

HALALSPHERE

International Islamic University Malaysia - INHART

Revisiting contemporary halal research from the perspective of the *tawhidic* paradigmYumi Zuhani Has-Yun Hashim^{a*}, Anis Najiha Ahmad^a, Nurhusna Samsudin^a, Nurhidayu Al-saari^a, Maizatul Atiqah Yusof^a, Ibrahim Shogar^b and Dinie Kaiyisah Mohamad Tauhid^a^aInternational Institute for Halal Research and Training (INHART), International Islamic University Malaysia, 53100 Kuala Lumpur, Malaysia.^bDepartment of Computational and Theoretical Science, Kulliyah of Science, International Islamic University Malaysia, Kuantan, Pahang, Malaysia.*Corresponding author: E-mail address: yumi@iium.edu.myReceived:17/3/2025
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Abstract

The concept of halal, established over 1,400 years ago in the *Qur'an*, has only recently developed into a commercial industry within the global Islamic economy. This evolution has placed the halal industry within a capitalist ecosystem, which has helped it expand into sectors beyond food but has also raised concerns about potential economic exploitation that may dilute its faith-based values. Recognising this, the study investigates whether halal research aligns with the *tawhidic* paradigm—rooted in the unity of God and Islamic values—through an analysis of halal-related publications. Using thematic analysis, the study categorises publications within halal science and education, guided by the framework of the Islamization of knowledge. Data sourced from Scopus and Google Scholar is classified into five categories: un-Islamic, conventional studies, conventional halal studies, relevantization, and Islamization. Findings reveal that most articles fall within the "relevantization" category, indicating applications of Islamic teachings in modern issues. However, the degree of relevantization may still be minimal, portraying only limited *tawhidic* elements. This suggests that current halal research does not consistently safeguard halal as a divinely ordained system. Focusing on articles aligned with 'conventional halal studies' could help emphasise the *tawhidic* elements in halal-related work. By fostering more faith-based halal research, the study proposes that the industry can better retain its spiritual integrity, highlighting halal's unique religious and ethical dimensions. This approach is essential for preserving halal's sanctity as a faith-bound system while addressing contemporary challenges in science and education.

Keywords:

Tawhidic,
Islamization of
knowledge,
Relevantization,
Halal, Integration

1. Introduction

The demand for halal products has increased significantly over the past decades, with Muslim spending rising from US\$1.62 trillion in 2012 to US\$2.29 trillion in 2022. (Dinar Standard, 2023). Halal has been inherently present in all aspects of life as commanded by *Allah* SWT in the *Qur'an*, revealed more than 1,400 years ago but its industry only emerged as market reality and commercially lucrative sector of the Islamic economy in the last few decades (Kamali, 2021), implying that the industry was 'created in' or 'born into' a capitalist ecosystem. While this industrialised ecosystem seems to support the expansion of halal and its industry into various sectors (in addition to food as a readily visible sector for halal), there is a growing concern that it is riding on religious platform (intentionally or unintentionally) to gain economic benefits and regrettably losing the *roh* (soul, spirit) and the faith-bound values. The mere adoption and adaptation of the halal industry to the capitalistic ecosystem has resulted in unfavourable consequences, such as the halal market monopoly by only a particular segment of the population. For instance, data from the Malaysian Islamic Development Department

(Jabatan Kemajuan Islam Malaysia, JAKIM) showed that more than 60% of halal product manufacturers in Malaysia were multinational companies owned by non-Muslims (The Malay Mail, 2019).

Delving into the above crisis, the root cause could be the unclear current halal body of knowledge (tainted with secular and capitalist concepts rather than abiding by the *tawhidic* paradigm). In contrast, if the intention and processes revolving around the development of halal products and services are based on the *tawhidic* foundation, it could solve the crisis of halal being trapped in the secularistic and capitalistic paradigm. As such, a 'true' halal body of knowledge based on a *tawhidic* paradigm is important to uphold the religious aspects of halal from being manipulated.

1.1 *Tawhidic* paradigm and the Islamization of knowledge

A *tawhidic* paradigm has been described as having the components of faith, theory, and practice, which include ethics and behaviour related to the absolute oneness of *Allah* SWT (Mohd Khalid *et al.*, 2021).

In a speech given by almarhum Tan Sri Distinguished Professor Dr Mohd Kamal Hassan in 2009 (and published in 2010), the *tauhidic* paradigm was defined to encapsulate the expected character and way of life that one should lead to attain a harmonious life here in the world and the hereafter, where, according to this definition.

"Tawhid - the uncompromising Islamic monotheism based upon the absolute oneness of *Allah* as the Most Compassionate, Most Merciful, Omnipresent Master of the universe and the Living Ruler of all mankind, who has laid down the Divine Path for (a) the proper growth and well-being of human beings as His servants (*ibad al Rahman*), vicegerents (*khulafa fi al ard*), believers (*al-mu'minin*), and (b) the best form of social grouping, social solidarity and transnational community with the attribute of the best community brought forth (by *Allah* (SWT) for mankind (*khaira ummatin ukhrijat lil-nas*) (*Qur'an* 3:110) and the justly balanced community to be a witness to all people (*ummatan wasatan li takunshuhada 'ala al-nas* (*Qur'an* 2:143)."

(Hassan, 2010)

Islamization of knowledge (or, interchangeably, Islamization of human knowledge) ensures that knowledge is created and disseminated in the *tauhidic* paradigm. The concept of 'Islamization of knowledge' was first introduced in the late 1970s by Syed Muhammad Naquib al-Attas, a contemporary Malaysian philosopher (Al-Attas, 1993), in response to secularisation. The concept of Islamization of knowledge was further built upon by other eminent scholars like Ismail Raji al-Faruqi and Syed Hossien Nasr using varied approaches. However, the core values remain the same, i.e. the *tauhidic* paradigm (Ahsan et al, 2013).

Within the overarching effort of Islamization of knowledge, integration and relevantization have been described as critical processes (CENTRIS, 2013). Islamization is the liberation of human beings from various old traditions that bind them, such as magical traditions, mythology and so on, so that human beings are free and do not depend on the occult, mythology, animism, superstition and free from secularism (al-Attas, 2018). Integration is a means to realise the Islamization of knowledge by unifying religious and non-religious sciences (Abu Sulayman, 1997). Meanwhile, relevantization is referred to as reforming (*islah*), renewing (*tajdid*) and constant improvement in areas of religious sciences to maintain their relevance to the contemporary issues of humanity, environment and civilisation (Hassan, 2009).

1.2 Research and knowledge creation in the halal industry

Research, development, and innovation (R&D&I) are fundamental in the knowledge creation and academic pursuits. Ideally, the R&D&I outputs could and should be translated into real applications and solutions in the industry (Papalamproulou-Tsiridou, 2021). In the halal industry, research contributes to expanding knowledge and discovering new findings, which can assist in fulfilling the needs and providing solutions to halal industry stakeholders. Ahmad et al., (2011) argued that halal-related studies and knowledge should also not be overlooked to

ensure the sustainability of the halal industry (Aziz et al., 2015). In Malaysia, for instance, the halal industry has been reported to receive support from academia in terms of research and development, as well as nurturing human resources (Zain et al., 2017). However, other studies reported imbalances between research in halal areas and the growth of the halal industry, with the former not being able to catch up with the latter. (Mohamed Ismail et al., 2020).

In a recent development, the Malaysian National Industry Masterplan (NIMP) identified research as one of the strategies in the mission to advance the economic complexity towards a competitive industry, including the halal sector (MITI, 2023). This is a response to the challenge identified where R&D activities in the halal industry mainly focus on strengthening halal compliance, while a minimal focus is given on innovation (MITI, 2023). It is also a positive development considering that the action plans related to research as elements or strategies were not explicitly mentioned in the Malaysian Halal Industry Master Plan (HIMP) 2030 (which was launched prior to NIMP) (Ministry of Economic Affairs), despite R&D&I being the backbone of a progressive halal ecosystem.

To this end, it can be seen that although there are pockets of research looking at halal industry from the perspective of studies on halal industry sectors such as work by Putera et al. (2023), Mohd Zaki et al. (2023) and Hashim et al. (2022) as well as numerous other bibliometric work on specific halal sub-sectors, work on identifying its translational impact to the real world is very scarce while work on examining the paradigm of which the halal research is being carried out is far more scarce or non-existence.

