

An Artificial Intelligence Case Based Approach to Motivational Students Assessment in (e)-learning Environments

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ABSTRACT

In the last decades effective teaching and learning and e-learning environments have been performed in order to construct courses jointly with the collaboration with Industry and High-Level Educational Institutions. On another way there are several terminologies that attempt to specify the best teaching and learning methods applied to engineering, from problem-based learning, project-based learning, work-based learning, team-learning, self-direct learning for example. However motivational studies and motivational scales typically discard uncertainty characteristic in for quantitatively evaluating the different dimensions on student's motivational assessment in (e)-learning environments. This paper presents a computerized framework grounded on Artificial Intelligence techniques, namely the Case

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Based Reasoning approach for problem solving, complemented with a Knowledge Representation and Reasoning method that considers unknown, incomplete or even self-contradictory data or knowledge in the motivational student's assessment.

CCS Concepts

- Applied computing → Education → E-learning
- Applied computing → Education → Distance learning
- Computing Methodologies → Artificial Intelligence → Knowledge Representation and Reasoning
- Computing Methodologies → Machine Learning → Instance-based Learning
- Theory of computation → Logic → Logic Programming

Keywords

(e)-Learning Environments; Students Motivational Assessment; Artificial Intelligence; Logic Programming; Knowledge Representation and Reasoning; Case Based Reasoning; Decision Support Systems.