

Fuzzy Delphi Application of Key Components for ICT-Based Tahfiz Teaching Model Development Design

Azmil Hashim^{1*}, Mardhiah Yahaya², Miftachul Huda¹

¹Universiti Pendidikan Sultan Idris, Tanjung Malim, Malaysia

²Kolej Universiti Islam Antarabangsa, Selangor, Malaysia

Abstract: Tahfiz (memorizing sciences) education is no longer foreign, and it was first accepted ten years ago. Its status of the 21st-century education, which empowers the use of ICT in teaching, requires implementing changes from the viewpoint of teaching. This article aims to obtain expert consensus on designing key components of the tahfiz teaching model based on information and communication technology (ICT) by the Fuzzy Delphi method (FDM) approach using a 7-point Likert scale. The design of the main components for the development of this model is based on the Assure Model. A total of six items for the questionnaire component were given to experts to be evaluated. Next, the data were analyzed using the FDM method, which employs Fuzzy triangle numbering (Triangular Fuzzy Numbers) and Defuzzification Processes. The findings of the study have shown that expert agreement on the main components for the development of this model is good and accepted after the overall expert agreement exceeding 75% as threshold value ($d < 0.2$ and Fuzzy score ($A \geq \alpha$ - cut = 0.5) were obtained. The main components are arranged in the order of priority and refined with improvements recommended by experts.

Keywords: Fuzzy Delphi application, key components, ICT-based tahfiz teaching model, development design.

基于信息通信技术的塔菲兹教学模型开发设计关键部件的模糊德尔福应用

摘要: 塔菲兹 (记忆科学) 教育不再是外国的, 它在十年前首次被接受。其在 21 世纪教育中赋予信息通信技术在教学中使用的地位, 需要从教学的角度实施变革。本文旨在通过使用李克特 7 点量表的模糊德尔菲法 (FDM) 方法, 就设计基于信息和通信技术 (信息通信技术) 的塔菲兹教学模型的关键组成部分获得专家共识。该模型开发的主要组件的设计基于保证模型。问卷部分共有六个项目提供给专家进行评估。接下来, 使用 FDM 方法分析数据, 该方法采用模糊三角形编号 (三角模糊数) 和去模糊化过程。研究结果表明, 对于开发该模型的主要组成部分, 专家一致意见良好, 并且在整体专家一致意见超过 75% 后被接受, 阈值 ($d < 0.2$ 和模糊评分 (一个) $\geq \alpha$ - 切 = 0.5)。主要组件按优先级顺序排列, 并根据专家的建议进行改进。

关键词: 模糊德尔福应用、关键组件、基于信息通信技术的塔菲兹教学模型、开发设计。

1. Introduction

Education has become a major focus for Information and Communication Technology (ICT) to develop society, especially in developed countries. ICT

is considered a powerful tool to promote social and economic development. In the current boom phase of information technology, there is change after change in aspects of human life. Human dependence on ICT is

Received: October 25, 2021 / Reviewed: November 23, 2021 / Accepted: December 16, 2021 / Published: January 28, 2022

Fund Project: Research Management and Innovation Centre (RMIC), Sultan Idris Education University, Perak, Malaysia (University Research Grant 2020-0164-107-01)

About the authors: Azmil Hashim, Universiti Pendidikan Sultan Idris, Tanjung Malim, Malaysia; Mardhiah Yahaya, Kolej Universiti Islam Antarabangsa, Selangor, Malaysia; Miftachul Huda, Universiti Pendidikan Sultan Idris, Tanjung Malim, Malaysia

Corresponding author Azmil Hashim, azmil@fsk.ups.edu.my

proof that we are moving in line with the 4.0 industrial revolution that is raging around the world. Therefore, it is necessary for every teacher to prepare themselves to make changes in teaching patterns and knowledge delivery with high mastery of technology to face greater challenges to the world of Islamic education in particular.