Reiterating the concern that the halal industry, including its R&D&I, is being created in the secular and capitalist worldview, this study aims to classify halal-related publications based on the *tauhidic* paradigm guided by the concept of Islamization of knowledge. The insights revealed through the process would enable a better understanding of the current knowledge of halal science and education. This would help answer whether the current halal-related research is being carried out within the framework of the *tauhidic* paradigm, thus safeguarding the sanctity of halal as a divine system bestowed on humankind.

2. Methodology

This study used thematic analysis, a qualitative research method, to identify patterns and themes within a dataset to uncover the underlying meaning, gain insights into halal science and halal education body of knowledge, and integrate *tauhidic* concepts and modern knowledge. The data set used in this study was systematically obtained from Scopus and Google Scholar in the scope of halal science and halal education. The definition of 'halal science' varies, but it generally refers to applying conventional science and technology (S&T) in areas related to halal. Some researchers emphasise that S&T in this context should be approached with an awareness of religious principles, given that halal is a faith-based system ordained by *Allah* SWT (Hashim et al., 2024).

Meanwhile, in this work, a general operational definition of halal education refers to halal knowledge and curriculum at any educational level. In a work reported by Jais (2014) a decade ago, the author argued that despite its critical role in

developing talent and human capital for the halal industry, the area of halal education, particularly in curriculum and syllabus design, remains underexplored. Research in halal education and curriculum and halal studies has been very scarce. The Malaysian Qualification Agency (MQA) Programme Standard on Halal Studies has been categorised into two main halal fields: management and applied Science (MQA, 2022). However, no specific reference to halal education or curriculum exists except for the recommended body of knowledge. One recent bibliometric work reported that halal knowledge and education clusters were centred on perceived knowledge and consumer behaviour studies, not the halal curriculum or syllabus (Hashim *et al.*, 2024).

Before generating the initial codes, which are labels or tags assigned to data segments that represent important concepts or ideas, researchers worked to understand the context and content of the data to capture meaningful units of information within the dataset. To guide the process, this study adopted a framework on Islamisation of Knowledge and Islamic Knowledge Management developed by the Centre for Islamisation (CENTRIS), International Islamic University Malaysia. The CENTRIS framework was aimed at classifying academic publication outputs (theses and books) based on three categories: conventional study, relevantization and Islamization. In this work, the dataset was already in the scope of halal, so there was a need to expand the categories, as shown in Table 1.

Guided by the framework, the similarity, patterns and connections between the data set were identified. Each article was reviewed, and justification was made about the identified categories. Related codes were then grouped to form potential themes, which are the overarching concepts or patterns that emerge from the data and provide a higher level of interpretation. Each theme was further defined, and the finalised themes were systematically applied to the entire dataset. The themes were validated by examining the supporting evidence from the dataset to extract meaningful insights and interpretations. The key patterns, variations, or connections were identified within and across themes. Being an iterative process, the steps outlined above were revisited and refined throughout the thematic analysis.

3. Results and discussion

The section below describes the classification of halal-related publications based on the *tawhidic* paradigm guided by the concept of Islamization of knowledge. The discussions are based on the identified categories of un-Islamic, conventional studies, conventional halal studies, relevantization and Islamization.

3.1 Categories of halal research

Table 2 shows categories of halal research based on the expanded framework of Islamisation of Human Knowledge and Islamic Knowledge Management. It was observed that most articles from Google Scholar were categorised in the relevantization category. In contrast, for Scopus, almost an even number of articles were found to be in conventional halal studies and relevantization. No articles were

categorised as un-Islamic. This meets the requirement as the corpus of data was obtained using the keywords halal science and/or halal education.

3.2 Conventional studies

Based on the framework in Table 1, the studies were classified into the 'conventional studies' category when they are based on sensual experience (observational), scientific procedures, processes of logic and rely upon observable objects derived via empirical methods of enquiry without any reference to religion or being critical of religion. No articles from Google Scholar were found to fit these criteria. Meanwhile, most articles from Scopus were from the natural sciences in gelatin, collagen and species detection using analytical and molecular techniques. For instance, Nurilmala *et al.* (2023) studied the toxicity of gelatin capsule materials from Pangasius skin (*Pangasius sp.*) on mice (*Mus musculus*). This fish gelatin is a halal gelatin that can be an alternative to porcine-based gelatin. However, the halal issue was not the study's main highlight, as the prohibition of porcine-based gelatin was mentioned only once. Another study reported the development of the mitochondrial 12S rRNA gene for identifying dog and rat in beef using multiplex PCR (Cahyadi *et al.*, 2019). The technique helps detect adulteration of halal beef. However, this study did not discuss its potential use in halal.

3.3 Conventional halal studies

In this work, the 'conventional halal studies' criteria were set to extend to the 'conventional studies' but with a more elaborate reference to religion/Islam/halal as described in Table 1. Compared to 67 Scopus articles classified into this category, only three articles from Google Scholar fit this category.

The earliest article in this category was from 2010. The article 'Gap Analysis of MS1500: 2009 Implementation: Malaysia Industry' by Daud *et al.* (2011) discussed the implementation of halal guidelines in food products. Most articles were from science and technology, including authentication using various techniques and developing alternative halal ingredients for food, pharmaceuticals, and cosmetic products.

No articles discussed the academic body of knowledge, philosophy, pedagogy, or curriculum of halal studies as a discipline. This scope of work has been reported to be less explored despite the enhancement of the halal ecosystem, the growth of the halal industry (Hashim *et al.*, 2024 and Jais, 2014) and the effort in developing halal talent, as evident in the MS2691: 2021 Halal Profession – General Requirements (Department of Standards Malaysia, 2021). This may explain the absence of a specific academic definition and authoritative reference on halal education and curriculum. This also calls for a more scholarly work to establish a framework to provide a clear direction for this area of research.

Nevertheless, in science and technology, the reference to religion/Islam/halal is apparent in these articles. This is

Table 1: Framework to classify the dataset (adopted and adapted from CENTRIS framework of Islamisation of Human Knowledge and Islamic Knowledge Management (CENTRIS, n.d))

Unislamic (UI)	Conventional Studies (CS)	Conventional Halal Studies (CHS)	Relevantisation (R)	Islamisation (I)
Emphasises individual freedom of choice Setting norms/models/standards /which contradict the Qur'an, the Sunnah and the practice of the early Muslim society	Studies based upon: <ul style="list-style-type: none"> Sensual experience (observational) Scientific procedure Processes of logic Relies upon observable objects derived via empirical methods of enquiry No reference to religion or critical of religion	May include the elements below, but referred to religion/Islam/halal Studies based upon: <ul style="list-style-type: none"> Sensual experience (observational) Scientific procedure Processes of logic Relies upon observable objects derived via empirical methods of enquiry 	Studies on: <ul style="list-style-type: none"> Islam as a religion and civilisation The historical and current forms of Islam Understanding of Islam and society '<i>Ulm al-din</i> (religious sciences) pursued by the ulama Application of Islamic teachings in contemporary times. 	Studies with <ul style="list-style-type: none"> Critical evaluation of Western knowledge Incorporation of revelation into different fields of research Reflection on Islamic objectives and values Setting norms/models/standards /which are derived from the <i>Qur'an</i>, the <i>Sunnah</i> and the practice of the early Muslim society
<ul style="list-style-type: none"> LGBT+, Animal rights against Islamic practices, Human rights against Islamic values 	<ul style="list-style-type: none"> Purchase intention of conventional product 	<ul style="list-style-type: none"> Alternative halal ingredient Authentication 	<ul style="list-style-type: none"> Application of Islam in contemporary times (Purchase intention of Islamic Marketing; Muslim friendly tourism, Islamic banking) 	<ul style="list-style-type: none"> Concept and Principle – e.g, friendly tourism, Islamic Marketing, Islamic banking) Development of guidelines/fatwa for halal vaccine, cultured meat and emerging products and service trends

Table 2: Categories of halal research based on the expanded framework of Islamisation of Human Knowledge and Islamic Knowledge Management (Islamization of knowledge)

	Google Scholar	Scopus
Unislamic (UI)	0	0
Conventional Studies (CS)	0	9
Conventional Halal Studies (CHS)	3	67
Relevantisation (R)	84	60
Islamisation (I)	6	21
TOTAL	93	157

evident in the earlier articles as well as the later ones. For instance, in 2012, when halal laboratories were in their early establishment, Rohman and Che Man reported an analytical technique to detect pork derivatives (Rohman & Che Man, 2012). The halal authentication techniques have evolved over the years. More advanced techniques were studied, such as using LC-Orbitrap HRMS untargeted metabolomics combined with chemometrics to analyse the presence of pork in beef sausages (Windarsih, 2023). Both research works clearly stated that halal authentication was the objective of the studies.

