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Manuscript Designing and Developing the Form and Condition for Integrating the Quran with Acquired Knowledge

Reka bentuk dan Pembangunan Bentuk dan Syarat Pengintegrasian Al-Quran dengan Ilmu Aqli

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ABSTRACT

Integrating Quranic verses with acquired knowledge is necessary, along with knowledge and technology development. This helps in understanding the Quranic verses that are relevant to those fields and further exploring the contents of the Quran more broadly. However, the form of integration of the Quran with aqli knowledge and the conditions for such integration based on the expert agreement have not been highlighted. This study aims to design and develop the integration of Quranic verses with acquired knowledge form and its condition based on the discipline of Quranic exegesis. The study used the three-phase Design and Development Research (DDR) approach, and this paper only discussed the second phase, design and development. The form of the integration and its condition was designed based on the literature review and Focus Group Discussion (FGD) by seven (7) experts in the related field of study. Then, the Fuzzy Delphi Method (FDM) was used to develop the form and condition. Twelve (12) experts in Quranic exegesis have participated in FDM. Experts' consensus has been obtained in developing the forms for integrating Quranic verses with acquired knowledge and its conditions. The forms involve eleven items: Discussion of Concept, Discussion of the Quranic Approach, Explanation of function, Explanation of feature, Explanation of process, Explanation of cause and effect, Rational explanation of aspects of language, Explanation of Islamic legislation's wisdom, Explanation of historiography and geography of the stories in the Quran, Inspirational Innovation by the Quran, Translational Technology from the Quran. The conditions for integrating consist of nine items and the experts emphasise the conditions concerning ethics more than the conditions relating to interpretation content. This study has significant implications for using new methods, namely design and development research. This study also contributes to the Quranic studies itself using quantitative and qualitative studies that combine various methods in one study.

Keywords: Quranic exegesis; aqli knowledge; naqli; tadabbur; tafsir 'ilmi; and tahfiz

ABSTRAK

Pengintegrasian ayat-ayat Al-Quran dengan ilmu aqli adalah satu keperluan, seiring dengan perkembangan ilmu pengetahuan dan teknologi. Hal ini membantu dalam memahami ayat-ayat al-Quran yang relevan dengan bidang-bidang tersebut dan seterusnya meneroka kandungan Al-Quran dengan lebih luas. Namun, bentuk pengintegrasian al-Quran dengan ilmu aqli dan syarat pengintegrasian tersebut berdasarkan kesepakatan pakar belum diketengahkan. Kajian ini bertujuan untuk membangunkan bentuk pengintegrasian ayat-ayat Al-Quran dengan ilmu aqli dan syarat pengintegrasian tersebut berdasarkan disiplin ilmu tafsir al-Quran. Kajian menggunakan pendekatan tiga fasa Design and Development Research (DDR) dan artikel ini hanya membincangkan fasa kedua iaitu reka bentuk dan pembangunan. Bentuk pengintegrasian dan syaratnya direka bentuk berdasarkan kajian literatur dan Focus Group Discussion (FGD) oleh tujuh (7) orang pakar dalam bidang pengajian berkaitan. Kemudian, Kaedah Fuzzy Delphi (FDM) digunakan untuk membangunkan bentuk pengintegrasian dan syaratnya. Seramai dua belas (12) orang pakar dalam tafsir al-Quran terlibat dalam FDM. Kesepakatan pakar telah diperolehi dalam membangunkan bentuk-bentuk untuk mengintegrasikan ayat-ayat Al-Quran dengan ilmu aqli melibatkan sebelas item iaitu Perbincangan konsep, Perbincangan pendekatan al-Quran, Penjelasan fungsi, Penjelasan sifat, Penjelasan proses, Penjelasan sebab dan akibat, Penjelasan rasional aspek bahasa, Penjelasan hikmah pensyariatan, Penjelasan pensejarahan dan geografi kisah-kisah dalam al-Quran, Inspirasi Inovasi oleh al-Quran, Terjemahan Teknologi daripada al-Quran. Manakala syarat-syarat dalam pengintegrasian tersebut terdiri daripada sembilan item dan pakar lebih menekankan syarat berkaitan etika daripada syarat berkaitan kandungan tafsiran. Kajian ini memberi implikasi yang signifikan dalam menggunakan kaedah baharu iaitu penyelidikan reka bentuk dan pembangunan. Kajian ini turut menyumbang kepada pengajian al-Quran itu sendiri menggunakan kajian kuantitatif dan kualitatif yang menggabungkan pelbagai kaedah dalam satu kajian.