The teaching process is the delivery of skills, knowledge, attitudes, and values that require topic planning, objectives, content standards, and learning standards, delivery, and assessment methods consistent with students' existing abilities. The sophistication and current technological challenges of tahfiz education should not be left behind to change the teaching angle characteristic of 21st-century education. However, many studies still discuss the improvement in tahfiz teaching [1], [2]. The teaching pattern of tahfiz, which is often considered backward, is among the causes of this problem

In addition, teachers' rigid and static teaching is the cause of the boredom of tahfiz students in the classroom [3], while 21st-century education emphasizes careful planning [4]. Objectives, content, strategies, clarity of approach, and logic of teaching materials are important in planning. In contrast, the process of planning and implementation of 21st-century learning is based on four principles, namely (1) student-centered learning, (ii) collaborative learning, (iii) contextual learning, and (iv) involving the community. Consistent with the view of al-Qabisi [5] that the effective teaching process of tahfiz is to meet the characteristics of methods and techniques such as listening, seeing, reading, and writing that involve a variety of senses. Thus, looking at the needs of 21st-century education and effective teaching of tahfiz stated in [5] then clearly shows ICT to be an important element in helping change teacher teaching and student understanding.

Changes in the teaching of tahfiz become a necessity when the institution of tahfiz becomes part of the framework of Islamic Education in Malaysia. Furthermore, now the increasing demand in the Education sector has become a factor in the increase in tahfiz institutions in Malaysia. Therefore, tahfiz education needs to have a quality methodology by which truth is reached (manhaj) and model that is even capable and effective in line with the philosophy and goals of Islamic Education [6].

Based on the initial survey, previous studies clearly show the need to develop tahfiz teaching models with ICT elements. Therefore, researchers have chosen the Assure Model as the main model for developing this tahfiz teaching model. The Assure model is an instructional design model for systematically planning media use [7]. This model also serves to provide guidance for planning and operating using media. The suitability of the features found in the Assure Model is

expected to help teachers teach and convey knowledge more clearly and effectively to achieve the objectives that follow the learning objectives.

1.1. Assure Model

The model formulated in [7] is designed for teaching that uses media systematically. It serves as a guide for teachers to conduct teaching more effectively. This model has six steps that are applied in planning a lesson, namely:

1. Student analysis
2. State the objectives
3. Choose methods, media, and materials
4. Use of media and materials
5. Student involvement
6. Assessment

1.2. Objectives of the Study

This study aims to design and develop key components in an ICT -based tahfiz teaching model based on consensus and expert views.

1.3. Research Questions

What are the main components in the ICT-based tahfiz teaching model based on the consensus and views of experts?

2. Research Methodology

The main components are formed by reviewing the existing literature and models. Therefore, the components in the existing model are made as to the main components for the development of ICT -based tahfiz teaching model. However, each element is evaluated and validated by a group of experts to strengthen the element to meet the study context requirements. This process uses analysis based on the FDM approach. Then the questionnaire was distributed to 11 experts who have expertise in the field according to the context of this study. All data were analyzed using the FDM technique approach.

2.1. Study Respondents and Study Sampling

The purposeful sampling (purposive sampling) method is used in this study because it coincides with the context of the study that requires the views and consensus of experts on a matter. A total of 11 experts were involved in this study based on their experience and expertise in their respective fields. The number of experts for the Delphi technique ranges from 10 to 15 people if the experts can get a high level of agreement with each other [8].

The category of experts for the design and development phase of this model corresponds to the research context. The research involved experts in tahfiz al-Quran and al-Qiraat, lecturers of al-Quran and al-Qiraat, drafters of Tahfiz Education program, experts

in Islamic Education pedagogy, Information Technology Education, and lecturers in information technology. This expert selection process is based on [9], stating that experts are those involved in a field for five years consistently. However, it was stressed in [10] that the experts involved must be highly skilled and experienced in the field.

3. Results

FDM Implementation Steps [11]:

1. Selection of respondents: This study used 11 field experts according to the context of this study. They consist of experts in the field of al-Quran and al-Qiraat, experts in pedagogy, and experts in the field of ICT to obtain agreement for the main components of the ICT-based tahfiz teaching model. Researchers choose to meet face-to-face with experts in selected fields to facilitate the discussion process.

2. The construction of a questionnaire using another alternative approach that can be used is to use a questionnaire taken from the relevant literature review according to the context of the study.

