International Journal of Engineering & Technology, 7 (4.15) (2018) 80-86

International Journal of Engineering & Technology

Website: www.sciencepubco.com/index.php/IJET

Research paper

A Systematic Review on Semantic-based Ontology for Quranic Knowledge

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Abstract

The Holy Quran ontology models are gaining popularity among researchers due to people's demands in understanding this divine book. Due to this, there are many studies and research have been conducted in this area to facilitate people's understanding of the Quran. The Quran knowledge is represented conforming to an ontology within a system framework. This also includes various concepts that are interrelated with the others. From the literature, however, the existing Quranic ontology models do not cover all concepts in the Quran, which limit them to domains such as place nouns, themes, pronouns, antonyms and Islamic knowledge in the Quran. Thus, this research aims to identify relevant research works from various electronic data sources using systematic literature review (SLR) method to provide a comprehensive review of this area. This paper presents a systematic review of the literature related to the existing ontology models, where it leads to disseminating the correct knowledge of the Quran using semantic technologies.

Keywords: *Ontology; Quran; Semantic; Systematic Review.*

1. Introduction

Ontology is a knowledge representation of a collection of facts and concepts about certain domain and describes how those concepts interrelated with each other. It plays an important role in semantic web, information extraction, artificial intelligence, natural language processing, and knowledge management etc. [1]. It is relevant for knowledge-based systems as it can capture the knowledge, process and depict the interrelations of the domains and concepts in a particular ontology model. Currently, there are many artificial intelligence models of the Quran incorporating ontology to explore its divine knowledge such as [2-5]. These intelligent systems were developed to answer questions regarding underlying knowledge in the Quran. Quran is comprised of Arabic scripts, complex structure and lexicons that convey implicit meanings using different contexts. Its verses and words have ambiguous interpretations despite the same structure of the word because Arabic words could have varied meanings only with slight changes of diacritics. For example, 'الجنة'represents two distinct words: 'الجَنَّة' means paradise, and 'الجِنَّة' means ghosts [6]. Researchers have proposed different types of approaches and parameters in developing and evaluating the Quran ontology models in terms of their performances and efficiency. Recently, studies such as [7-8] have been broadened to other fields involving Arabic vocabulary. The semantic-based approach has been applied in many ontology implementations within Quranic domains. This method has been proven as effective compared to keyword search. For example, in [9-11] implemented semantic search techniques which is the retrieved results match with a user's query that are related to certain concepts and synonym-sets that return all synonym results that match with the query words. However, current research is limited to a particular concept and domains resulting in challenges in capturing and representing the knowledge. This can limit the accuracy of search results and in the case where the ontologies are not aligned to each other, inaccurate and incomprehensible resources for the ontologies may result [2, 12].

In this paper, the existing ontology models of Quran are studied and presented using Systematic Literature Review (SLR) inspired from [13]. This has been applied in various fields such as software engineering [14], information system [15] and networking [16]. SLR is a protocol that identify, evaluate and interpret all available research relevant to the research questions, or the topic of interests. SLR is undertaken to review and identify any gaps and limitations in the current studies.

The objectives of this systematic review are; 1) to review the existing implementation of ontologies of the Quran knowledge, 2) to examine the existing models used to develop the ontology and 3) to underline any limitations for proposing future studies in Quran ontology. The rest of this paper is organized as follows: the outline and details of research method are presented in Section 2. Section 3 explains the results from this study followed by the limitation of existing studies in Section 4. Finally, conclusion and future research directions are discussed in Section 5.

2. Methodology

This systematic literature review (SLR) is presented using formal systematic literature review process by [13]. This process describes a protocol on generalizing the vast number of articles by answering the research questions. This unbiased search is one

factor that differentiates systematic review from traditional review as they must comply with the research questions and criteria. This section describes the outline of the review process as illustrated in Figure 1. These stages are proceeding sequentially to retrieve potential primary articles. The first step involves a process of formulating research questions. Next, the search process is conducted which includes sources of selection and search keywords. This process aims to identify the existing works and potentially relevant studies in this area. The next step is inclusion-exclusion criteria in assenting relevant primary articles. Then, the information is extracted and organized based on quality assessment conditions.

Fig. 1: SLR Process.

The following sub-sections define the methods used in conducting this review. The relevant primary sources are summarized and presented in the next section.