Kata kunci: Tafsir al-Quran; ilmu aqli; naqli; tadabbur; tafsir 'ilmi; and tahfiz

INTRODUCTION

Translating works from the Greek, Indian, and Persian civilizations during the 'Abbasid Dynasty developed rapidly (Fu'adi 2007), but the transfer of the knowledge (non-Muslim acquired knowledge) required filtration and alteration that involved the worldview, principles, values, and norms of Islam (Hashim et al. 2018). Muslim scholars of the era have done exploration, conducted research, and produced original theories, knowledge, and new works whose quality was higher than the original work (Nawi 2011). The mindset patterns of previous Islamic scholars were based not only on theoretical knowledge but also on practical, aimed at producing more authoritative findings in line with current developments (Amir et al. 2012). Combining aqli (acquired) knowledge (from non-Muslims and Muslims) with naqli (revealed) knowledge is known as "integrating naqli and aqli knowledge" (Hashim et al. 2018).

The integration also involves the Quran, a source of naqli knowledge. Quranic exegesis, for example, has continuously evolved following the development of the times and the increasingly complicated demands of human life (Basir 2019; Sanaky 2008). Its development involves the aspects of interpretation resource, presentation style, and stream or pattern. Beginning with the general interpretation of the Quran in the time of the Prophet PBUH, followed by analysis in the form of Quranic interpretation using *al-ma'thur,* then developed in the form of Quranic interpretation using the opinion. The interpretation of analysis continued to grow until the birth of specific streams such as fiqh, tasawwuf, language, etc. Then came the comparation presentation style, which ended with the thematic style (Basir 2019).

The growth of these streams demonstrates how Quranic exegesis is combined with aqli knowledge, such as philosophy and the natural sciences. Al-Khalidi (1994) defined the process of engaging with the Quran utilising modern knowledge, including that of psychology, astronomy, medicine, embryology, geology, and other subjects, to comprehend the verses of the Quran that are relevant to those fields. This demonstrates the necessity of combining acquired knowledge as a channel with the Quran as the source of information. Harun Nasution believes that Islamic education should be religious and rational, combining religion with science (S. H. Ali et al. 2023). Islam does not reject science as long as it does not restrict the Shariah's ethical framework to prevent its abuse for particular objectives (Amir et al. 2023). Mohd et al. (2017) suggested that scientific discoveries could be utilised in interpreting the meaning of the Quranic verses so that the function of the Quran as an end-time miracle would always be relevant in all ages, including the present age of science and technology.

However, according Ahmad & Iksan (2023), the lack of sufficient knowledge and skills is one of the challenges in implementing the Quran integrated science learning. This study aims to develop integrating Quranic verses with acquired knowledge form and its condition based on the discipline of Quranic exegesis. The focus is on opinion-based interpretation because acquired knowledge is derived from human intellect.

INTEGRATING QURANIC VERSES WITH ACQUIRED KNOWLEDGE FORM

The debate about the Quran's content is directly related to the science of Quranic exegesis. Integrating Quranic verses with acquired knowledge is considered an interpretation of the Quran. Thus, the method for integrating the verses must follow the methodology of Quranic exegesis as proposed by Hilmi et al. (2023). Scholars have outlined general methods for interpreting the Quran regardless of the type and style of interpretation.

An exegete must interpret the Quran using the Quran first. If it is not found, it is permissible to interpret the Quran using the Sunnah as it explains the Quran. If it is not found, it is acceptable to refer to the Companions' RA commentary because they are more aware of the events and circumstances during the decline of the Quran. But all that is taken is the thing that authentic of them. He should interpret it using the Followers' commentary if it is still not found (Al-'Ak 1986). Interpretations based on these sources are called Quranic interpretation using *al-ma'thur* or *al-naqli* (Al-'Ak 1986). If it is still not found in the primary sources, then the exegete could use the mind, discover ideas and redouble efforts in finding exposure about what is meant by Allah SWT (Al-Dhahabi 2000). In other words, he should make a decision if he meets its requirements. Thus, integrating Quranic verses with aqli science is categorized as one interpretation using the opinion. Integrating Quranic verses with acquired knowledge based on the discipline of Quranic exegesis can be implemented in several forms. Observation of the literature found that the integration's forms are as follows:

DISCUSSION OF CONCEPT

Concept is the formation or drafting of a plan or idea (Stevenson 2010). The concept of a matter can be explored using a thematic interpretation approach. This approach provides concrete and inclusive ideas and answers to a theme by knowing, linking, and comprehensively analysing all theme verses (Shihab 1996). It involves the whole Quran or a specific surah (Yusoff 2003). This approach begins with the interpretation of *al-ma'thur*, the Quran using the Quran, followed by the interpretation using the opinion for the individuals who want to use the opinion (in the context of this study is the knowledge of aqli) (Bakar et al. 2019).