3.4 Relevantization

The 'relevantization' category had the most significant publications, with 144 articles across Google Scholar and Scopus. Most articles were studies from the social sciences and humanities, meeting at least one of these criteria: i) understanding of Islamic society or ii) application of Islamic teachings in contemporary times. Within the social science and humanities areas, the articles discussed, among other topics, topics of halal knowledge, halal awareness, perceived behaviour, and purchase intention.

It was observed that the context of halal knowledge in these articles differed from halal education, where the latter referred to a more structured syllabus of halal curriculum at any educational level. At this juncture, it can be argued that the effort to make relevantization optimal can be made if it is infused in a structured curriculum (Maulana, 2014). The dearth of halal education/curriculum-related research seen in this study could signal a sub-par relevantization effort in the halal-related areas.

Although most of the articles in this category were from a social science background, the earliest article (2009) was a scientific study by researchers at the Halal Science Centre, Chulalongkorn University, Bangkok, Thailand. The group reported the development of clay liquid detergent to clean *najis* (Angkatavanich *et al.*, 2009). This article meets the relevantization category based on its focus on applying Islamic rituals in contemporary times using a modern approach.

The application of Islam in contemporary times can also be seen in social science-related research. For instance, Aziz and Najmudin (2023) studied the influence of halal knowledge on the intention of tourists to visit a *Shari'ah* tourism spot in Indonesia. In recent years, *Shari'ah*-compliant tourism (also referred to as Islamic tourism, halal tourism and Muslim-friendly tourism) has been flourishing. It has been reported that halal travel in 2022 reached US\$133 billion, up 17% from US\$114 billion in 2021, and is forecasted to reach US\$174 billion in 2027 at a CAGR of 5.5% between 2022 and 2027 (Dinar Standard, 2023). This upward trend is also seen in the research work related to this area, as Suban *et al.* (2021) described in their bibliometric work.

A recent scientific study investigated how religious affiliation and knowledge of halal practices affect the decision to take the COVID-19 vaccination (Nurrahmi *et al.*, 2023). This work showed that Islamic tenets are being applied in responding to the recent pandemic, a global-scale contemporary issue that has not occurred before. As such, this work fulfils the criteria of the relevantization category.

From the perspective of Islamization of Knowledge, the works (halal-related research) analysed in this study are inherently faith-bound such that they fit the relevantization elements as described in the IIUM Policies and Guidelines on Islamisation (CENTRIS, 2013)

"...of *taghyir* (individual or societal change), *islah* (reform and improvement, *tajdid* (renewal, revitalization, restoration and reconstruction), *ihya'* (revival, regeneration, revivification), *takamul* (integration of practical knowledge or skills from other disciplines, including those from human, social or natural sciences) and *ijtihad* (exercise of independent legal reasoning in facing new issues not covered by the revealed texts) to bring about the necessary changes in Muslim and human societies."

"...the terms *taghyir*, *islah*, *tajdid*, *ihya'*, *takamul* and *ijtihad* or contextualization are more appropriate than Islamisation or Islamicisation. However, the English word preferred to be used in

the Kulliyyah to represent all the five Arabic terms put together is "relevantisation..."

(note: the description was referred to the case of Islamic Revealed Knowledge departments at the Kulliyyah of Islamic Revealed Knowledge and Human Sciences at the International Islamic University Malaysia (IIUM))

3.5 Islamization

There were 27 articles in the Islamization category. The earliest article was published in 2012, in which the author discussed the Islamic principle of *Istihalah* (transformation or conversion of material that involves changes in its composition and properties) process and knowledge and how it can be set as a norm in the Muslim community (Aris *et al.*, 2012).

Studies on halal science concepts from the *Qur'an* dominated the Google Scholar source. This could be a response from researchers to refute some views on the significance of halal science as an academic discipline or whether halal science is even a valid term. Meanwhile, articles in Scopus were observed to include setting the standard/norms using *Shari'ah* and *Qur'anic* teaching in areas of halal industry in general, and in more specific fields like medical tourism, and scenarios like multiculturalism. Other articles described incorporating revelation as an approach in various fields, such as environmental protection and reflection on Islamic objectives and values, such as finding a spouse.

3.6 The current landscape, challenges and strategies

Based on the findings presented above, it was observed that around 58% of the articles are classified in the relevantization category and 28% in the conventional halal studies category. This suggests that topics of interest in the halal research are i) contemporary, addressing the current needs of industry and society, and ii) being referred to Islamic legacy to some extent. However, the body of knowledge in these articles may not be substantially aligned with the *tawhidic* paradigm. A push towards articles that fulfilled the 'conventional halal studies' may help elevate the *tawhidic* elements in the halal-related work. In this category, the aim to propel halal as a faith-based system is explicit.

Several challenges can be drawn from the data obtained. Since halal is a faith-based system, research on halal should be *Shari'ah*-abiding. However, since halal covers a wide range of topics (from science and technology to social science and humanities and religious studies), references to *Shari'ah* aspects could be sub-par. This is especially true for science and technology studies, where the topics are commonly discussed using a modern scientific approach. This is mainly due to the conventional structure of the body of knowledge adopted in journal publications, where the sciences and religion are separated. To be publishable in a high-impact journal (often owned by international publishers), the research article must meet the specific scope or focus of the journal, which renders religious matters secondary or not mentioned at all. The race for the fulfilment of key performance index (KPI) of publication in reputable journals could also be a factor that hinders the integration of sciences and religion. This calls for a higher-

Table 3: Articles categorised under 'Conventional studies'

Title	Justification	Reference
Google scholar Not available		
Scopus		
Rhodopseudomonas palustris Collagen-like Recombinant Protein Purification using an Aqueous Two-Phase System	Scientific procedure for collagen, halal was not explicitly mentioned	Awang <i>et al.</i> (2023)
Toxicity Test of Gelatin Capsule Materials from Pangasius Skin (Pangasius sp.) on Mice (Mus musculus)	Scientific procedure to test the toxicity of gelatin, and alternative ingredients to use other than porcine. Mentioned the prohibition to Muslims one time (not the main objective of this paper)	Nurilmala <i>et al.</i> (2023)
Exploring Gastronomic Tourism Experiences through Online Platforms: Evidence from Thai Local Communities	Explore tourists' local gastronomic experiences and their impacts on local communities	Kattiyapornpong <i>et al.</i> (2022)
Pangasius Fish Skin and Swim Bladder as Gelatin Sources for Hard Capsule Material	Scientific procedures were used to make gelatin from fish skin, and alternative ingredients were used to make gelatine other than lard, but they did not mention Islamic thought/halal	Nurilmala <i>et al.</i> (2021)
Reducing Musculoskeletal Complaints and Fatigue through Participatory Ergonomics on the table and Chair Design of Participants of Halal Assurance System (HAS) Training in IPPOM MUI of Banten, Indonesia	Sensual experience, duration, and condition in the HAS class did not relate to the Islamic approach	Susihono <i>et al.</i> (2020)
Comparing the Effect of Heat on Tropomyosin Isoforms Patterns from Water Buffalo and Wild Boar Meat by Two-Dimensional Gel Electrophoresis	Scientific procedure differentiates water buffalo and wild boar following the application of heat; no reference to religion	Junoh <i>et al.</i> (2019)
Development of Mitochondrial 12S rRNA Gene for Identification of Dog and Rat in Beef using Multiplex PCR	A scientific procedure to detect species of rat and dog in beef by simplex and multiplex PCR assays	Cahyadi <i>et al.</i> (2019)
Development of Antipeptide Enzyme-linked Immunosorbent Assay for Determination of Gelatin in Confectionery Products	Scientific procedure: analysis of types of gelatin. One time only mention about halal (conclusion, line 10)	Tukiran <i>et al.</i> (2016)
Determination of Porcine Gelatin in Edible Bird's Nest by Competitive Indirect ELISA based on Anti-peptide Polyclonal Antibody	Scientific procedure to evaluate the efficiency of polyclonal antibodies (pAbs) against peptide immunogens in detecting porcine gelatin in EBN by competitive indirect ELISA	Tukiran <i>et al.</i> (2016)

Table 4: Articles categorised under 'Conventional halal studies'. Only articles from 2020-present are shown.