3. Dissemination and Collection of data. Researchers have used face-to-face methods with experts individually.

4. Conversion of linguistic variables into triangular fuzzy numbering.

Table 1 Measurement statements for an item and fuzzy scale values

Variables	Fuzzy scale
Strongly disagree	(0,0,1,0,3)
Disagree	(0,1,0,3,0,5)
Simple Agree	(0,3,0,5,0,7)
Agree	(0,5,0,7,0,9)
Strongly Agree	(0,7,0,9,1,0)

5. Data analysis (triangular fuzzy number). This step is based on the triangular fuzzy number and provides the threshold value (d). A condition must be complied with that the value of (d) must be less than or equal to 0.2. The value (d) of two fuzzy numbers m is calculated using the formula as in the equation below:

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

6. Data analysis (Defuzzification Process). This step is done to determine the value of the percentage of expert agreement. It is necessary to avoid the condition in this step that the value of the expert accuracy percentage must be equal to or greater than 75% for each item.

7. Data Integration. This step uses the Defuzzification Process to obtain the fuzzy score value (A), and the value of the fuzzy score (A) must be greater than or equal to the median value (a-cut value) of 0.5. This condition indicates that the element is accepted by expert consensus. The formula for obtaining the fuzzy score value (A) is as follows:

Nilai skor fuzzy (A)

$$A = 1/3 * (m_1 + m_2 + m_3)$$

Triangular Fuzzy Numbers

1) Threshold value (d) \leq 0.2

2) Expert Agreement Percentage \geq 75%

Defuzzification Process

3) Fuzzy score (A) \geq α - cut = 0.5

Table 2 Key components of tahfiz teaching model based on expert consensus according to fuzzy Delphi analysis (FDM)

Expert	Main component					
	Pupil Analysis	Teaching Objectives	Selection of methods	Use of media and materials	Pupil Involvement	Assessment
1	0.039	0.023	0.051	0.049	0.025	0.037
2	0.039	0.023	0.051	0.111	0.025	0.125
3	0.174	0.152	0.104	0.111	0.131	0.125
4	0.220	0.023	0.104	0.111	0.025	0.037
5	0.039	0.023	0.051	0.049	0.025	0.037
6	0.220	0.243	0.291	0.281	0.266	0.268
7	0.039	0.023	0.051	0.049	0.025	0.037
8	0.039	0.023	0.104	0.111	0.025	0.125
9	0.220	0.243	0.051	0.281	0.025	0.268
10	0.174	0.152	0.104	0.111	0.131	0.125
11	0.174	0.152	0.104	0.111	0.131	0.125
Threshold Value (d) Each Major Component	0.125	0.098	0.97	0.125	0.076	0.0119
Expert Agreement Percentage %	100	100	100	100	100	100
Fuzzy Score (A)	0.848	0.864	0.897	0.891	0.879	0.882
Ranking	6	5	1	2	4	3

The results show a threshold value of 0.2 ($>$ 0.2) for all items, indicating that all the main components in the teaching model are less than 0.2. In this case, the item has reached a good expert agreement. Furthermore, the overall percentage for all major component items is 100%, which is more than 75%. This result means that the conditions of the expert agreement for this item are accepted. All defuzzification process values should exceed \geq α - cut = 0.5, but it must be dropped if the data is less than 0.5. This analysis shows that the main components of the tahfiz teaching model based on ICT elements have received expert agreement and approval. Therefore, the items agreed and agreed based on the views of experts are arranged in order of priority (ranking), as shown in Table 1.

4. Analysis and Discussion

The analysis findings against expert consensus display the value of the good and acceptable agreement. Thus, this study answers the research question that points to the main components based on expert consensus in developing the tahfiz teaching model based on ICT elements. The ranking order according to the FDM method is as in Table 3.

Researchers chose the Assure model as the main model based on the development of this tahfiz teaching model because the Assure Model provides the best teaching as a guide to plan and conduct teaching that uses technology. The Assure model is a procedural guide for instructional planning and providing instruction that incorporates the integration of media materials. The determination of the suitability of

teaching results from a complete teaching development process that is subsequently able to achieve the best objectives.

Table 3 Key components by ranking (FDM)

Main component	Ranking
Selection of methods, media and materials	1
Continuation of Table 3	
Use of media and materials	2
Assessment	3
Student involvement	4
Teaching objectives	5
Student analysis	6

As a result of the evaluation of these views, the component is made the main one in the tahfiz teaching model with ICT elements. The consensus from an expert group eventually formed a ranking of 1 to 6, according to the context of tahfiz teaching. The method, media, and material selection component are ranked first, followed by the media and material use component, the assessment component, the student engagement component, the objective teaching component, and ending with the student analysis component.