The following are examples of studies in the form of concepts for the field of social science: The Concept of Ahsani Taqwim Human and Its Reflection in Islamic Education by Priatna and Ratnasih (2017), Education According to Al-Quran and Sunnah and Its Role in Strengthening the Civilisation of Ummah by Stapa, Yusuf, and Shaharudin (2012), Basic Concepts of Education in the Quran by Wahyudi (2016), Paradigm and Concept of Knowledge in The Quran by Khotimah (2014), Character Education from the Al-Quran and Hadith Perspective by Fitri (2018), The Concept of Moral Education in the Story of Ibrahim in The Quran by Hamdani (2019), The Concept of Evil in The Quran by Muhammadun (2011), and Green Colour According to Quranic Perspective by Mohamed Razali (2019).

Meanwhile, studies conducted in the form of concepts for science and technology are The Concept of Soil in al-Quran al-Karim from a Semantic Aspect and al-I'jaz Al-Bayani by Abdullah (2017), Concept of the Universe According to The Quran by Jamarudin (2010), Humankind According to the Concept of The Quran and Science by Kurniawati & Bakhtiar (2018), The Concept of Man and Nature and the Relation of Both in The Quran Perspective by Rosowulan (2019), and Islamic Park Concept Study Based on the Quran and Hadith by Jannah & Gunawan (2015).

DISCUSSION OF THE QURANIC APPROACH

Integrating the Quran with acquired knowledge can also be implemented in the form of discussion of the Quranic approach in a matter. Discussion on the Quranic approach in a subject is a category of thematic interpretation. This approach begins with the interpretation of the Quran using the Quran, followed by the interpretation using the opinion for the individuals who want to use the opinion (in the context of this study is the knowledge of aqli) (Bakar et al. 2019).

Among the examples of studies in the field of social science are the Quranic approach to improving morality by Al-Farjani (2015), Al-Quran and Al-Sunnah approach to dealing with social problems (Rajab, 2018), the Quranic approach to tackling unemployment (Dargham, 2017), Quranic approach to economic reform by Ibrahim & Abd al-Tawwab (2020), and Quranic approach in education through events in surah al-Anfal (Saleh, 2011).

In the field of science, the studies conducted are The Quranic Approach to Food and Its Influence on Disease Prevention by Mahmud & Hana' (2020), and The Quranic Approach to Directing and Utilising Human Energy and Cosmic Potential by Syuhrah & Salami (2017).

EXPLANATION OF ISLAMIC LEGISLATION'S WISDOM

The explanation of Islamic legislation's wisdom is a form of integration that can usually be found in analysis style of Quranic exegeses, such as Rawa'i' al-Bayan and al-Tafsir al-Munir. The matter became a community's demand because of the awareness of what Islam brings in the Quran in line with intellect, knowledge, and reality (Rokim 2017). Examples of studies that use this form in social science are The Impact of Iddah on Female Psychology by Mutmainna (2015) and The Quran and Islamic Justice in the Hudud Proclamation by Ibrahim (2012).

While in science and technology, research in the form of wisdom is gaining popularity in the academic world. Among the studies conducted are Breastfeeding in the Quran by Ismail (2018), The Forbidden of Pigs in the Quran: Review the Interpretation of the Verses of the Forbidden of Pigs with the Science Approach by Tamlikha (2017), Admiring Islamic Law through the Verses of the Quran: An Assessment from a Scientific Point of View by Abdul Aziz, Ibrahim, Mohd Yusoff, & Mohd Yakub (2012).

RATIONAL EXPLANATION OF ASPECTS OF LANGUAGE

Rationale is a reasonable reason that underlies an action, act, or hold (Baharom 2005). Integration in the form of explanation regarding rationality is widely used in studying the rationale for the use of a word (including the form of the word in terms of male and female, little or many), phrases (including in terms of advance and end of words), prepositions, parable found in the Quran, etc. The acquired knowledge can partly explain the rationale for using such matters.