Title	Justification	Reference
Google scholar		
A Comparison of High School Students' Knowledge and Satisfaction Regarding Basic Science and Halal Science Literacy Training Course	It may include conventional elements such as science and technology, but refer to halal/religion; it may also include observing students' knowledge	Mhamad <i>et al.</i> (2022)
Urgensi Halal Knowledge dan Kasus Faktual Kontaminasi Produk Haram di Masyarakat	It may include conventional elements such as contamination, but refers to halal/religion	Nusran (2021)
Zebrafish Nutrition: Promoting Fish Health and Welfare of the Animal Model in Halal Science Research	Scientific procedure; May include conventional elements but refers to religion (halal science)	Idris <i>et al.</i> (2022)
Scopus		
A Bibliometric Analysis of Applied Technology Development of Halal Food Sciences	May include conventional elements (bibliometric) but made reference to religion/Islam/halal	Hastuti <i>et al.</i> (2023)
Analysis of Pork in Beef Sausages using LC-Orbitrap HRMS Untargeted Metabolomics Combined with Chemometrics for Halal Authentication Study	Scientific procedure on halal authentication of adulterated meat	Windarsih <i>et al.</i> (2023)
Response Surface Methodology (RSM) for Optimization of Gelatin Extraction from Pangasius Fish Skin and Its Utilization for Hard Capsules	Alternative ingredients for gelatin	Nurilmala <i>et al.</i> (2023)
Multiplex Platforms in Biosensor-based Analytical Approaches: Opportunities and Challenges for the Speciation of Animal Species in the Food Chain	May include conventional elements (authentication techniques) but refer to Islamic approaches	Sultana <i>et al.</i> (2023)
CRISPR/Cas12a-mediated Enzymatic Recombinase Amplification for Rapid Visual Quantitative Authentication of Halal Food	Scientific procedure; detection platform for the authentication of halal food	Wang <i>et al.</i> (2023)
Duplex Droplet Digital PCR (ddPCR) for Simultaneous Quantification of Bovine and Porcine Gelatin in Capsules	Scientific procedure; Concerns about health and religious beliefs have been raised regarding the intake of gelatin	Mahamad <i>et al.</i> (2023)
Potential Technical Parameters for the Authentication of Carrion Meat (Tiren): A Review	Scientific procedure; authentication of meat	Purwanto <i>et al.</i> (2023)
Analysis of Lard in Palm Oil using Long-Wave Near-Infrared (LW-NIR) Spectroscopy and Gas Chromatography-Mass Spectroscopy (GC-MS)	Scientific procedure: adulteration of palm oil with lard. Mentioned about halal/ haram	Hussain <i>et al.</i> (2023)

The Competitiveness, Challenges and Opportunities to Accommodate the Halal Tourism Market: A Sharia-law Tourism Destination Perspectives	It relies upon an observable objective and explores the stakeholders' perception of Halal tourism	Hariani <i>et al.</i> (2023)
Halal Authentication using Lateral Flow Devices for Detection of Pork Adulteration in Meat Products: A Review	Scientific procedure on halal authentication of adulterated meat	Raja Nhari <i>et al.</i> (2023)
Halal Research Streams: A Systematic and Bibliometric Review	Bibliometric review on research streams regarding Halal literature: Consumer Behaviour, Islamic Branding, Islamic Marketing, Halal Supply Chain, Halal Certification, and Halal Tourism	Putera and Rakhel (2023)
Detection of Porcine DNA in Korean Processed Foods by Real-Time PCR	Scientific procedures for detecting pork DNA refer to Islamic thought	Kim <i>et al.</i> (2023)
Some Insights Concerning the Halal Tourism Research. A Bibliometric Analysis	An analysis of halal tourism	Riduan and Syamsurrijal (2022)
Determination of Alcohols in Various Fermented Food Matrices using Gas Chromatography-Flame Ionisation Detector for Halal Certification	Scientific procedure: analysis of alcohol in fermented food	Kim <i>et al.</i> (2022)
Volatile Compounds, Texture, and Colour Characterisation of Meatballs made from Beef, Rat, Wild Boar, and Their Mixtures	Scientific procedure to characterise the volatile compounds, texture, and colour profile of meatballs made from beef, rat, wild boar, and their combinations. Concern about the Muslim majority in Indonesia	Amalia <i>et al.</i> (2022)
Profiling of Volatile Compounds in Beef, Rat, and Wild Boar Meat using SPME-GC/ MS [Pemprofilan Sebatian Meruap dalam Daging Lembu, Tikus dan Babi Hutan menggunakan SPME-GC/MS]	Scientific procedure; identified the volatile compound markers, reference to Islamic approaches (halal/non-halal)	Amalia <i>et al.</i> (2022)
Halal-Tayyiban and Sustainable Development Goals: A SWOT Analysis	Discuss and uncover the various strengths, weaknesses, opportunities, and threats in incorporating the concept of tayyiban in the halal food industry	Idris <i>et al.</i> (2022)
Fish Skin as a Biomaterial for Halal Collagen and Gelatin	Scientific procedure for making fish skin as a halal gelatin	Nurilmala <i>et al.</i> (2022)
Modern on-site Tool for Monitoring Contamination of Halal Meat with Products from Five Non-Halal Animals using Multiplex Polymerase Chain Reaction Coupled with DNA Strip	Scientific procedure to detect meat contamination	Denyingyhot <i>et al.</i> (2022)
A New Tool for Quality Control to Monitor Contamination of Six Non-Halal Meats in the Food Industry by Multiplex High-Resolution Melting Analysis (HRMA)	Scientific procedure, new tool to detect the non-Halal ingredients, valuable tools for HAS in halal production	Denyingyhot <i>et al.</i> (2021)

Online Traceability of Halal Food Information to Protect Muslim Consumers in the Cyber Era	May include conventional elements (traceability) but referred to religion/Islam/halal (halal food information)	Azizah (2021)
Volatilomics for Halal and Non-Halal Meatball Authentication using Solid-Phase Microextraction–Gas Chromatography–Mass Spectrometry	Scientific procedure to detect the adulteration of beef meatballs with wild boar, mentioned regarding Muslim concerns	Pranata <i>et al.</i> (2021)
Good Idea but Not Here! A Pilot Study of Swedish Tourism Stakeholders' Perceptions of Halal Tourism	Observation to get the perception of halal tourism in Sweden among representatives of tourism stakeholders	Abbasian (2021)
Implementation of Halal Product Assurance in the Pharmaceutical Sector in Indonesia	Implementation of halal certification for the pharmaceutical business	Luthviati Jenvitchuwong (2021)
Real-Time PCR to Identify Porcine DNA in Prosthodontic Materials	Scientific procedure: to detect halal materials contaminated by haram materials (porcine)	Hutasoit <i>et al.</i> (2021)
Application of Spectroscopic and Chromatographic Methods for the Analysis of Non-Halal Meats in Food Products	Scientific procedure to analyse non-halal meat in food products	Rohman and Fadzillah (2021)
Heuristic Evaluation on Mobile Halal Detection Application	Alternative for halal: evaluating the halal MUI application using a heuristic evaluation approach	Ridwan <i>et al.</i> (2020)
Review on Analytical Methods for Analysis of Porcine Gelatine in Food and Pharmaceutical Products for Halal Authentication	Scientific procedure: halal authentication on gelatin	Rohman <i>et al.</i> (2020)
Detection of Porcine Pepsin in Model Cheese using Polyclonal Antibody-based ELISA	Scientific procedure; established the ELISA used for the detection of porcine pepsin in a model cheese	Raja Nhari <i>et al.</i> (2020)
Potential Authentication of Various Meat-based Products using a Simple and Efficient DNA Extraction Method	Scientific procedure implemented to assist the halal authentication of various meat-based products	Khairil Mokhtar <i>et al.</i> (2020)
Potentiality of Analytical Approaches to Determine Gelatin Authenticity in Food Systems: A Review	May include conventional elements (authenticity of gelatin) but referred to religion (halal, Islamic approaches)	Ishaq <i>et al.</i> (2020)
Detecting Adulteration in Halal Foods	Scientific procedure on adulteration	Farag (2020)