Ranking 1, which is the selection of methods, media, and materials, coincides with the views of some scholars [5], [12]-[13] and Mohd Farouq (1427 H). The importance of the method in the subject of memorization is not only to achieve the student's objective, but it also follows the Sirah as Rasullullah SAW received revelation from Jibril AS by way of talaqi musyafahah [18]-[20].

The need for this method element is very important because it can enable students to achieve the set targets since it is a measure to provide understanding to students in a systematic way in the short term to achieve objectives. The integration of ICT in teaching will definitely change the approach to the PdP process that will take place. Teacher-centered teaching changed to student-centered teaching, which will make the process more oriented to the process of exploration and discovery based on constructivist theory [14].

The elements of media and materials are formed from the methods used and adapted to the needs in the subject of memorization. According to [7], media is used to channel information or substitute teacher communication channels in the teaching process. The advantages of teaching media that are now changing and evolving over time have more recent advantages that can be adapted according to the teaching of tahfiz.

The 2nd component, according to the ranking, is the use of media and materials. The importance of ICT is to smooth the PdP process apart from saving time, energy, and money. Therefore, the suitability of this component as the 2nd ranking is appropriate and appropriate after the selection component of methods, media, and materials as the main component.

According to [15], selecting media with interesting animation, sound, and graphics makes the presentation more conducive and attracts students' interest. In fact, the recommendation from the Ministry of Education, Malaysia (MOE) also sees ICT can function as a tool to revolutionize learning, enrich the curriculum, develop pedagogy, effective school organizational structuring, effective school-community relations, and improve student mastery [21]-[22].

The media element is important in this research because the media became the main tool used to develop this study model. Therefore, appropriate media and materials play an important role in making the teaching objectives achieve the best targets. This provision supports the view that students will feel involved in the learning process because ICT will create interactivity among students. Thus, ICT here serves as a tool to strengthen and improve the ability to understand and remember lessons. The use of ICT is the best approach in line with the current generation's interest, which is friendlier to gadgets and communication tools.

Assessment is the third component, coinciding with [5]: assessment is a factor strengthening the teaching and learning system. In addition, he also believes that to have a solid mission and implementation of Quranic Education is through evaluation. This assessment should be continuous, i.e, every day, week, and ending with the final test. As suggested by [12], this assessment can be done in two forms, namely syafawi (oral) and tahriri (written). Therefore, researchers have taken the initiative to divide this form of evaluation into three levels, according to its suitability. Next, assessment is also an assessment of the achievement or not of a teaching objective.

According to the ranking, the student involvement component is the fourth component because student involvement will involve active learning and cooperative learning. Consistent with [16], active learning creates different ways of learning, resulting in a situation of opportunity to interact in a creative way for the students themselves. Thus, it is necessary to encourage them to understand and develop knowledge actively. It was concluded in [17] that teachers need to instill encouragement to students, such as language aspects, willingness to do activities, and explore learning topics fully. In turn, this encouragement will stimulate student engagement and create a healthy and engaging learning environment.

The fifth component is the teaching objective. Teaching objectives should be appropriate to the subject of memorization so that teachers are more focused on important things and should be mastered by students. Thus, teachers can state the teaching objectives in the classroom clearly, whether it is cognitive, affective, or psychomotor objectives [23]. In addition, the application of ICT in the construction of

teaching objectives greatly helps teachers formulate more effective and planned memorization subject teaching objectives. Evidence of this effectiveness is supported by a statement that the objective effectiveness of a media material is very necessary to see the effectiveness of media materials used in teaching and learning. In addition, formulating teaching objectives that help use ICT will make learning more extensive and help teachers plan appropriate activities for students to achieve optimal results in the objectives.

The final component of this tahfiz teaching model, according to consensus, is student analysis. The analysis of students is very important because, based on the facts explained in the literature review, identifying the characteristics of students can eliminate the bored attitude of students in the classroom and achieve the objectives of teacher teaching. Next, it is important to build good media material because it suits the students' backgrounds. The formation of this element of student analysis is built based on three dimensions found in the analysis of students, namely general characteristics, specific competencies, and learning styles. For example, the suitability of excellent, average, and weak students is adjusted according to learning styles, whether visual, auditory, or kinesthetic. When students' learning styles can be identified by the teacher, handling students in the classroom in teaching will be easier and more interesting.