2.1. Research Questions

In order to evaluate the current ontology implementation in Quran and evaluation parameters used in the previous research, this study investigates the research questions as shown in Table 1. The first research question studies the current trend of implementing ontology in representing semantic Quran knowledge (RQ1). To answer RQ1, a number of published journals and conference proceedings dated from 2012 to 2017 were reviewed. The main idea and research problems in the studies were analysed. Two sub-questions were derived to answer RQ2, which is analysing methods and models proposed by researchers. RQ3 leads to the answer to the limitation of the existing research on semantic Quran ontological models. This provides a new direction in designing an ontology model.

Table 1: Research Questions of SLR

No.	Research Questions
RQ1	What is the existing research and studies on implementation of semantic-based Quran ontology model?
RQ2	How ontology models are reviewed in the previous works? RQ2.1: What are the methods used to develop the semantic-based Quran ontology model? RQ2.2: What are the techniques and metrics used to evaluate the ontology?
RQ3	What are the limitations of the existing research on semantic-based Quran ontology model?

2.2. Search Process

This process is conducted to identify any potential relevant studies regarding the existing literatures, based on the research questions above. The selection process undertakes a thorough four-step as shown in Figure 2. The articles were retrieved from five digital databases as listed below:

- Google Scholar
- IEEE Xplore Digital Library
- Research Gate
- Science Direct
- Springer Link

Fig. 2: Search Process of Systematic Review

Based on Figure 2, the activities involved for search process start with the articles' search, which is carried out using keywords search in the article title and abstract. Primary keywords "Ontology" and "Semantic" and "Quran" or secondary keyword "Ontology" and "meaning" and "Arabic" were used in the search criteria in the digital databases selected. These keywords define the titles and contents of the articles which resulting in retrieving articles related to semantic Quran ontology models. The secondary keywords consider alternative search strings to obtain other relevant articles. Title and abstracts of the retrieved articles were downloaded. Then, thorough reading and critical review were carried out to select relevant articles relating to Quranic ontology models. Lastly, primary articles were sorted out following the inclusion and exclusion criteria tabulated in Table 2 and Table 3 in the next subsection.

2.3. Inclusion-Exclusion Criteria

The primary articles were selected based on the inclusion and exclusion criteria. The criteria are outlined manually to attain the requirements of primary articles referring to research questions. These criteria are vital in approving primary articles and ruling out any irrelevant papers. This can be done by thorough reading and scrutinizing the criteria. Table 2 presents the inclusion criteria that assent the primary articles' selection. Meanwhile, papers that fulfill the exclusion criteria in Table 3 were excluded from this study.

Table 2: Inclusion Criteria

No.	Inclusion Criteria
IC1	The ontology of semantic-based Quran knowledge must be the major topic of discussions in the articles.
IC2	Articles do present and outline the methods and parameters used in constructing the ontology.

Table 3: Exclusion Criteria

No.	Exclusion Criteria
EC1	Articles' contents not related to the ontology of semantic context of Quran knowledge.
EC2	Articles do not outline the methods and parameters used to represent the ontology models.
EC3	Duplicate articles from the same researches and topics.
EC4	Publications that provide ambiguous report, e.g. only abstract presented.

2.4. Data Extraction and Quality Assessment

The quality of assessment conditions (Table 4) was formulated to analyse whether the articles' context of the studies is complete and can be practically used. This is to ensure the quality of the selected primary articles. The conditions tabulated below are inspired by [14, 16] in assessing the quality of their SLR reviews. These conditions weight the importance of each study resulting the quality differences in terms of points. Furthermore, they can minimize any invalid and ambiguous articles. The points used for the answers are Yes = 1, Partially = 0.5 and No = 0 point. Articles that comply with the conditions and weight 3.5 points and above will be signified as primary articles. From a thorough assessment, the primary articles have been finalised and tabulated in Table 5.

3. Results and Discussion

The selected primary articles were discussed and summarised below, followed by the results according to its respective research questions.

3.1. Primary Articles Selection

First, preliminary search is conducted using the defined keywords from the digital databases and a sum of 138 articles, journals, theses, reports and proceedings has been collected to extract useful

information such as title, year of publication, authors and methods proposed. The inclusion and exclusion criteria, sort out the articles and return 58 articles. Hence, only 58 primary articles were selected for this review as they were relevant and comply with the criteria stated.

Table 4: Quality Assessment Conditions.