Reducing Musculoskeletal Complaints and Fatigue through Participatory Ergonomics on the table and Chair Design of Participants of Halal Assurance System (HAS) Training in IPPOM MUI of Banten, Indonesia	Sensual experience, duration, and condition in the HAS class did not relate to Islamic approaches.	Susihono <i>et al.</i> (2020)
A Literature Review and Classification of the Studies on “Halal” in Islamic Business Journals (2010-2018)	A literature review of findings that focus on halal in Islamic business	Baran (2020)
Postmarket Laboratory Surveillance for Forbidden Substances in Halal-Certified Foods in Thailand	May include conventional elements (lab surveillance), but referred to religion/Islam/halal (halal certified food)	Mahama <i>et al.</i> (2020)

Table 5: Articles categorised under ‘Relevantization’. Only articles from 2020-present are shown.

Title	Justification	Reference
Google scholar		
An Intention to Visit Sharia Tourism in Banten: An Effect of Halal Knowledge and Awareness	Application of Islamic teachings in contemporary times, influence of halal knowledge on the intention of tourists to visit <i>Shari'ah</i> tourism spots	Aziz and Najmudin (2023)
Determinant of Employment and Employability Attributes in the Halal Sector for Halal Science Graduates in Brunei Darussalam	Application of Islamic teachings (halal science) in contemporary times	Raffi <i>et al.</i> (2023)
Effects of Religiosity, Halal Knowledge and Halal Certification on the Intention of Muslims to use the Halal Vaccine during the Covid-19 Pandemic	Application of Islamic teachings (halal knowledge and halal certification) in contemporary times, related to intention	Sudarsono <i>et al.</i> (2023)
Exploring Halal Awareness and Halal Knowledge of the Information and Communications Technologies Industry in Bangladesh	Application of Islamic teachings (halal knowledge and halal awareness) in contemporary times	Islam <i>et al.</i> (2023)
Exploring the Impact of Religiosity, Halal Knowledge, and Subjective Norms on Purchase Intention of Japanese Food in Indonesia	Application of Islamic teachings (halal knowledge) in contemporary times, related to intention	Ardiyanto <i>et al.</i> (2023)
Halal Food Knowledge among Non-Muslim Food-Services Workers in General Santos City, Philippines	Understanding Islam (halal) and society	Jasa (2023)
Integrating Halal Knowledge towards Selection of Islamic Banking Product: The Perspective of Muslim Students	Application of Islamic teachings (Islamic banking) in contemporary times, to examine the halal knowledge and financial information disclosure in the selection of Islamic banking products among Muslim students	Rosli <i>et al.</i> (2023)

Makanan Halal pada Street Food: Halal Awareness, Halal Knowledge, Label Halal terhadap Keputusan Pembelian (Studi Kasus Di Kota Malang)	Application of Islamic teachings (halal awareness, halal knowledge on purchasing decisions for halal food at street food) in contemporary times	Sayyaf (2023)
Pemberdayaan Kewirausahaan Berbasis Halal Knowledge pada Pekerja Migran Indonesia (PMI) di Taiwan	Application of Islamic teachings (halal knowledge) in contemporary times	Juwitaningtyas <i>et al.</i> (2023)
Pengaruh Brand Awareness, Daya Tarik Iklan, Perceived Quality, dan Knowledge Halal Product terhadap Keputusan Pembelian Geprek Kak Rose di Kota Malang	Application of Islamic teachings (halal products) in contemporary times, related to knowledge and intention	Maghfira <i>et al.</i> (2023)
Pengaruh Halal Knowledge, Islamic Religiosity, dan Halal Lifestyle terhadap Penilaian Produk Kosmetik dan Keputusan Pembelian Kosmetik Halal	Application of Islamic teachings (halal cosmetic and skincare) in contemporary times, related to knowledge and intention	Risdiyani (2023)
Pengaruh Halal Lifestyle, Halal Knowledge, dan Promosi terhadap Keputusan Pembelian Brand Merk Rabbani	Application of Islamic teachings (halal knowledge and halal lifestyle) in contemporary times	Anisa (2023)
Relationship between Individual Characteristics and Information Exposed with Halal Food Knowledge for Business Actors	Application of Islamic teachings (halal food products) in contemporary times, related to intention	Sylvia and Putri (2023)
The Effects of Religiosity and Halal Knowledge on the Decision to use the Covid-19 Vaccine	To investigate how religious affiliation and knowledge of halal practices affect the decision to take the COVID-19 vaccination	Nurrahmi <i>et al.</i> (2023)
The Hidden Influence of Halal Labeling and Product Knowledge on Customer Loyalty: Unraveling Religiosity's Role among Cosmetic Consumers in Malang	Application of Islamic teachings (halal cosmetics) in contemporary times, related to knowledge and intention	Akbar <i>et al.</i> (2023)
Pengaruh Religiusitas, Halal Knowledge, Halal Awareness, dan Sikap Konsumen terhadap Niat Beli Produk Skincare BLP Skin di Kota Surabaya	Application of Islamic teachings (halal skincare) in contemporary times, related to knowledge and intention	Balqis and Zulaikha (2023)
The Relationship between Halal Knowledge and Perception with the Attitude of Buying Halal Food in the Consumer Community in Jambi City	Application of Islamic teachings (halal knowledge) in contemporary times, related to intention	Triana <i>et al.</i> (2023)

The Relationship between Halal Status Knowledge and the Korean Food Products Purchasing Practices in DIY's Muslim Society	Application of Islamic teachings (halal knowledge) in contemporary times, related to intention	Widyaningrum (2023)
Do Knowledge, Perceived Usefulness of Halal Label and Religiosity Affect Attitude and Intention to Buy Halal-Labelled Detergent?	Application of Islamic teachings (halal labelled detergent) in contemporary times, customer purchasing intention	Rizkitysha and Hananto (2022)
Buying Intentions: Do Knowledge, Religiosity, and Halal Certification Matter?	Related to the intention of purchasing a product and knowledge	Hasim <i>et al.</i> (2022)
Enhanced Knowledge Sharing Adoption Model in the Halal Food Industry	Application of Islamic teachings (halal food products) in contemporary times, related to the implementation of knowledge	Samsi (2022)
Halal Food Producer as an Alternative Employment Job for Halal Science Graduates in Brunei Darussalam	Application of Islamic teachings in contemporary times, how halal science graduates could get themselves employed in the halal food sector	Deuraseh <i>et al.</i> (2022)
Hubungan Tingkat Pengetahuan terhadap Sikap dan Perilaku Mengenai Produk Farmasi Halal pada Apoteker di Apotek Kota Yogyakarta	Application of Islamic teachings (halal pharmaceutical) in contemporary times	Octavia (2022)
Keputusan Konsumen dalam Memilih Hotel Syariah: Ditinjau dari Halal Lifestyle, Muslim Friendly Facilities, dan Knowledge	Application of Islamic teachings (<i>Shari'ah</i> hotels) in contemporary times, related to knowledge and intention	Tyas and Supriyanto (2022)
Local Halal Cosmetic Products Purchase Intention: Knowledge, Religiosity, Attitude, and Islamic Advertising Factors	Application of Islamic teachings (halal cosmetics) in contemporary times, related to knowledge and intention	Najib <i>et al.</i> (2022)
Muslim Sellers' Knowledge of Halal Cosmetics Awareness: Regression Analysis Approach Muslim Sellers' Knowledge of Halal Cosmetics Awareness: Regression Analysis Approach	Application of Islamic teachings (halal cosmetics) in contemporary times, related to knowledge and intention	Jabar <i>et al.</i> (2022)
Pengaruh Halal Knowledge, Religiusitas, Sikap Konsumen Generasi Z terhadap Perilaku Konsumen Produk Kosmetik Halal dalam Negeri Studi Kuantitatif di Lingkungan Kota Tangerang	Application of Islamic teachings (halal cosmetic and skincare) in contemporary times, related to knowledge and intention	Kusuma and Kurniawati (2022)
Pengetahuan, Persepsi dan Perilaku Konsumer Mualaf di negeri Terengganu dalam Menggunakan Produk Makanan Halal	Application of Islamic teachings (halal food products) in contemporary times, related to intention	Awang and Izudin (2022)
Relationship between Knowledge and Religiosity with Attitudes towards Halal Food in Muslim Students	Application of Islamic teachings (halal food products) in contemporary times, related to intention	Kurniati (2022)

