Mississippi State University  
Starkville, Mississippi

**Graceline Williams, MSC**  
Georgia Institute of Technology  
Atlanta, Georgia

While Massive Open Online Courses (MOOCs) seem well suited for lecture-based courses, hands-on learning objectives (labs, studios) might be more difficult to achieve with current MOOCs practices because they require interaction with tangible objects and/or are location-specific. New technologies and ubiquitous computing offer the possibility of providing new means of communication that can let online users have a very similar experience to traditional college students bringing physical locations closer to online users in a natural, intuitive way. With a majority of prospective students likely having access to mobile devices and the Internet, mobile Augmented Reality and the implementation of new Human Computer Interaction paradigms could provide a new medium and method of teaching students in an online environment. Through this approach, students with mobile phones or tablets could look through a “magic” window where information (text, image, 3d geometry, audio, and video) is superimposed on real-life video/image captures of a traditional classroom/lab setting. In this research a panoramic view of a building was used while its structural components were augmented with loading-related information as a learning tool for students in “Architectural Structures and Design Integration I” class in the College of Architecture at Georgia Tech. Students could interact with structural elements of the building to visualize load distribution on them. The information was available on the geo-location spots around the target structure but building the augmentations on panoramic views made the system location-independent that makes the system widespread and universal. This innovative application of the augmented reality has the potential of transforming MOOCs education beyond traditional video and audio formats.

**Key Words:** MOOCs, augmented views, augmented reality, panorama, human computer interaction.