The analysis and support from the views of scholars prove the arrangement of the main components of the tahfiz teaching model based on ICT elements following the pattern of practice and teaching of tahfiz. The component begins with selecting methods, media, and materials that are very appropriate in the teaching process, as has been done by the Angel Gabriel US to the great patron of the Prophet Muhammad SAW through the method of talaqi musyafah. In the end, with the component of teaching objectives and student analysis after going through the process of assessment and student involvement. It makes teaching more effective and systematic after identifying the category of students according to excellent, moderate, or poor levels. Next, the process is sequential according to the six components that have been formed.

5. Conclusion

The formation of key components in the teaching of tahfiz will positively impact the world of tahfiz Education. An orderly arrangement of priorities according to the agreement of experts is logical and suitable as a reference source for teachers in implementing the teaching process more effectively according to the latest educational trends, namely the application of ICT. It also helps teachers add knowledge and skills in preparation for teaching so that tahfiz education progresses in line with other educational advances.

Acknowledgment

This paper is based on the research project entitled Pembinaan Indeks Piawaian Kurikulum Pengajian Tahfiz Ke Arah Pengiktirafan Kurikulum Institusi Tahfiz Swasta di Malaysia [Construction of Tahfiz Study Curriculum Standards Index towards Curriculum Recognition of Private Tahfiz Institutions in Malaysia]. The authors would like to thank the Research Management and Innovation Centre (RMIC), Sultan Idris Education University, Perak, Malaysia, for the University Research Grant (2020-0164-107-01) that helped fund the research.

References

- [1] YAHAYA M. *Penilaian Program Tahfiz Ulul Albab di Maktab Rendah Sains MARA* (Unpubslied master's thesis). Universiti Pendidikan Sultan Idris, 2017.
- [2] HASHIM A, & TAMURI A H. Perspektif murid terhadap kaedah pembelajaran Tahfiz al-Quran di Malaysia. *Journal of Islamic and Arabic Education*, 2012, 4(2): 1-10.
- [3] RAHIM M M A. Pengajaran Mata Pelajaran Hafazan Al-Quran: Suatu Kajian Maahad Tahfiz Al-Quran Zon Tengah. Paper Project master's: Fakulti Sains Kognitif dan Pembangunan Manusia: Universiti Pendidikan Sultan Idris, 2008
- [4] MOHAMAD ALI A, KARIM N A, MOHAMED A, & ISMAIL N. Aplikasi gaya pengajaran dan pembelajaran aktif dalam subjek Kemahiran Dinamika bagi merealisasikan pendidikan abad ke-21. *Sains Humanika*, 2018, 10(3-2), <https://doi.org/10.11113/sh.v10n3-2.1487>.
- [5] AL-QABISI. *Abi Hasan Ali Muhammad Khalaf. Ar-Risalah al-Mufassolah li ahwal al- mua'allimin wa ahkam al-mua'allimin wal muta'alimin*. Kaherah: Dar Ehya' al-Kutub al Arabiyyah, 1955.
- [6] ISMAIL S. 2016. Institusi Tahfiz di Malaysia: Prospek dan cabaran. Simposium Tahfiz al-Quran Peringkat Antarabangsa. 23-24 Oktober 2016. Institut Latihan Islam Malaysia (ILIM) Bangi
- [7] HEINICH R, MOLENDI M, RUSSELL J D, & SMALDINO S E. *Instructional Media and Technologies for Learning*, 7th Edition. Pearson. 2002.
- [8] ADLER M, & ZIGLIO E. *Gazing into the oracle: The Delphi Method and its application to social policy and public health*. London: Jessica Kingsley Publishers, 1996.
- [9] BERLINER D C. Describing the Behavior and Documenting the Accomplishments of Expert Teachers. *Bulletin of Science, Technology & Society*, 2004, 24(3): 200-212.
- [10] DALKEY N C, & HELMER O. An experimental application of the Delphi Method to the use of experts. *Management Science*, 1963, 9(3), 458 - 468.
- [11] MOHD JAMIL M R, SIRAJ S, HUSSIN Z, et al. *Pengenalan Asas Keadah Fuzzy Delphi Dalam Penyelidikan Rekabentuk Pembangunan*. Minda Intelek Agency, Bangi Selangor, 2014.
- [12] ABU AL-FIDA' M I. *Kaifanahfazul Quran*. Kaherah: Darul Salam, 2006
- [13] AL-SYARBINI I A M. *As-Sabilila al-Jinan bi Bayan KaifaYuhfazul Quran*. Zaqaziq: Dar IbnuKathir, 2004.