Examples of studies that use this form are The Malay Translation of the Qur'an: An Evaluation Based on Scientific Exegesis by Hilmi et al. (2014), "Usage of Floral in Metaphor in the Quran by Saleh (2017), The Translations on The Meaning of The Words Al-Muzn And Yasbahun: An Evaluation Based on The Scientific Exegesis by Hilmi et al. (2015), and Insect Parable in the Qur'an: Analysis of I'jaz by Othman & Yusoff (2012).

EXPLANATION OF FEATURE

Integrating Quranic verses with acquired knowledge can be done by explaining the feature of a matter in the Quran. Some Quranic verses mention the features or circumstances of a particular subject, primarily related to the creation. Among the features stated are قِطَعٌ مُتَجَاوِرَاتٌ (nearby pieces of land), أَدْنَى الْأَرْضِ (closest state), نُّطْفَةٍ أَمْشَاجٍ (mixed semen), and many more. Explaining these features using acquired knowledge, such as science, will provide a more robust understanding. This is because the Quran usually only mentions the fact of a creation without a detailed description (Al-Halabi 1993).

EXPLANATION OF FUNCTION

There are Quranic verses that state the function of a thing. Among the functions mentioned is the mountain as the peg of the earth, the sky as a protected ceiling, rain as a plant nourisher, stars as road signs, and many more (Khalid 2021). Further explanation of the function can be described using acquired knowledge.

Among the studies conducted in the form of explaining the functions are The Mountain and Its Function in the Quran and its Relevance to Geological Sciences by Saputra (2020), Al-Quran and The Function of Atmospheric Layers by Rusdi (2011), and Water in the Quran and Its Function in Life by Kurni (2016).

EXPLANATION OF PROCESS

There are verses of the Quran that tell the process of a thing. Among them are the human creation process, creation of natural process, rain occurrence, sun and moon rotation process, animal milk production process (Al-Najjar 2007), human beings' speech process (Mamluatul 2010), and more. The Quran

generally does not tell a process in detail, and this is where acquired knowledge explains it.

Among the studies that have been conducted in the form of explaining the process are Natural Phenomena in the Quran: The Study of Rain and Wind Formation Verses by Latansa (2015), Human beings Speak Process: Quranic Perspective and Psycholinguistic by Hasanah (2010), The Process of The Creation of Embryos in Quran Perspective by Saiffullah (2015), Livestock Milk in Tafsir' Ilmi Frame: The Integration Study of Tafsir Al-Quran and The Science of Ranching by Safitri et.al (2020), The Process of Raining: The Perspective of the Quran by Sugiarti (2018), and The Translation of the Meaning of the Words Al-Muzn Dan Yasbahun: A Revaluation Based on the Method of Tafsir 'Ilmi by Hilmi et.al (2019).

EXPLANATION OF CAUSE AND EFFECT

Several Quranic verses mention the causes and effects of something. For example, lightning bolts can almost cause blindness and kill humans, earthquakes cause debris, storm leads to rock forests, and destruction on land and sea due to human hands. Observation of the matter provides people with knowledge of how the event occurred and predicts its effects. Hence, the acquired knowledge is vital in more accurately explaining the cause and effect (Fakhri 2010).

In short, an explanation using scientific facts regarding the cause and effect is a form of integrating Quranic verses with acquired knowledge. Among the studies conducted in this form is Earthquake Disaster Management according to the Quranic Perspective and Modern Science by Noor Fazilah (2014) and Discussion of External Forces of Earth in the Quran by Iravani & Zade (2013).

TRANSLATIONAL TECHNOLOGY FROM THE QURAN

Human intellectual activities must not cease in science and must be developed and produced technology. (Danusiri 2015) Technology is everything structured (implying the establishment of order) whose components work toward a common goal (Carroll 2017). Science and technology are a unity that supports each other. Technology is an integral part of science and could not have developed without the basis of solid science (Rusdiana 2014). Ibrahim et al. (2018) stated that technology is the application of any knowledge (not limited to science) systematically that can bring convenience to the world.

