Augmented Reality in Pre-service Teachers' Education

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Abstract

Augmented Reality (AR) is an emerging technology that incorporates virtual components in real environments. It has been receiving increasing attention in educational settings because it has the potential to enhance teaching and learning. However, its use in the classroom is still rather limited. Teachers have a crucial role for the effective integration of any digital technology including AR and therefore guiding teachers on how to create and use AR in the classroom is important. However, not many studies exist on educating pre-service teachers as creators and facilitators of AR learning experiences. The current study is aiming to explore pre-service teachers' experiences and views on creating AR content and using it to teach science to young learners. Convenience sample was used with student teachers enrolled in a teacher education course. Forty 3rd year pre-service teachers participated in a two-hour workshop where they have been introduced in AR development. Participants developed simple AR experiences to teach basic science to primary class pupils. After the intervention, qualitative and quantitative data were gathered through online questionnaires developed by the researchers. Findings revealed that AR in pre-service teacher education is promising. Pre-service teachers consider that the integration of AR in the primary classroom can be engaging for pupils due to its interactivity and playfulness and can facilitate better understanding of difficult or abstract science concepts. Moreover, student teachers reported that the development of AR content, as part of their curricula, enhances their computational thinking skills. Implications for educators and policy makers are important because AR can enhance teaching having an impact on student learning.