- [14] JENSEN J W, & FREDERICK H. Using constructivism as an alternative to teacher-centered instruction. In ALEXANDER K. (Ed.) *Teaching Family and Consumer Sciences in the 21 Century* (pp. 153-159). Lubbock, TX: Texas Tech University, 2016.
- [15] MAIMUN M, MANDALA H, & ARIFUDDIN. Ideology in tempo magazine advertising: a critical discussion analysis. *International Research Journal of Management, IT and Social Sciences*, 2018, 5(6): 40-51. <https://doi.org/10.21744/irjmis.v5n6.336>
- [16] MEYERS C, & JONES T B. *Promoting Active Learning: Strategies for the College Classroom*. San Francisco, CA: Jossey-Bass Inc., 1993.
- [17] PARSONS J, & TAYLOR L. Improving Student Engagement. *Current Issues in Education*, 2011, 14(1): 1-33. Available from <https://cie.asu.edu/ojs/index.php/cieatasu/article/view/745>
- [18] NOVEBRI N, & DEWI S. Correlation between Students' Ability to Memorize the Qur'an and Students' Learning Achievement at Islamic Boarding Schools in Indonesia. *Khalifa: Journal of Islamic Education*, 2020, 4(2): 118-141.
- [19] MUSA M G B, YUSOP M H N B, SOPEE M M B M, & ALI N A M. i-Tasmik mobile platform—Enabling tahfiz student to memorize Al-Quran independently. *Proceedings of the IEEE International Conference on Information and Communication Technology for the Muslim World (ICT4M)*, 2018: 24-29.
- [20] HASHIM A. Correlation between strategy of Tahfiz learning styles and students' performance in Al-Qur'an memorization (Hifz). *Mediterranean Journal of Social Sciences*, 2015, 6(2 S5): 85-85.
- [21] TAAT M S, TALIP R, & MOSIN M. The influence of curriculum and school climate on the academic attitude of tahfiz students in Malaysia. *International Journal of Evaluation and Research in Education*, 2021, 10(3): 807-815.
- [22] YUSUF S A M, NOH M A C, & RAZAK K A. Tahfiz Teachers Ability in Teaching of the Subject Hifz Quran in Implementing Integrated Curriculum Tahfiz (KBT) Secondary Schools. *International Journal of Academic Research in Business and Social Sciences*, 2019, 9(5), 836-850.
- [23] THAHA H, RUSTAN E, & SUBHAN S. Learning Model Development of Memorizing the Qur'an Through Integration of Internal and External Representation. *Journal of Education, Teaching and Learning*, 2021, 6(1): 95-101.
- 参考文:**