The Quran is not a book of science and technology, but it contains some information and principles that are very important in science and technology (Rusdiana 2014). The form of integration of Quranic verses with acquired knowledge in the context of technology is translational technology from the Quran. Translational means change or conversion to another form, look, and so on; transformation (Anon n.d.). For example, the Quran mentions birds flying by outspreading and folding their wings, leading to aircraft technology. Another example is the split rock due to flowing water leading to waterjet cutter technology (Khalid 2021).

TECHNOLOGICAL INSPIRATION FROM THE QURAN

The Quran demands man to read, dig, delve, and research what is in the universe and benefit human life by knowing the characteristics of something such as natural disasters, signs of time, history, and oneself to face challenges and answer the problems of the modern world (Ali 2016). The Quran mentions features such as the wind carrying water, the underwater waves, the rain process, the mountain as a peg of the earth, and many more (Khalid 2021).

An in-depth study of the Quranic verses by individuals knowledgeable in acquired knowledge such as math, physics, chemistry, astronomy, biology, geology, and others can accurately understand the phenomenon of the universe (Fakhri 2010). This understanding inspires people to create technologies that can facilitate life's affairs and keep them safe. Examples of the production of Quran-inspired technologies are the cloud seeding, solar distillation, ocean wave energy, Seismic Isolation (technology that protects the structure from the destructive effects of an earthquake), Warka water nets (water vapour traps carried by wind like water on spider nests), and so on (Khalid 2021).

CONDITIONS OF INTEGRATING QURANIC VERSE WITH ACQUIRED KNOWLEDGE

Scholars have outlined some conditions to ensure interpretation using opinion and so that the interpretation is considered a trustworthy opinion-based interpretation and can be accepted. Among them are:

1. Do not interpret the meaning of the saying of Allah in a state of ignorance of Arabic rule and usul al-fiqh, and without the basis of the knowledge required in interpretation (Al-Dhahabi 2000; Al-Khalidi 2008).
2. Not to investigate anything in Allah's knowledge and is His secret, such as something ambiguous and unseen matters, such as the signs and atmosphere of the Day of Resurrection (Al-Dhahabi 2000).
3. Not influenced by lust in the interpretation and use of reason, as lust will prevent the individual from understanding the Quran well and bring it to wrongdoing (Al-Dhahabi 2000; Al-Khalidi 2008).
4. Not interpreting to support sects and damaged thoughts by making the sect a basis and interpretation as a follow-up (Al-Dhahabi 2000; Al-Khalidi 2008).
5. The interpretation does not contradict other Quranic verses, and his opinion does not contradict the stipulation of other verses (Al-Khalidi 2008).
6. The interpretation does not contradict authentic hadiths and does not set opinions that are contrary to the matters established by the hadiths (Al-Khalidi 2008).
7. The interpretation does not contradict the meaning of the Arabic language and does not interpret the Quran's words and arrangement with interpretations contrary to the meaning of the language, its use, and the alterations of words (Al-Khalidi 2008).
8. Not claiming that the interpretation is what Allah means without any proof (Al-Dhahabi 2000; Al-Khalidi 2008).(Al-Dhahabi 2000; Al-Khalidi 2008)

Based on the ten described forms of integration and eight conditions, the researcher aims to design and develop the form of integrating memorised Quranic verses with aqli knowledge and its condition.

METHODS

The study used the three phase Design and Development Research (DDR) approach by Richey & Klein (2007) and this paper only discussed the second phase which is design and development. The form of the integration and its condition was designed based on the literature review and Focus Group Discussion (FGD) by seven (7) experts in the related field of study. Then, the Fuzzy Delphi Method (FDM) was used to develop the form and condition. Twelve (12) experts in Quranic exegesis have participated in FDM.

Based on the literature review, a design of integrating Quranic verse with acquired knowledge form (10 items) and its conditions (8 items) has been outlined. Next, a Focus Group Discussion (FGD) involving a heterogeneous group of seven experts related to the field of the study (Quranic exegesis, social science, science & technology, integration of naqli and aqli knowledge, pedagogy, and Quran memorisation) was held to comment on the design. The Fuzzy Delphi method, a series of steps for gathering and analyzing the thoughts and opinions of a group (often a panel of experts) on content authenticity (Noh 2020), has been used to develop the form of integration and its condition. The experts serve as responders using quantitative techniques (Jamil 2016). Purposive sampling was utilized in this study based on Hasson et al.'s (2000) assertion. The expert' criteria are specialist and proficient in the subject, giving a total commitment, and having no personal stake. Twelve specialists in Quranic exegesis were involved, as suggested by Adler & Ziglio (1996) and Jones & Twiss (1978), that the Delphi procedure should involve somewhere between 5 and 50 experts.

