ABSTRACT

The intelligent tutoring systems (ITS) is the most recent alternative advancement to human tutors in the teaching and learning processes in today's educational environments that started over the past three decades. The main goal of an ITS is to help students to achieve maximum learning gain and improve their skills acquisition in a particular domain. For an intelligent tutoring system to be very effective in accomplishing these tasks, the system must be equipped with an explicit representation of the domain knowledge that is the subject of the learning activity (Domain model). But the task of acquiring and designing an effective domain knowledge representation is always challenging and difficult that has been the main concern of so many research projects in the fields of ITS and other artificial intelligence (AI) domains.

**Keyword:** Ontology; Domain knowledge; Artificial intelligence; Domain concepts; Intelligent tutoring systems (ITS)