No.	Conditions	Answer
QA1	The objectives of the research are clearly stated.	Yes/Partially/No
QA2	The approach used to construct the ontology is described and discussed methodically.	Yes/Partially/No
QA3	The results presented are thoroughly explained and evaluated.	Yes/Partially/No
QA4	The information required can be extracted directly from the study.	Yes/Partially/No

Table 5: Primary articles

Title	Points
The Noble Quran Arabic Ontology: Domain Ontological Model and Evaluation of Human and Social Relations	4
Semantic Hadith: Leveraging Linked Data Opportunities for Islamic Knowledge	4
Arabic Quranic Search Tool Based on Ontology	3.5
Developing an Ontology of Concepts in the Qur'an	3.5
Domain-specific Ontology-based Approach for Arabic Question Answering	3.5
Cross-Domain Semantic Web Model for Understanding Multilingual Natural Language Queries: English/Arabic Health/Food Domain Use Case	3.5
Applying Ontological Modeling on Quranic Nature Domain	3.5
Al-Bayan: A Knowledge-based System for Arabic Answer Selection	4
Semantically Answering Questions from the Holy Quran	4
Semantic Arabic Information Retrieval Framework	4
Ontology-based Model for Arabic Lexicons: An Application of the Place Nouns in the Holy Quran	3.5
QuranAnalysis: A Semantic Search and Intelligence System for the Quran	4
Semantic Quran	4
Ontology-based Approach for Retrieving Knowledge in Al-Quran	4
ISWSE: Islamic Semantic Web Search Engine	4
Arabic Anaphora Resolution: Corpus of the Holy Quran Annotated with Anaphoric Information	4
Creation and Populating of an Islamic Knowledge Ontology using Extraction Pattern Bootstrapping	3.5
Using Association Rules for Ontology Extraction from a Quran Corpus	3.5
Object-based Knowledge Representation of Female Related Issues from the Holy Quran	4
Azhary: An Arabic Lexical Ontology	4
Automated Semantic Query Formulation for Quranic Verse Translation Retrieval	4
Using Ontology for Associating Web Multimedia Resources with the Holy Quran	3.5
Rules and Natural Language Pattern in Extracting Quranic Knowledge	4
An Ontology Engineering Approach with a Focus on Human Centered Design	3.5
Quranic Verse Extraction based on Concepts using OWL-DL ontology	3.5
Ontological Knowledge Management System of Islamic Concepts	3.5
An Experience of Developing Quran Ontology with Contextual Information Support	3.5
Al-Quran Themes Classification using Ontology	3.5
Quranic-based Concepts: Verse Relations Extraction using Manchester OWL Syntax	3.5
QurAna: Corpus of the Quran Annotated with Pronominal Anaphora	4

RQ1: What is the existing research and studies on implementation of the Quran ontology model?

The existing studies have been analysed based on the quantities of articles published throughout the years. The search was restricted to publications between year 2012 to 2017 as illustrated in Figure 3. A lot of researches have been conducted in leveraging ontological modelling using semantic web technologies in the field of Holy Quran. As shown in Figure 3, the demand of Islamic knowledge of the Holy Quran is progressively increase from 2012 until 2016. In the semantic field, research works are mostly aimed to analyse the lexical forms of Holy Quran manuscript, concepts, domains and themes. Based on the quality assessment conditions in Table 4, only 30 articles with the score of 3.5 and above were used to answer the following research questions RQ2.

RQ2: How ontology models are reviewed in the previous works?

The sub questions RQ2.1 and RQ2.2 answer the methods and parameters used to analyse and construct the ontology of Quranic modelling.

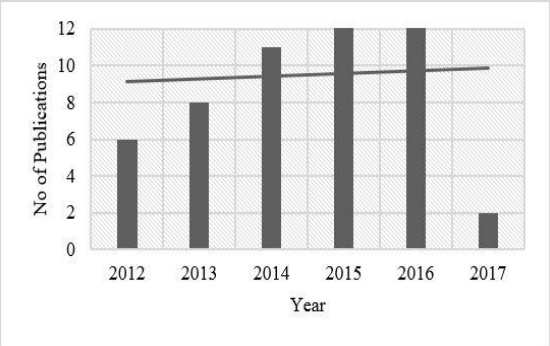

Fig. 3: Number of Publications throughout 2012 to 2017

RQ2.1: What are the methods used to develop the semantic-based Quran ontology model?

In the study conducted by [13], the ontology models were analysed and synthesised descriptively based on the techniques, types of ontology, datasets and domain coverage. The data synthesis extracted the information about the related studies and tabulate them to highlight the similarities and differences between the study outcomes [13]. Table 6 presents the types of techniques used in constructing Holy Quran ontology models. This paper analyses and categorises the methods into two groups, which are Quran concepts/domains and Islamic knowledge.

