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Article

Studying Affective Tutoring Systems for Mathematical Concepts

Journal of Educational Technology Systems
2019, Vol. 48(1) 14–50
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DOI: 10.1177/0047239519859857
journals.sagepub.com/home/ets



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Abstract

Students face difficulties in learning mathematical processes. As a result, they have negative emotions toward mathematics. The use of technology is employed to change the student's attitude toward mathematics. Some methods utilize intelligent tutoring systems to recognize student's emotional state and adapt the learning process accordingly. These systems, known as affective tutoring systems (ATSs), sense the emotional state of a student and then intelligently attempt to suggest appropriate strategies that can guide the learning process and ultimately shift the negative attitude of students toward mathematical learning. This article presents a survey of ATSs, which teach mathematic content, and tries to find common elements among them. It examines the kind and the number of student's emotions that can be recognized and the strategies and methods that these ATSs use to recognize student's emotional state. There are findings that agree with other studies about the recognized emotions and the methods that are used.

Keywords

intelligence tutoring systems, emotional learning processes, affective tutoring systems, mathematical training, emotions

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