

**ABSTRACT:** Semantic descriptions of knowledge acquisition (KA) tools and resources enable machine reasoning about KA systems and can be used to automate the discovery and composition of KA services, thereby increasing interoperability among systems and reducing system design and maintenance costs. Whilst there are a few general-purpose ontologies available that could be combined for describing knowledge acquisition, albeit at an inadequate abstraction level, there is as yet no KA ontology based on Semantic Web technologies available. In this paper, we present OAK, a well-founded, modular, extensible and multimedia-aware ontology of knowledge acquisition which extends existing foundational and core Semantic Web ontologies. We start by using a KA tool development scenario to illustrate the complexity of the problem, and identify a number of requirements for OAK. After we present the ontology in detail, we evaluate it with respect to the identified requirements.