

- Title:** A review of research on augmented reality in education: advantages and applications
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- Abstract:** Technology in education can influence students to learn actively and can motivate them, leading to an effective process of learning. Previous research has identified the problem that technology will create a passive learning process if the technology used does not promote critical thinking, meaning-making or metacognition. Since its introduction, augmented reality (AR) has been shown to have good potential in making the learning process more active, effective and meaningful. This is because its advanced technology enables users to interact with virtual and real-time applications and brings the natural experiences to the user. In addition, the merging of AR with education has recently attracted research attention because of its ability to allow students to be immersed in realistic experiences. Therefore, this concept paper reviews the research that has been conducted on AR. The review describes the application of AR in a number of fields of learning including Medicine, Chemistry, Mathematics, Physics, Geography, Biology, Astronomy and History. This paper also discusses the advantages of AR compared to traditional technology (such as e-learning and courseware) and traditional teaching methods (chalk and talk and traditional books). The review of the results of the research shows that, overall, AR technologies have a positive potential and advantages that can be adapted in education. The review also indicates the limitations of AR which could be addressed in future research.