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E-books plus: Role of interactive visuals in exploration of mathematical information and e-learning

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Sonja Rowhani, Kamran Sedig, Cognitive Engineering Laboratory, University of Western Ontario, Canada

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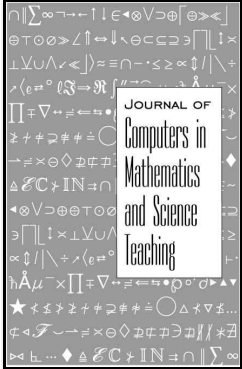
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Abstract & Citation

Abstract

E-books promise to become a wide-spread delivery mechanism for educational resources. However, current e-books do not take full advantage of the power of computing tools. In particular, interaction with the content is often reduced to navigation through the information. This paper investigates how adding interactive visuals to an e-book influences interaction with the information and learning. Two different versions of a mathematics e-book were designed containing information about Platonic and Archimedean solids: a hypertextual version and a version augmented with interactive visuals. A study of how learners explore mathematical information using these two different versions of the e-book is presented. The findings of this study show that the addition of interactive visuals to an e-book can increase learning by supporting diverse sense-making activities. Based on the findings of this study, we suggest five approaches for adding interactive visuals to e-books.

Citation

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Keywords

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