Table 6: Ontology Model's Methods.

Methods	Ontology Model
Quran concepts/domains	[9, 17-34]
Islamic knowledge	[6-8]

RQ2.2: What are the techniques and metrics used to evaluate the ontology?

This paper focuses on categorising the evaluation techniques from [35]. According to [35], there are four types of ontology evaluation techniques, which is, gold standard, application-based, user-based and data driven. Previous researchers have applied these techniques in their studies to evaluate and measure the proposed ontology. The techniques for evaluation are presented in Table 7.

Table 7: Evaluation Techniques.

Techniques	Ontology Model
Gold standard	[3, 8, 25]
Application-based	[5, 7, 36, 25, 33]
User-based	[5, 8-9, 17-19, 21-23], [26-29]
Data-driven	[17, 21, 24, 34]

For the first technique, gold standard means to compare the proposed ontology against the other established ontology (IEs). For example, in [3] contrasted their proposed Azhary, an Arabic Language lexical ontology against Arabic WordNet (AWN) in terms of words semantic meanings and relations. Meanwhile, in [25] compared his QuranAnalysis (QA) with the other twelve ontologies according to the nine list criteria proposed in [37]. Application-based is measured by the functionality of the ontology onto an actual software program or a use-case scenario (application). Both [7, 33] implemented their ontologies using Protégé to represent the knowledge and manage the class hierarchy and relationships. In [25] integrated his QA Ontology into QA website to add more functionalities and smartness, and in [30] used PROMPT system to compare the results obtained.

Apart from that, there is also a user-based evaluation where human experts assess on how well the ontology meets a set of predefined criteria, standards and requirements. The ontology models were evaluated manually by experts and query run. SPARQL, OWL as well as DL languages is used to determine the correct query and check whether all retrieved classes, sub-classes, individuals and relations are accurate and valid throughout the process. Some sample tests are executed using the query and the results are shown in the output. Other than that, experts from that field also evaluate the proposed model by comparing the results and conducted a manual check [18-19, 26]. The performance, correctness and effectiveness of the ontology models are measured manually using the metrics of Precision (P), Recall (R) and F-measure. (P) refers to the correctness of retrieval answers that are relevant to the query, while (R) refers to the relevant answers that are successfully retrieved. Numerous researchers applied these measurements in their studies to evaluate their ontology models [5, 8-9, 24, 27, 32, 34]. These measurements are calculated in percentages, where high percentage indicates the correctness of the retrieved answers. On the other hand, some algorithms are used as evaluation metrics. For example, in [21] applied the Apriori algorithm to mine the association rules representing the relations between classes of concepts in the Quran ontology. Other than that, in [17] proposed QurAna, which a large corpus is created from the Quran that annotated the verses with pronominal anaphora (personal pronouns) with their antecedents. They measured the verses distance using the Vector Space Model (VSM). The distance between query terms and document is measured where the cosine of the angle (verse distance) between them is compared. Then, each term is weighted using term frequency–inverse document frequency (tf-idf) metric inspired from [38]. The resulting weight is normalised and the distance is calculated to measure the similarity between them. The similarity value lies between zero (0) and one (1), where 0 indicates no similarity, and 1 indicates identical matching. Last but not least, data-driven can be performed by comparing the ontology against a corpus based on the ontology coverage and the domain of the ontology models. In [17] compared their QurAna ontology against the other seven available corpora annotated with anaphora resolution. In [21, 34] evaluated their ontologies to a collection of Quran chapters that related to the stories of the prophets. They used a specific corpus characterised by the specialisation of its domain (stories of the prophets). In [24] evaluated the capabilities of their ontology models by comparing against nine Quran search engines in terms of certain keywords such as Education, Christian, Heritage, Boat, Hell, Miracle of Jesus and Flood. These research works on Quran ontology models are summarised in Table 8 comprising all details, including methods, models research focus and evaluation techniques. This table depicts the outline of RQ1 and RQ2's answers.

