

Abstract

E-learning poses a challenge in a pedagogical perspective such as finding ways on how to motivate the students to learn in spite of the absence of a human instructor. Many researchers in the field have proposed and implemented various mechanisms to improve the learning process such as individualization and personalization. The main objective is to maximize learning by dynamically selecting the closest teaching operation in order to achieve the learning goals. In this paper, a revolutionary technique has been proposed and implemented to perform individualization and personalization using reversed roulette wheel selection algorithm that runs at $O(n)$. The technique is simpler to implement and is algorithmically less expensive compared to other evolutionary algorithms since it collects the dynamic real time performance such as examinations, reviews and study matrices. Results show that the implemented system is capable of recommending new learning sequences that lessens time of study based on their prior knowledge and real performance matrix.