A questionnaire with a seven-point Likert scale (strongly disagree - strongly agree) was used as an effective instrument for data collection in the Delphi approach (Dalkey & Helmer 1963). The questionnaires were based on the literature review and focus group discussions (FGD) using Google Forms. Taherdoost et al. (2016) proposed face validity to ensure that the questionnaire was appropriate for what was being measured. This study included expert evaluation methods, including four experts: two content experts and two language experts. The questionnaire was then sent to the experts via email.

Then, fuzzy triangular numbers were formed from each linguistic variable to analyze the data and determine a threshold value (d). Thus, the threshold (d) must be less than or equal to 0.2 to satisfy the first requirement.(Cheng & Lin 2002) The vertex technique determines how far apart an average rij is. A formula (Equation 1) is used to calculate the threshold values (d) of two fuzzy numbers, m = (m1, m2, m3) and n = n = (m1, m2, m3).

$$d(\tilde{m},\tilde{n}) = \sqrt{\frac{1}{3}\left[(m_1 - n_1)^2 + (m_2 - n_2)^2 + (m_3 - n_3)^2\right]}$$

Equation 1 Formula to calculate the threshold values of two fuzzy numbers

Next, the second condition, the percentage of expert consensus, is calculated. The second condition is that the percentage must be equal to or greater than 75.0% (Chang et al. 2011). Then the average fuzzy numbers are used (defuzzification process) to obtain a fuzzy score (A). The equation A = (1/3)*(m1 + m2 + m3) must be used to obtain a fuzzy score (A). To meet the third criterion, the fuzzy score (A) must be greater than or equal to the median value (α - cut) of 0.5 (Bodjanova 2006). This shows that the experts generally accept such elements. The priority and rank of an element in the expert consensus can be determined from the fuzzy score value (A).

RESULT AND DISCUSSION

FINDINGS OF FGD

Table 1 describes participants' demographics, including the institution's name, department or division, position, and area of expertise. Each of these experts is labelled with EA, which means *Expert of Area*.

TABLE 1. Demographic of FGD participants

No	Institution name:	Departments/Divisions	Position	Field
EA1	Universiti Sains Islam Malaysia	Institute of Islamic Sciences	Professor	Quranic exegesis
EA2	Universiti Sains Islam Malaysia	Faculty of Leadership and Management	Professor	Social science
EA3	Universiti Sains Islam Malaysia	Kolej PERMATA Insan	Senior Lecturer	Pure science
EA4	Universiti Sains Islam Malaysia	Centre for Graduate Studies	Professor	Pedagogy
EA5	Universiti Sains Islam Malaysia	Institute of Islamic Sciences	Senior Lecturer	Integration of naqli and aqli knowledge
EA6	Universiti Sains Islam Malaysia	Kolej PERMATA Insan	Quran Teacher	Tahfiz
EA7	Universiti Sains Islam Malaysia	Kolej PERMATA Insan	Quran Teacher	Tahfiz

The results of the Focus Group Discussion (FGD) on the forms and conditions of integrating Quranic verses with acquired knowledge designed by the researcher are as in Table 2.

TABLE 2. Findings of the FGD

Components, Phases, Subphases, and Elements	Change
Forms of Integrating Quranic verses with aqli knowledge	
- Inspirational innovation by the Quran:	- The term technology is converted to innovation that coversotherareasaswellandisnotlimitedtotechnology
- Explanation of historiography and geography of the stories in the Quran The Quran tells many stories of ancient figures and people such as Zulqarnain, Jews, Rum, and so on. Integration can be done in the form of historical and geographical explanations of these stories.	- Item added
Conditions of Interpreting the Quran using the opinion	
- Does not contradict the *uṣūl* or opinions agreed by scholars in the discipline of Islamic studies such as *'aqīdah*, *fiqh*, *akhlāq*, *sīrah*, and others	- Items added at no. 8
- Not claiming that the interpretation is what Allah means without a proof	- Item moved to no. 9

The table shows some changes in the items involving the term, addition, and position. The FGD's finding was used to create a questionnaire in Fuzzy Delphi Method (FDM).