Table 8: Research works on Quran Ontology

Title	Author	Year	Method	Model	Research Focus	Evaluation
The Noble Quran Arabic Ontology: Domain Ontological Model and Evaluation of Human and Social Relations	Tashtoush, Yahya M., Majd R. Al-Soud, Reema M. AbuJazoh, and Manar Al-Frehat	2017	Quran concepts/ domains	Noble Quran ontological model	Human and Social relations in Quran	User-based
Developing an Ontology of Concepts in the Qur'an	Ahmed, Rasha, and E. S. Atwell	2016	Quran concepts/ domains	Quran ontology model	Abstract concepts from various sources	Application-based, User-based
Domain-specific Ontology-based Approach for Arabic Question Answering	Sheker, Mustefa, Saidah Saad, Rehab Abood, and Mohanaad Shakir	2016	Islamic knowledge	Automatic Question Answering System	Islamic fatwas (prayer)	Gold standard, User-based
Applying Ontological Modeling on Quranic Nature Domain	Sadi, ABM Shamsuzzaman, Towfique Anam, Mohamed Abdirazak, Abdillahi Hasan Adnan, Sazid Zaman Khan, Mohamed Mahmudur Rahman, and Ghassan Samara	2016	Quran concepts/ domains	Ontological model	Nature concepts in Quran	User-based
Al-Bayan: A Knowledge-based System for Arabic Answer Selection	Mohamed, Reham, Maha Ragab, Heba Abdelnasser, Nagwa M. El-Makky, and Marwan Torki	2015	Islamic knowledge	Al-Bayan	Islamic sciences	Application-based, User-based
Semantically Answering Questions from the Holy Quran	Shmeisania, Hashem, Samir Tartirb, Ammar Al-Na'ssaanc, and Moath Najid	2015	Quran concepts/ domains	Quranic Ontology	Quranic concepts related to Prophet Muhammad	Data-driven
Ontology-based model for Arabic lexicons: An application of the Place Nouns	Alromima, Waseem, Ibrahim F. Moawad, Rania Elgohary, and Mostafa Aref	2015	Quran concepts/ domains	Place Nouns Ontology	Place nouns in Quran	User-based

Title	Author	Year	Method	Model	Research Focus	Evaluation
in the Holy Quran						
QuranAnalysis: A Semantic Search and Intelligence System for the Quran	Ouda, Karim	2015	Quran concepts/ domains	QuranAnalysis	All chapters in Quran	Gold standard
Semantic Quran	Sherif, Mohamed Ahmed, and Axel-Cyrille Ngonga Ngomo	2015	Quran concepts/ domains	Semantic Quran Ontology	All chapters in Quran	User-based
ISWSE: Islamic Semantic Web Search Engine	Ishkewy, Hossam, and Hany Harb	2015	Quran concepts/ domains	Islamic Ontology	Islamic concepts	Data-driven
Arabic Anaphora Resolution: Corpus of the Holy Quran Annotated with Anaphoric Information	Seddik, Khadiga M., Ali Farghaly, and Aly Aly Fahmy	2015	Quran concepts/ domains	Holy Quran scripts annotated with anaphoric information	Personal pronouns in Quran	User-based
Creation and Populating of an Islamic Knowledge Ontology using Extraction Pattern Bootstrapping	Ghanem, Mohamed, Abdelaaziz Mouloudi, and Mohammed Mourchid	2015	Islamic knowledge	OntoShari'a	Hadith books' concepts (Sahih Muslim and Sahih Al-Bukhari)	Application-based
Using Association Rules for Ontology Extraction from a Quran Corpus	Harrag, Fouzi, Abdullah Al-Nasser, Abdullah Al-Musnad, Rayan Al-Shaya, and Abdulmalik Al-Salman	2014	Quran concepts/ domains	Quran ontology	Prophets stories in Quran	Data-driven, User-based
Object-based Knowledge Representation of Female Related Issues from the Holy Quran	Ku-Mahamud, Ku Ruhana, Aniza Mohamed Din, Noraziah Che Pa, Faudziah Ahmad, Wan Hussain Wan Ishak, Farzana Kabir Ahmad, and Roshidi Din	2014	Quran concepts/ domains	Object-based knowledge representation using Semantic Network and Conceptual Graph	Female related issues in Quran	User-based
Azhary: An Arabic Lexical Ontology	Ishkewy, Hossam, Hany Harb, and Hassan Farahat	2014	Arabic lexicon	Azhary ontology	Arabic language	Gold standard, Application-based
Using Ontology for Associating Web Multimedia Resources with the Holy Quran	Abdelhamid, Yasser, Mostafa Mahmoud, and Tarek M. El-Sakka	2013	Quran concepts/ domains	Holy Quran (HQ) Ontology	Multimedia-enabled Holy Quran (HQ) browser	Application-based
Rules and Natural Language Pattern in Extracting Quranic Knowledge	Saad, Saidah, S. Azman Mohd Noah, Naomie Salim, and Hakim Zainal	2013	Quran concepts/ domains	Quranic Ontology	Knowledge of Quranic English translation texts	User-based
Quranic Verse Extraction based on Concepts using OWL-DL ontology	Yauri, Aliyu Rufai, Rabiah Abdul Kadir, Azreen Azman, and Masrah Azrifah Azmi Murad	2013	Quran concepts/ domains	Quran ontology model	Concepts in Quran	User-based
Ontological Knowledge Management System of Islamic Concepts	Ali, Hayat	2013	Quran concepts/domains	Ontological model	Semantic relationship between different verses	Application-based, User-based
An Experience of Developing Quran Ontology with Contextual Information Support	Iqbal, Rizwan, Aida Mustapha, and Zulkifli Mohd. Yusoff	2013	Quran concepts/ domains	Quran ontology	*Juz 'Amma*	User-based
Al-Quran Themes Classification using Ontology	Ta'a, Azman, Syuhada Zainal Abidin, Mohd Syazwan Abdullah, Mat Ali, Abdul Bashah, and Muhammad Ahmad	2012	Quran concepts/ domains	Al-Quran Ontology Model	Themes in Quran (*Iman* and *Akhlaq*)	User-based
Quranic-based Concepts: Verse Relations Extraction using Manchester OWL Syntax	Yauri, Aliyu Rufai, Rabiah Abdul Kadir, Azreen Azman, and Masrah Azrifah Azmi Murad	2012	Quran concepts/ domains	Quran ontology model	Concepts in Quran	User-based
QurAna: Corpus of the Quran Annotated with Pronominal Anaphora	Sharaf, Abdul-Baquee M., and Eric Atwell	2012	Quran concepts/ domains	Ontological model	Pronominal anaphora (pronouns) in Quran	User-based, Data-driven

