IIM > Vol.2 No.9, September 2010

OPEN ACCESS

Simulation of Learners' Behaviors Based on the Modified Cellular Automata Model

PDF (Size:888KB) PP. 563-568 DOI: 10.4236/iim.2010.29065

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ABSTRACT

This study develops a computational model for simulation of behaviors of learners under the influence of motivation and engagement environment based on Cellular Automata (CA). It investigates the changing patterns of learners' behaviors when motivation and engagement environment are assigned with different values respectively. The simulation process indicates that the internal factor, which is the motivation in this paper, plays a key role in changing learners' behaviors under certain circumstance and the engagement environment also significantly influences learner's perception. The results obtained also show good agreement with the phenomenon generally being observed in practice.

KEYWORDS

Motivation, Engagement, Cellular Automata, Simulation, Learner Behaviors

Cite this paper

Z. Liang, H. Liu, C. Zhang and S. Yang, "Simulation of Learners' Behaviors Based on the Modified Cellular Automata Model," *Intelligent Information Management*, Vol. 2 No. 9, 2010, pp. 563-568. doi: 10.4236/iim.2010.29065.

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