



## E-LEARNING MOBILE APPLICATION FOR ARABIC LEARNERS

Eng, Abdelghani Karkar  
Qatar University  
QATAR  
[a.karkar@qu.edu.qa](mailto:a.karkar@qu.edu.qa)

Prof. Dr. Jihad Mohamad Alja'am  
Qatar University  
QATAR  
[jaam@qu.edu.qa](mailto:jaam@qu.edu.qa)

Prof. Dr. Mohamad Eid  
Nyu Abu Dhabi  
ABU DHABI  
[mohamad.eid@nyu.edu](mailto:mohamad.eid@nyu.edu)

Prof. Dr. Andrei Sleptchenko  
Qatar University  
QATAR  
[andrei.sleptchenko@qu.edu.qa](mailto:andrei.sleptchenko@qu.edu.qa)

### Abstract

Digital devices may bring people modern aspect of learning environment. Due to the huge amount of obtainable applications, learners can use them on their mobile devices for entertainment, social network communication, exchanging multimedia, and learning. We present in this paper an educational mobile system that provides explanatory details about terms in Arabic stories characterized by semi-impulsive generated multimedia and generates semantic questions about them. In order to augment the text with these supplementary details, different processing phases have been accomplished which involve: the extraction from expanded educational ontology, word-to-word relationships, supplementary annotation, and querying search engines. The generation of semantic questions depends substantially on the results of semantic queries and reasoning techniques bounded by contrastive semantic rules. The fundamental target of our proposed work is to develop a mobile-based Arabic learning tool that adopt Bloom's Taxonomy for education, including comprehension, analysis, evaluation, knowledge, etc.

**Key Words:** Mobile Learning; Arabic Natural Language Processing; Ontology; Multimedia; Engineering Education.