The Effect of Halal Awareness, Religiosity, Product Ingredients Knowledge, and Halal Certification on the Purchase Decision of Halal Fast Food	Application of Islamic teachings (halal knowledge) in contemporary times	Santosa and Rizaldy (2022)
The Effect of Halal Product Knowledge, Halal Awareness, Perceived Psychological Risk and Halal Product Attitude on Purchasing Intention	Application of Islamic teachings (halal products knowledge) in contemporary times	Öztürk (2022)
The Effect of Knowledge, Religiosity, and Halal Certification on Halal Traceability with Halal Awareness as an Intervening Variable (Case Study of Muslim Traders in Malang Traditional Market)	Application of Islamic teachings (halal traceability) in contemporary times	Pertiwi <i>et al.</i> (2022)
The Influence of Halal Knowledge and Labelling on Food Product Purchase Decisions	Application of Islamic teachings (halal knowledge) in contemporary times, related to intention	Febrilyantri (2022)
The Influence of Knowledge, Innovation Compatibility and Social Influence on the Adoption of Halal Cosmetics: An Empirical Evidence from Pakistan	Application of Islamic teachings (halal cosmetics) in contemporary times, related to knowledge and intention	Sohail <i>et al.</i> (2022)
The Intention of the Young Muslim Generation to Purchase Halal Cosmetics: Do Religiosity and Halal Knowledge Matter?	Application of Islamic teachings (halal cosmetics) in contemporary times, related to knowledge and intention	Riswandi <i>et al.</i> (2022)
The Potential Job Opportunities for Halal Science Graduates in the Education Sector in Negara Brunei Darussalam	Application of Islamic teachings (halal science) in contemporary times	Deuraseh <i>et al.</i> (2022)
The Relationship of Halal Awareness, Selection of Menu Variation and Nutrition Knowledge with Purchase Decisions: A Study on Chatime Consumers in Surabaya	Application of Islamic teachings (halal knowledge) in contemporary times, related to intention	Palupi and Putri (2022)
The Role of Millennial Knowledge in the Application of Halal Lifestyle	Application of Islamic teachings (halal knowledge and halal lifestyle) in contemporary times	Soehardi (2022)
Do Religiosity, Halal Knowledge, and Halal Certification Affect Muslim Students' Intention to Purchase Halal Packaged Food?	Application of Islamic teachings (halal packaged food) in contemporary times, related to knowledge and intention	Wirakurnia <i>et al.</i> (2021)
Effectiveness of Public Service Announcements on Halal Knowledge among Muslim Teenagers during the Time of Pandemic	Application of Islamic teachings (halal knowledge) in contemporary times	Rahim and Saperiz (2021)

Does Halal Science Meet the Criteria of an Academic Discipline?	This article discusses the application of Islamic teachings (halal science) in contemporary times, the definitions of halal science, the current use of the term, and its philosophy	Hashim <i>et al.</i> (2021)
The Role of Islamic Banking in the Development of Halal Science and Industry in Nigeria	Application of Islamic teachings (halal science and industry) in contemporary times	Bello and Jaiyeoba (2021)
Transferring Knowledge on Halal Awareness amongst the Orang Asli Community	Application of Islamic teachings (halal knowledge and halal lifestyle) in contemporary times	Othman and Jamaludin (2021)
Faktor Halal Awareness, Religiosity, dan Knowledge terhadap Consumer Decisions dan Implikasinya terhadap Consumer Loyalty	Application of Islamic teachings (halal knowledge and halal awareness) in contemporary times	Sartika and Motik (2021)
Impact of Knowledge, Religiosity, Awareness and Halal Logistics on Purchase Intention	Application of Islamic teachings (halal logistics) in contemporary times, related to knowledge and intention	Yaakub and Sham (2021)
Pengaruh Halal Knowledge, Islamic Religiosity dan Kualitas Produk terhadap Keputusan Pembelian Produk Wardah	Application of Islamic teachings (halal cosmetic and skincare) in contemporary times, related to knowledge and intention	Achmad and Fikriyah (2021)
The Influence of Product Knowledge, Religiosity, Halal Awareness of Purchasing Decisions on Halal Products with Attitude as a Mediation Variable	Application of Islamic teachings (halal products) in contemporary times, related to intention	Fauziah and Al Amin, (2021)
Consumer Knowledge toward Purchasing Halal Label Products in Selangor	Application of Islamic teachings (halal products) in contemporary times, customer purchasing intention	Latiff <i>et al.</i> (2020)
Do Religiosity and Knowledge Affect the Attitude and Intention to Use Halal Cosmetic Products? Evidence from Indonesia	Application of Islamic teachings (halal cosmetics) in contemporary times, related to knowledge and intention	Divianjella <i>et al.</i> (2020)
Factors Influencing Malaysians' Halal Knowledge in Purchasing Halal Pharmaceutical Products/Wan Nur Khaleda W. Hassan	Application of Islamic teachings (halal pharmaceutical) in contemporary times	Hassan (2020)
Halal Knowledge Integrity Model (HaKIM) in intensifying the integrity of the Halal industry	Application of Islamic teachings (halal industry) in contemporary times	Mohammad <i>et al.</i> (2020)
Halal Knowledge, Religiosity and Celebrity Worship in Determining Muslim Consumers' Purchase Intention on Halal Cosmetics: A Conceptual Model	Application of Islamic teachings (halal cosmetics) in contemporary times, related to knowledge and intention	Abd Malek (2020)

Meningkatkan Repurchase Intention Kosmetik Halal melalui Halal Knowledge dan Religiusitas Intrinsik dengan Halal Product Attitude sebagai Variable Intervening	Application of Islamic teachings (halal cosmetics) in contemporary times, related to knowledge and intention	Iliyyin (2020)
Pengaruh Islamic Religiosity dan Halal Knowledge terhadap Purchase Intention Kosmetik Halal Dimediasi oleh Attitude terhadap Produk Halal di Indonesia	Application of Islamic teachings (halal cosmetics) in contemporary times, related to knowledge and intention	Adriani (2020)
Peningkatan Purchase Intention melalui Brand Image Berbasis Halal Knowledge, Brand Knowledge dan Religiusitas pada Produk Indomie	Application of Islamic teachings (halal knowledge) in contemporary times	Widyatni (2020)
Relationship between Awareness, Knowledge, and Attitude of Behavioural Intention Towards Halal Jobs among Malaysian Muslim University Students	Application of Islamic teachings (halal jobs) in contemporary times, related to intention	Hashim et al (2020)
The Deeper of Consumer Knowledge towards Intention to Purchase Halal Food Products in Indonesia	Application of Islamic teachings (halal food products) in contemporary times, related to intention	Riptiono and Bangsa (2020)
The Effect of Consumer Psychology, Halal Knowledge and Religiosity on Halal Purchase Decisions in Indonesia	Application of Islamic teachings (halal knowledge) in contemporary times	Ernasari <i>et al.</i> (2020)
Scopus		
Islamic Financial Literacy and Islamic Banks Selection: An Exploratory Study using Multiple Correspondence Analysis on Banks' Small Business Customers	Application of Islam (Islamic financial literacy) in contemporary times	Al-Awlaqi and Aamer (2023)
Corporate Social Responsibility and Islamic Social Finance Impact on Banking Sustainability Post-COVID-19 Pandemic	Application of Islamic teachings in contemporary times; exploring Corporate Social Responsibility (CSR) and Islamic Social Finance activities in banks	Marzuki <i>et al.</i> (2023)
Transnational Halal Networks: INHART and the Islamic Cultural Economy in Malaysia and Beyond	The application of Islamic teachings in contemporary times, concern for piety among contemporary middle-class Muslims, has led to efforts to establish a halal ecosystem	Nisa (2023)
Charting Future Growth for Islamic Finance Talents in Malaysia: A Bibliometric Analysis on the Islamic Finance Domains and Future Research Gaps	Application of Islamic domains (<i>Shari'ah</i> -based, Islamic Finance, Islamic Economics, Islamic Accounting, Islamic Management and Halal Management) in contemporary times	Abd. Wahab <i>et al.</i> (2023)