4. Research Limitation

The research limitation will be answered by RQ3.

RQ3: What are the limitations of the existing research on semantic-based Quran ontology model?

This is a big challenge as arrangements of Quran verses are not according to the topics. Current studies limit itself to a particular domain or up to certain specific verses. The search areas are limited and constricted to a particular domain or concepts only rather than the whole Quran itself. The ontology will be unaligned between verses with the same concepts, which will decrease the accuracy of the results (verses) and false information retrieved.

- Information retrieval
  The limitations of the existing Quran ontology models are retrieving all requested information from the queries. In the Quran, several words may have different syntax, located in different locations and chapters, but they carry the same meaning and related semantically. For example, الليل (night) and المسأ (evening) are related as they are part of الزمن (time). Moreover, irrelevant verses are retrieved from the input query. This will cause misunderstandings of the meaning behind the Quran verses. The main causes are these semantic search tools do not cover all concepts in the Holy Quran leading to

inaccurate results [2]. This can affect the accuracies of the retrieved results.

- Quran knowledge representation
  Most Muslims are ignorant of the deeper meanings in the Quran and do not understand the text correctly, in spite of learning the sounds of the verses [39].

In this Quran computation field, a new model that represents the Quran contextual knowledge that can bring an accurate and valid contextual information retrieval with covering the whole scopes, domains and relationships within the Quran is required.

5. Conclusion

A systematic literature review was conducted in this paper to analyse the issues on the development of semantic-based ontology model in the Holy Quran. This paper has explained the process of selecting and reviewing literature according to Kitchenham style. SLR helps researchers in analysing and focusing on selected primary studies from a broad field. This can be carried out by ensuring the papers comply with the research questions, criteria and quality conditions. The literature review covered the techniques and parameters used to evaluate the Quran ontology models. This paper observed the methodology and evaluation parameters in constructing the ontology model. From the studies conducted, knowledge in the Quran has been explored and summarized by various researchers. However, they are inadequate coverage of Quran domains and concepts within the ontology models. This can limit the accuracy of the results retrieved and lead to people misunderstandings. Furthermore, the key features of this area and the research issues have been discussed. Lastly, further investigations needs to be done to review the issues counterparts. Thus, a Quran ontology model that covers all domains that highlight the whole contextual Quran knowledge would give people a clearer understanding of this divine book. Semantic technology also can provide deeper meaning and context of the knowledge by interrelating the concepts in the Quran.

Acknowledgement

This work was supported by the Universiti Sains Islam Malaysia (USIM) and Ministry of Higher Education, Malaysia (USIM/TRGS02_PROJEK01/ISI/59/50416).

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