- [1] YAHAYA M. 玛拉低科学学院 塔赫菲兹·乌卢尔·阿尔巴布 项目的评估 (未发表的硕士论文)。苏丹伊德里斯教育大学, 2017.
- [2] HASHIM A 和 TAMURI A H. 学生对马来西亚 塔赫菲兹古兰经 学习方法的想法。伊斯兰和阿拉伯教育杂志, 2012, 4 (2) : 1-10。
- [3] RAHIM M M A. 哈法赞古兰经 科目的教学: 马哈德·塔赫菲兹·古兰经 中区的研究。论文项目硕士: 认知科学与人类发展学院: 苏丹伊德里斯教育大学, 2008
- [4] MOHAMAD ALI A, KARIM N A, MOHAMED A 和 ISMAIL N. 在动态技能学科中应用主动教学和学习方式实现 21 世纪教育。人文科学, 2018, 10(3-2), <https://doi.org/10.11113/sh.v10n3-2.1487>。
- [5] AL-QABISI. 阿比·哈桑·阿里·穆罕默德·卡拉夫。将铅笔盒的情况以及铅笔盒和铅穆塔明的裁决的详细信息发送给我。开罗: 阿拉伯书籍复兴之家, 1955。
- [6] ISMAIL S. 2016。马来西亚塔赫菲兹机构: 前景与挑战。古兰经国际排名研讨会。2016 年 10 月 23 日至 24 日, 马来西亚伊斯兰培训学院(伊利姆) 班吉
- [7] HEINICH R, MOLENDI M, RUSSELL J D, 和 SMALDINO S E。教学媒体和学习技术, 第 7 版。皮尔逊。2002。
- [8] ADLER M, 和 ZIGLIO E. 凝视预言: 德尔菲法及其在社会政策和公共卫生中的应用。伦敦: 杰西卡·金斯利出版社, 1996。
- [9] BERLINER D C. 描述行为和记录专家教师的成就。科学、技术与社会公报, 2004, 24(3): 200-212。
- [10] DALKEY N C, 和 HELMER O. Delphi 方法在专家使用中的实验应用。管理科学, 1963, 9(3), 458 - 468。
- [11] MOHD JAMIL M R, SIRAJ S, HUSSIN Z 等。开发设计研究中的德尔福模糊方法基本介绍。智力思维机构, 万宜雪兰莪, 2014。
- [12] ABU AL-FIDA' M I. 凯法纳法祖尔古兰经。卡赫拉: 达鲁尔·萨拉姆, 2006
- [13] AL-SYARBINI I A M. 萨比利亚济南毕巴彦开法无法祖尔 古兰经。扎卡齐克: 达尔伊布努卡蒂尔, 2004。
- [14] JENSEN J W, 和 FREDERICK H. 使用建构主义作为以教师为中心的教学的替代方案。在 ALEXANDER K. (Ed.) 在 21 世纪教授家庭和消费者科学 (第 153-159 页)。德克萨斯州拉伯克: 德克萨斯理工大学, 2016 年。
- [15] MAIMUN M, MANDALA H, 和 ARIFUDDIN. 节奏杂志广告中的意识形态: 批判性讨论分析。国际管理、信息技术与社会科学研究杂志, 2018, 5(6): 40-51. <https://doi.org/10.21744/irjmis.v5n6.336>
- [16] MEYERS C, 和 JONES T B. 促进主动学习: 大学课堂策略。加利福尼亚州旧金山: 乔西-巴斯公司, 1993。
- [17] PARSONS J 和 TAYLOR L. 提高学生参与度。当前的教育问题, 2011, 14 (1) : 1-33。可从 <https://cie.asu.edu/ojs/index.php/cieatasu/article/view/745> 获得
- [18] NOVEBRI N 和 DEWI S. 印度尼西亚伊斯兰寄宿学校学生记忆古兰经的能力与学生学习成绩之间的相关性。哈利法: 伊斯兰教育杂志, 2020, 4 (2) : 118-141。
- [19] MUSA M G B, YUSOP M H N B, SOPEE M M B M, & ALI N A M. 一世-塔斯米克移动平台——让塔菲兹学生独立背诵古兰经。IEEE 穆斯林世界信息和通信技术国际会议 (ICT4M) 论文集, 2018: 24-29。
- [20] HASHIM A. 塔菲兹 学习风格策略与学生在古兰经记忆 (希夫兹) 中的表现之间的相关性。地中海社会科学杂志, 2015, 6 (2 S5) : 85-85。
- [20] HASHIM A. 塔菲兹 学习风格策略与学生在古兰经记忆 (希夫兹) 中的表现之间的相关性。地中海社会科学杂志, 2015, 6 (2 S5) : 85-85。

[21] TAAT M S, TALIP R, 和 MOSIN M. 课程和学校氛围对马来西亚 塔菲兹 学生学术态度的影响。国际教育评估与研究杂志, 2021, 10(3): 807-815。

[22] YUSUF S A M、NOH M A C 和 RAZAK K A. 塔菲兹 教师在实施综合课程 塔菲兹 (KBT) 中学中教授 古兰经学科的能力。国际商业与社会科学学术研究杂志，2019, 9(5), 836 – 850。

[23] THAHA H、RUSTAN E 和 SUBHAN S. 通过整合内部和外部表征来开发记忆古兰经的学习模型。教育、教学与学习杂志，2021, 6 (1) : 95-101。