

# An Ontological Framework of Semantic Learner Profile in an E-Learning System

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## **Abstract**

The success of E-Learning system depends on the retrieval of relevant learning contents of learner. The best method to acquire learner needs is to construct an efficient learner profile which has to comply with the Semantic Web. Semantic Web relies heavily on formal ontologies to structure data. The proposed work suggests an approach to construct an efficient ontology based semantic learner profile by achieving the following objectives: First step is to collect static data using questionnaire and dynamic data using web log files. Second step is to preprocess weblog files to retrieve learner interest using semantic representation of WordNet and to retrieve learning style using decision tree classifier with significant rules. Third step is to construct an ontology using the retrieved data and to update ontology automatically using semantic similarity with WordNet. Finally an efficient fuzzy semantic retrieval is obtained using fuzzy linguistic variable which improves information retrieval and filtering.