**ABSTRACT**

E-learning is a knowledge management concept where content creators have to arrange a set of learning resources, to present them in a clear and comprehensive way to the learners. In this paper, we formulate a new approach for obtaining better learning paths for different learners groups as a constraint satisfaction problem (CSP) in which meta-data and competencies are used to define the relationships between the learning objects (LOs), where the course materials are used to formulate LOs sequence. The main aim of this paper is to obtain a dynamic learning path for the considered CSP problem by using the [swarm intelligence](https://www.sciencedirect.com/topics/mathematics/swarm-intelligence) technique, which is a sub-set of the artificial intelligence technique. Further, the proposed model is tested in a simulated environment, which gives an optimized LO sequencing. The simulation results reveal that the artificial ants gives solution to the proposed problem in an optimized way. More precisely, suitable learning path can be obtained by applying ant colony optimization (ACO) technique. From the obtained results it is concluded that the proposed model supports the e-learning portal administrator in getting benefits in terms of less processing time and minimal sequencing cost.