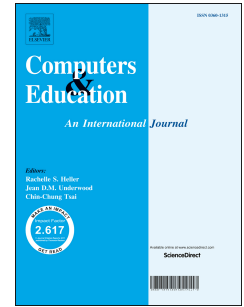


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The effects of an ARCS based e-book on student's achievement, motivation and anxiety

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The Effects of an ARCS based E-book on Student's Achievement, Motivation and Anxiety

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Abstract

This study investigates how a digital book – or e-book – based on Keller's ARCS model of Motivational Design influenced undergraduate students' sense of achievement, motivation, and anxiety. In the study, we used a mixed methods design to examine the effects of using an e-book versus a printed book or static PDF. Participants in the study were 94 students who were enrolled in a Mathematics-I course at Firat University Technology Faculty in Turkey. Forty-eight of these student volunteers were enrolled in the experimental group and 46 others enrolled in a control group. Data was collected from several sources: students' motivation surveys, mathematics anxiety surveys, mathematics achievement tests, and interviews. Results indicated that students using the e-book based on the ARCS motivation model performed significantly better on the mathematics achievement test and motivation survey. The findings also revealed that the e-book based on ARCS motivation model had a significant effect on reducing students' mathematics anxiety levels. The article also considers numerous digital and e-book empirical studies published in the literature, many of which have reported that the effect of digital books on a variety of different learning outcomes has produced mostly positive results. We hope the findings of this present study will contribute to the future design and implementation of digital books and how they are used in learning environments.

Keywords: improving classroom teaching; interactive learning environments; media in education; post-secondary education

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