The Influence of Halal Awareness, Halal Certificate, Subjective Norms, Perceived Behavioral Control, Attitude and Trust on Purchase Intention of Culinary Products among Muslim Costumers in Turkey	Understanding Islam and society; purchase of intention	Aslan (2023)
Between Awareness of Halal Food Products and Awareness of Halal-Certified Food Products	Application of Islamic teachings in contemporary times; difference between halal awareness in general and awareness of halal-certified products	Usman <i>et al.</i> (2023)
Empowerment of SME's Sustainability in Halal Cosmetics' Ecosystem by Diagnosing Growth Constraints	Application of Islamic teachings (halal cosmetics) in contemporary times; to identify and examine the growth constraints of the halal cosmetics ecosystem	Masood and Zaidi (2023)
An Expansion of the Technology Acceptance Model Applied to the Halal Tourism Sector	Application of Islamic teachings in contemporary times; technology acceptance model by incorporating the key constructs of halal knowledge	Berakon <i>et al.</i> (2023)
Designing and Assessing an Islamic Entrepreneurship Education Model for Islamic Higher Education (IHE)	Implementation of Islamic entrepreneurship education	Lailatussaadah <i>et al.</i> (2023)
Implementation of a Hospitality-Oriented Patient Experience (HOPE) Concept to Service Standards of Muslim-friendly Medical Tourism	Application of Islamic teachings in contemporary times; implementation of Islamic medical tourism	Teerakunpisut and Kongpam (2023)
Muslim Women Switching Intention to Halal Cosmetics: Push-Pull-Mooring Model Application	Application of Islamic teachings in purchasing cosmetics in contemporary times.	Pambekti <i>et al.</i> (2023)
Integrating Country of Origin, Brand Image, and Halal Product Knowledge: The Case of the South Korean Skincare in Indonesia	Application of Islamic teachings (halal skincare) in contemporary time; effect of the value of country of origin and brand image on the purchasing decision of South Korean skincare with halal product knowledge	Mahri <i>et al.</i> (2023)
Effects of Religiosity, Halal Knowledge, and Halal Certification on the Intention of Muslims to use the Halal Vaccine during the COVID-19 Pandemic	Application of Islamic teachings (halal vaccine) in contemporary times	Sudarsono <i>et al.</i> (2023)
The Effect of Halal Brand Awareness on Purchase Intention in Indonesia: The Mediating Role of Attitude	Application of Islamic teachings (halal brand) awareness in contemporary times	Pratama <i>et al.</i> (2023)
Multiculturalism in Japan Halal Tourism: Localising the Concept of Halal	Application of halal tourism in contemporary times in Japan to meet the demand from tourists	Aminah and Bhakti (2023)

Knowledge of Halal Foods by University Students Enrolled in a Dietitian Training Course in Japan	Application of Islamic teachings (halal food) in contemporary times; the study investigated the knowledge of halal foods among university students enrolled in a training course for registered dietitians	Yazawa and Kikuoka (2023)
Constructing an Integrated Sustainable Halal Policy (ISHP) in Brunei Darussalam: Refiguring the Domains of Conventional Policy Multiverses	Application of Islamic teachings (halal policy) in contemporary times, refiguring the domains of conventional policy multiverses	Azalie (2023)
Halal Industry 4.0 Model for SMEs	Application of Islamic teachings (halal industry) in contemporary times	Ahmad <i>et al.</i> (2022)
Customer Behaviour towards Halal Food: A Systematic Review and Agenda for Future Research	Understanding previous studies on behaviour towards halal food and shedding light on future studies, the food market	Iranmanesh <i>et al.</i> (2022)
Challenges of the Indonesian Halal Industry in the Digital Economic Era	Application of Islamic teachings (halal Industry) in Indonesia in contemporary times	Hasan and Pasyah (2022)
Muslim Millennials' Purchase Intention of Halal-Certified Cosmetics and Pharmaceutical Products: The Mediating Effect of Attitude	Application of Islamic teachings (cosmetic and pharmaceutical) in contemporary times	Widyanto and Sitohang (2022)
Factors Affecting the Halal Cosmetics Purchasing Behaviour in Klang Valley, Malaysia	Application of Islamic teachings in contemporary issues (cosmetic)	Osman <i>et al.</i> (2022)
Bleeding Time and False Aneurysm Incidence on Cattle Slaughtering using Non-Penetrative Pre-Slaughter Stunning in Indonesia	Application of Islamic teachings in contemporary issues (non-penetrative pre-slaughter stunning)	Supratikno <i>et al.</i> (2022)
Analysis of Determinants of Consumer Intentions to Purchase Halal Bakery Products	The influence of halal marketing on purchase intention	Zhafirah <i>et al.</i> (2022)
Strategic Perspectives of Islamic Entrepreneurship and Marketing (p. 183)	Application of Islamic teachings (Islamic entrepreneurship) in contemporary times	Islam (2022)
Halal Travel “2.0” and Beyond COVID-19	Application of Islamic teachings (halal tourism) in contemporary times	Rehman (2022)
Evaluation of Knowledge, Attitudes, and Perceptions on Halal Pharmaceuticals among Pharmacy Students from Malaysian Private Universities	Application of Islamic teachings (halal pharmaceuticals) in contemporary times	Xuan <i>et al.</i> (2022)
The Acceptance of Halal Food Products among Non-Muslim Consumers in Indonesia	Understanding Islam (halal concept) and society	Farhan and Sutikno (2022)

The Determinants of Muslim Travellers' Intention to Visit Non-Islamic Countries: A Halal Tourism Implication	Application of Islamic teachings (halal tourism) in contemporary times, related to intention	Aji <i>et al.</i> (2021)
Representations of Halal and Haram in Malaysian Parliamentary Discourse [Representasi Halal dan Haram dalam Wacana Parlimen Malaysia]	Application of Islamic teachings, halal, and haram in contemporary times	Awal <i>et al.</i> (2021)
Contemporary Issues in Islamic Social Finance	Application of Islamic teachings (Islamic finance and other issues related) in contemporary times	Qadri and Bhatti (2021)
Integrating the Internet of Things in the Halal Food Supply Chain: A Systematic Literature Review and Research Agenda	In contemporary times, the application of Islamic teachings addresses consumers' concerns regarding food integrity. Halal food businesses must rethink their conventional supply chains and leverage new technologies	Rejeb <i>et al.</i> (2021)
A Mediator of Consumers' Willingness to Pay for Halal Logistics	Application of Islamic teachings on the intention of purchasing halal products, concern, knowledge, and awareness of halal	Ag Majid <i>et al.</i> (2021)
Analysis of Pharmacists' Knowledge and Attitude in the Pharmaceutical Industry of Halal Certification and Their Readiness to Produce Halal Medicine	Application of Islamic teachings (halal medicine) in contemporary times	Rahem <i>et al.</i> (2021)
Exploring the Potential of Pondok Institutions as an Islamic Spiritual Tourism Product- The Case of Malaysia	Application of Islamic teaching (halal tourism) in contemporary times	Yusof and Simpong (2021)
Thai Flight Attendants' Intercultural Sensitivity and Topics in Intercultural Communication with Muslim Passengers	Understanding Islam and society in India: Observations on the growth of the halal product market	Semchuchot <i>et al.</i> (2021)
The Emergence of Halal Food Industry in Non-Muslim Countries: A Case Study of Thailand	Application of Islamic teachings (halal industry) in Thailand. The halal industry is developing in Thailand in contemporary times	Mohd Nawawi <i>et al.</i> (2020)
Does Intention Influence the Financial Literacy of Depositors of Islamic Banking? A Case of Malaysia	Understanding customers who chose Islamic banking and the differences between Islamic and conventional banking /intention	Ganesan <i>et al.</i> (2020)
"Halal Tourism": Is the same trend in non-Islamic destinations as in Islamic destinations?	Understanding of Islam and society; exploring Muslim tourists' needs and tourism practitioners' responses in China	Jia and Chaozhi (2020)
Religion and Entrepreneurship in Hospitality and Tourism	Application of Islamic teachings in contemporary times; hospitality and tourism by considering the influences of religion on entrepreneurial motivation	Farmaki <i>et al.</i> (2020)