FINDINGS OF THE FUZZY DELPHI METHOD

In The Fuzzy Delphi method, there are three conditions used in determining the level of consensus among experts for each item: 1. the average threshold value (d) obtained less than 0.2, 2. the Traditional Delphi method, which is the percentage of the expert agreement exceeds 75%, and 3. the alpha cut value should exceed 0.5. Table 3 shows an experts' consensus on integrating Quranic verses with acquired knowledge form, which includes 11 items.

TABLE 3. Element of integrating Quranic verses with acquired knowledge forms by experts' consensus

Items' Ranking	Items	Threshold Value (d)	Percentage of Experts' Agreement	Fuzzy Score (A)	Experts' Agreement
1	Discussion of Concept	0.03608	100%	0.925	Accepted
2	Discussion on the Quranic Approach	0.03608	100%	0.925	Accepted
3	Explanation of function	0.03608	100%	0.925	Accepted
4	Explanation of feature	0.0441	100%	0.90833	Accepted
5	Explanation of process	0.0441	100%	0.90833	Accepted
6	Explanation of cause and effect	0.0441	100%	0.90833	Accepted
7	Rational explanation of aspects of language	0.0441	100%	0.90833	Accepted
8	Explanation of Islamic legislation's wisdom	0.03849	100%	0.9	Accepted
9	Explanation of historiography and geography of the stories in the Quran	0.05533	100%	0.89167	Accepted
10	Inspirational Innovation by the Quran	0.05292	100%	0.88333	Accepted
11	Translational Technology from the Quran	0.11868	83%	0.80833	Accepted

Conditions:
*Threshold value ≤ 0.2
** Percentage of Experts' Agreement ≥75%
***All alpha-cut value for each item exceeds α-cut =0.5.

All the items of the element of integrating Quranic verses with acquired knowledge forms in Table 2 have met all the requirements to confirm the level of expert consensus: the average threshold value (d) obtained less than 0.2, the percentage of the expert agreement exceeded 75%, and the alpha cut value exceeded 0.5. Meanwhile, the items were sorted according to priority based on the highest Fuzzy score.

The findings show integration in the form of discussion of the concept, discussion of the Quranic approach, and explanation of function ranked in the top three. The discussions of the concept and the Quranic approach use a thematic interpretation approach that brings concrete and inclusive ideas and answers on a theme or issue and can help solve the problem faced. The rationale is that these two forms are becoming more widespread and practical to students. The explanation of function is commonly found in most kawniyyat verses.

In the 4th to 9th position is the integration in the form of explanation of the nature, process, cause and effect, rationale for the aspects of language, Islamic legislation's wisdom, and historiography and geography of the stories in the Quran. All these forms usually use the analysis style interpretation approach, and in the context of this study is to use acquired knowledge in explaining the verse. These forms can explain the content of the Quran, which is in line with intellect, knowledge, and reality as time progresses. Integration in the forms of inspirational innovation by the Quran and translational technology from the al-Quran are at the very bottom. These forms are at the highest level of learning, which is creating. This level requires creativity and a strong foundation in areas related to a verse. Thus, these forms of integration can be implemented when students have reached a proper level.

This finding is consistent with Al-Halabi (1993), Al-Najjar (2007), Bakar et al. (2019), Fakhri (2010), Khalid (2021), Rokim (2017), and the findings of the FGD results that outlined the forms of integrating Quranic verses with acquired knowledge without considering the priority ranking of the item. These

forms can be a platform for the implementation of science-oriented interpretation because according to Noor et al. (2022) the origin of modern science can be found in the Quran and is something that attracts attention if the Quran is compatible with modern Western science. This study is also significant with Sulaiman et al.'s (2016) recommendation that the integration of knowledge within the scope of one discipline, multidisciplinary and trans-discipline is one thing that needs to be done further research to clarify the need for real integration of knowledge. However, these findings do not imply that the forms of integration are limited to these forms only.

Table 4 shows the experts' consensus on the conditions of Quranic exegesis using the opinion, which includes nine items.

