

Using Adaptive Learning Technologies to Personalize Instruction: The Impact of Interest-Based Scenarios on Performance in Algebra

Candace Walkington, University of Wisconsin-Madison, 1025 W. Johnson St., Madison, WI,
cwalkington@wisc.edu

Milan Sherman, Portland State University, P.O. Box 751, Portland, OR, milan3@pdx.edu

Abstract: Context personalization refers to the idea of adapting learning activities based on students' interests and experiences. While new learning technologies make such innovations feasible, little research supports whether and how context personalization may mediate important learner outcomes, especially in mathematics. Here, we present results of a experimental

though a problem is personalized to a general topic that interests the student

Results and Discussion

The output from the regression model of performance in Unit 6 is shown in Table 2. Personalization increased performance when students were solving problem parts with hard KCs (odds = 1.5228, $p < .001$) and easy KCs (odds = $1.5228 \cdot .9368 = 1.4266$, $p < .001$). The effect of personalization on medium KCs did not quite reach significance (odds = $1.5228 \cdot .7689 = 1.1709$, $p = 0.0601$). P

Several trends are apparent from Table 3 that provide insight into how personalization may support learning. First, personalization was not particularly helpful when the problem's topic was already relevant to students' lives and interests – like paying for their cell phone or getting paid at work. In these cases, the original problem could

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