Table 6: Articles categorised under 'Islamization'

Title	Justification	Reference
Google scholar		
Islamic Perspective in Halal Science: Analysis of <i>Ijtihad</i> Methodology of Halal and Haram in Contemporary Realities	Reflecting on Islamic objectives and values, the study explicates contemporary <i>Ijtihad</i> methodology of <i>Tahqīq manāt al-hukm</i> (verifying causal effect existence) and <i>Takhrīj manāt al-hukm</i> (coming up with effective cause) in the medicine, pharmaceutical, food, entertainment, and service industries	Busari (2023)
Islamic Philosophy of Science as a Halal Science Framework: Literature Review	Setting a standard which is derived from Islamic approaches	Said <i>et al.</i> (2023)
Pembangunan Lestari Menerusi Sains Halal: Kajian Ayat <i>al-Qur'an</i> Terpilih [Sustainable Development Through Halal Science: A Study on Selected Verses From the <i>al-Qur'an</i>]	Setting a standard which is derived from Islamic approaches with references to <i>Qur'anic</i> verses	Said <i>et al.</i> (2023)
Philosophical Concept of Halal Science: Thematic Exegesis Research	Reflection of halal science on Islamic objectives and <i>Qur'anic</i> terms	Said and Hanapi (2019)
The Philosophy of Halal Science Concept in <i>Al-Qur'an</i>: A Study of Thematic Exegesis	Setting norms/models/standards /which are derived from the <i>Qur'an</i> , the Sunnah	Said and Hanapi (2019)
The Philosophical Concept of Halal Science: A Conceptual Analysis	Setting the norms derived from Islamic thought, the philosophy of halal science hinges on <i>tawhid</i> and <i>wahyu</i> , while humans need to play the role of <i>khalifah</i> and subjects of <i>Allah</i> SWT, as decreed	Said and Hanapi (2018)
Scopus		
Overview of Halal Issues	Setting standards on halal, containing reviews on some halal industry issues	Farouk (2023)
"We're Trying to Raise Muslim Kids, right?" Muslim Educators' Narratives of Human Development	Interpretations of Islam, Islamic teachings in the Western society	Alkouatli (2023)
Halal Wastewater Recycling: Environmental Solution or Religious Complication?	Discussion on several religious views, ideological and historical differences in the field of wastewater recycling	Jamil (2022)
Enhanced Knowledge Sharing Adoption Model in the Halal Food Industry	Setting standards is derived from Islamic principles, the halal food industry	Samsi (2022)

Islamic Ethical Principles to Protect the Environment Affected by Modern Biotechnology	Incorporation of revelation into different fields of research	Hasim <i>et al.</i> (2022)
Recycling Ablution Water (Wudu') using Membrane Water Treatment: A Study from Fiqh Halal Perspective	Incorporation of revelation into different fields of research; discussion on issues of water for ablution	Zahari <i>et al.</i> (2022)
Advancing Learners' Islamic Knowledge through a Parenting Education Module	Implementation of Islamic-based parenting activities in schools	Kosim <i>et al.</i> (2022)
Halal Tourism to Promote Community's Economic Growth: A Model for Aceh, Indonesia	Reflection on Islamic objective: model of tourism within the framework of Islamic <i>Shari'ah</i> enforcement	Yusuf <i>et al.</i> (2021)
Legal and Compliance Reform for Islamic Financial Benchmarking	Reflection and understanding the nature and workings of Islamic banking and/or Islamic finance	Muneeza and Mustapha (2021)
Islamic Religious Education in German State Schools	Implementation of Islamic values in education in Europe	Euchner and Hackner (2021)
The Need for International Islamic Standards for Medical Tourism Providers: A Malaysian Experience	Setting a standard on Muslim-friendly hospitals and Islamic practices among medical tourism providers according to <i>Shari'ah</i>	Kamassi <i>et al.</i> (2021)
Keep it Halal! A Smartphone Ethnography of Muslim Dating	Reflection on Islamic objectives and values to find a spouse in Islam	Hasan (2021)
Managing the Symbolic Power of Halal Meat in Swedish Preschools: Food for Thought in Discussions on Diversity	Setting norms and standards of Islamic thought in a multicultural community	Stier and Sandström (2020)
Fatwa Debate on Porcine Derivatives in Vaccine from the Concept of Physical and Chemical Transformation (Istihalah) in Islamic Jurisprudence and Science	Incorporation of revelation into different fields of research	Rosman <i>et al.</i> (2020)

-quality homegrown journal to provide an ample platform to publish inter-theme halal-related articles in the *tawhidic* paradigm.

Another challenge lies within the researchers themselves. Researchers may not be aware of the *tawhidic* paradigm. Most researchers are trained in the Western worldview that uses conventional, so-called modern Westernised methods. In other circumstances, researchers may be aware of the *tawhidic* paradigm, but they do not understand the importance of conducting halal research in the *tawhidic* paradigm. Therefore, these researchers continue to use the approach commonly done in the respective disciplines. Modern methods are not entirely un-Islamic, though what is missing is the *roh* of doing the research towards fulfilling the *amanah* (trust, responsibility), stewardship and attaining the *mardhatillah* (blessing from Allah SWT).

To this end, it is crucial to establish awareness and training programmes or modules to empower researchers to conduct their halal-related research work in the *tawhidic* paradigm. More research is needed to systematically develop methods to synthesise legacy and modern knowledge through the Islamization of Knowledge approach. One possible approach is using the *Maqasid* methodology described by Professor Jasser Auda of the *Maqasid* Institute (Auda, 2021). Hashim et al (2024) in a work investigating the halal science research output of a halal academic programme at master level, proposed that the *Maqasid* methodology can be used to overcome the currently limited discussion about belief in the oneness of Allah SWT (*tawhid*) or the trustworthy source of knowledge (Allah SWT) in the halal science research.

3.7 Implications of research

The current work is foreseen to pave the way for rekindling the Islamic legacy with modern knowledge towards mastery of halal science and halal education that shall uphold the sustainability of halal industry in the genuine realm of *tawhidic* paradigm. Halal science and education body of knowledge in the *tawhidic* paradigm can be rightly positioned as a foundation for developing curriculum, teaching methodologies, and educational resources related to the halal ecosystem. This, in turn, would fulfil the needs of the halal industry and halal economy through the nurturing of skilled human resources and professionals moulded in the *tawhidic* worldview. Taken together, this preserves Islamic values and fosters thought leadership in halal research and education. As an Islamic nation, Malaysia can leverage its expertise in this field to establish partnerships, exchange ideas, and participate in global halal industry development and standardisation initiatives. This enhances Malaysia's international reputation, strengthens diplomatic relations, and contributes to the nation's soft power on a global scale. Finally, a halal living and lifestyle guided by the *tawhidic*-based halal science and education shall help ensure *duniawi* (worldly) and *ukhrawi* (hereafter) success of all members of the society

4. Conclusion

Guided by the concept of Islamization, this study presented a *tawhidic* paradigm-based classification of halal-related publications in the scope of halal science and halal education into five categories: un-Islamic, conventional studies, conventional halal studies, relevantization and Islamization. More than half of the articles are classified into the relevantization category, which suggests applications of

Islamic teachings in contemporary issues. However, the degree of relevantization may still be minimal, portraying only limited *tawhidic* elements. Focusing on articles aligned with 'conventional halal studies' could help emphasise the *tawhidic* elements in halal-related work. In this context, the intention to promote halal as a faith-based system is explicit. Halal research undertaken within the *tawhidic* paradigm will aid in preserving the sanctity of halal as a divine system granted to humanity.

5. Conflict of interest statement

We declare that we have no conflict of interest.

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