TABLE 4. The conditions of Quranic exegesis using the opinion by experts' consensus

Items' Ranking	Items	Threshold Value (d)	Percentage of Experts' Agreement (%)	Fuzzy Score (A)	Experts' Agreement
1	Does not interpret the meaning of the saying of Allah in a state of ignorance of Arabic rule and *usul al-fiqh*, and without the basis of the knowledge required in the interpretation	0.03929	100%	0.94167	Accepted
2	Not to investigate anything in Allah's knowledge and is His secret, such as something ambiguous and unseen matters, such as the signs and atmosphere of the Day of Resurrection	0.05052	100%	0.925	Accepted
3	Not influenced by lust in the interpretation and use of reason, as lust will prevent the individual from understanding the Quran well and bring it to wrongdoing	0.05052	100%	0.925	Accepted
4	Not interpreting to support sects and damaged thoughts by making the sect a basis and interpretation as a follow-up	0.05052	100%	0.925	Accepted
5	The interpretation does not contradict other Quranic verses and does not contradict his opinion with the stipulation of other verses	0.05052	100%	0.925	Accepted
6	The interpretation does not contradict authentic hadiths and does not set opinions that are contrary to the matters established by the hadiths	0.05052	100%	0.925	Accepted
7	The interpretation does not contradict the principal or opinions agreed by scholars in the discipline of Islamic studies such as 'aqidah, fiqh, akhlaq, sirah, and others	0.04811	100%	0.91667	Accepted
8	The interpretation does not contradict the meaning of the Arabic language and does not interpret the Quran words and arrangement with interpretations contrary to the meaning of the language, its use, and the alterations of words.	0.06174	100%	0.90833	Accepted
9	Not claiming that the interpretation is what Allah means without a proof	0.06174	91%	0.90833	Accepted

Conditions:*Threshold value ≤ 0.2
** Percentage of Experts' Agreement ≥75%
***All alpha-cut value for each item exceeds α-cut =0.5

All items of the conditions of Quranic exegesis using the opinion in Table 3 have met all the requirements to confirm the level of experts' consensus: the average threshold value (d) obtained less than 0.2, the percentage of the expert agreement exceeded 75%, and the alpha cut value exceeded 0.5. Meanwhile, the items were sorted according to priority based on the highest Fuzzy score.

According to the findings, the conditions of Quranic exegesis using the opinion can be categorized into two parts: the conditions related to ethics and the contents of interpretation. The conditions relating to the ethics involve items 1-4 and item 9, while conditions relating to the interpretation content involve items 5-8. These findings show that experts emphasise the conditions concerning ethics more than the conditions relating to interpretation content. The importance of ethics in interpreting the Quran using the opinion is observed in the context of the companion's commentaries on the Quran interpretation. Their commentaries have value because of the safety of their purpose of using the Quran for personal gain. At the same time, the initial emphasis on ethics will ensure that the content of the interpretation meets the set conditions.

The findings show that experts' consensus has been achieved on the conditions for interpreting the Quran using the opinion, which includes nine elements. The items are also sorted by priority. The findings are consistent with the opinion of Al-Dhahabi (2000), Al-Khalidi (2008), and the FGD findings on the conditions in interpreting the Quran using the opinion without considering the priority ranking of the elements involved.

CONCLUSION

In designing and developing the forms for integrating Quranic verses with acquired knowledge and its conditions, a design has been made based on the literature review. Then, Focus Group Discussion was held to comment on the design. An experts' consensus on the design has been obtained using Fuzzy Delphi Method (FDM). The forms involve eleven items which are discussion of concept and the Quranic approach, explanation of function, feature, process, cause and effect, rational explanation of aspects of language, explanation of Islamic legislation's wisdom and historiography and geography of the stories in the Quran, inspirational innovation by the Quran, and translational technology from the Quran.

The experts' consensus has also been reached for the conditions of integrating Quranic verses with acquired knowledge consisting of nine items. The experts emphasise the conditions concerning ethics more than the conditions relating to interpretation content. The findings provide guidelines for integrating Quranic verses with acquired knowledge. This study has significant implications for using new methods, namely design and development research. This study also contributes to the Quranic studies itself using quantitative and qualitative studies that combine various methods in one study. Further study can focus on developing modules or reviewing the existing literature on integration based on the findings.

AUTHORS' CONTRIBUTIONS

This article was the result of a significant scientific contribution in the research done by five authors including in the concept and design of the research article, Ahmad Bazli Ahmad Hilmi; Methodology, Muhammad Hafiz Saleh; Data collection, analysis and interpretation of research data, Wan Nasyrudin Wan Abdullah and Afrizal Nur; The authors who made meaningful contributions to the data curation, writing-original draft preparation, writing-review and editing; Adibah Sulaiman, completion, and final editing, Ahmad Bazli Ahmad Hilmi. All authors have read and agreed to the published version of the manuscript.

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