World Academy of Science, Engineering and Technology
International Journal of Educational and Pedagogical Sciences
Vol:12, No:04, 2018

Application of Learning Media Based Augmented Reality on Molecular Geometry Concept

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Abstract : Studying chemistry requires the ability to understand three levels of understanding in the form of macroscopic, submicroscopic and symbolic, but the lack of emphasis on the submicroscopic level leads to the understanding of chemical concepts becoming incomplete, due to the limitations of the tools capable of providing visualization of submicroscopic concepts. The purpose of this study describes the stages of making augmented reality learning media on the concept of molecular geometry and analyze the feasibility test result of augmented reality learning media on the concept of molecular geometry. This research uses Research and Development (R & D) method which produces a product of AR learning media on molecular geometry concept and test the effectiveness of the product. Research stages include concept analysis and learning indicators, design development, validation, feasibility, and limited testing. The stages of validation and limited trial are aimed to get feedback in the form of assessment, suggestion and improvement on learning aspect, material substance aspect, visual communication aspect and software engineering aspects and media feasibility in terms of media creation purpose to be used in learning. The results of the overall feasibility test obtained r-calculation 0,7-0,9 with the interpretation of high feasibility value, whereas the result of limited trial got the percentage of eligibility with the average value equal to 70,83-92,5%. This percentage indicates that AR's learning media product on the concept of molecular geometry, deserves to be used as a learning resource.

Keywords : android, augmented reality, chemical learning, geometry
Conference Title : ICET 2018 : International Conference on Educational Technology
Conference Location : Tokyo, Japan
Conference Dates : April 05-06, 2018