CREATING ENGAGING INSTRUCTION AND STUDENT PROJECTS UTILIZING AUGMENTED REALITY (AR)

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Abstract

AR is an emerging technology that allows users to access digital information embedded into the physical environment through mobile devices, like smartphones or tables (Dunleavy, 2014). Dunleavy, Dede, and Mitchell (2009) further explained that interactions with virtual and augmented realities can have multiple implications for educators because it can shape “participants’ learning styles, strengths, and preferences in new ways beyond what using sophisticated computers and telecommunications has generated thus far” (p. 9).

AR provides a number of affordances in educational environments such as the capability for students to communicate face-to-face, as well as the opportunity for kinesthetic learning if mobile devices are utilized for the experience (Dunleavy et al., 2009). Additionally, AR experiences initiated through a mobile device can strengthen connections between formal and informal learning by enabling users to incorporate “experience and meaning within specific contexts” (FitzGerald et al., 2013, p. 45). Radu (2014) stated that these affordances can lead to increased content understanding, memory retention, student motivation, and improved collaboration (Radu, 2014).

With the recent popularity of Pokemon Go and a growing interest in educational activities that include utilizing the power of smartphones for mobile learning, the author, who is an assistant professor of education at an American liberal arts university in the state of Virginia, spent the past academic year implementing an AR design project into a curriculum development course for secondary level preservice teachers. During the fall of 2016, the preservice teachers designed AR-infused instructional pieces in their content areas utilizing the free application, Aurasma.

During the spring of 2017, a different group of preservice teachers used Aurasma to create projects intended for secondary level students to complete. The preservice teachers then completed the project they designed in order to work through the process from a student’s perspective. Bower, Howe, McCreddie, Robinson, and Grover described that when students have the opportunity to become designers they are able to develop higher level thinking skills (2014).

During this presentation, the author plans to present a brief survey of literature that supports AR as a learning experience, as well as the projects described above, student reflections about the design process, as well as the affordances and challenges experienced during both semesters.

References:

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