



Research article

Skills-based curriculum design for culinary course in Traditional Tahfiz institutions

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ABSTRACT

Traditional Tahfiz institutions have poor curriculum focus and design, resulting in graduates with poor employability skills. To overcome this issue, these institutions must embrace a skill-based curriculum, particularly for culinary courses. Thus, the purpose of this study is to determine the relevant objectives, learning content, delivery method, and assessment technique for Culinary Courses offered by traditional Tahfiz institutions. Twenty Tahfiz and culinary experts were selected for the Fuzzy Delphi Method utilising a purposive sample technique. According to the findings, the experts conclusively accepted all proposed objectives and learning activities. On the other hand, only 14 items representing content of learning, two items representing teaching modes, five items representing assessment activities, and three items representing assessment levels were acceptable. Generally, these items have reached a consensus value of above 80%. In summary, the proposed curriculum design serves as a useful reference for developing graduates' employability skills in addition to their Quranic knowledge and memorising skills. However, it is recommended that future studies develop a module based on the findings of this study in order to successfully introduce Culinary Courses in traditional Tahfiz institutions.

1. Introduction

Recently, the importance of Islamic-based education platforms, especially in memorizing Al-Quran, has been acknowledged by most parents in Malaysia. Therefore, the number of institutions (Tahfiz) that offer Quranic study has been increased over the years, including government-aided, private-funded, and individual-funded institutions (Ismail, 2016; Norsalim et al., 2021). Tahfiz institutions, among other important educational institutions, are expected to provide graduates who are knowledgeable, skilful and possess high employability skills in their respective fields (Ministry of Education Malaysia (MOEM), 2012, 2015). Therefore, these institutions should have an organized curriculum and certification to ensure their graduates are well accepted in their future work fields. Under the Education Development Master Plan 2015–2025 (MOEM, 2015) and National Key Result Areas (NKRA), educational institutions are allowed to conduct various subjects and specializations under the supervision of the ministry. Therefore, to strengthen the outcomes of Tahfiz institutions, the introduction of skills-based courses has been initiated and closely supervised by the Department of Skills Development, under the Ministry of Human Resources (Ismail, 2016; Norsalim et al., 2021).

However, the concern arises from the poor quality of curriculum and delivery in a number of Tahfiz institutions, specifically traditional Tahfiz institutions. These institutions implement their own curriculum depending on their personal preferences (Ahmad et al., 2018; Norsalim et al., 2021). Even though the education ministry has tried to coordinate the curriculum in Tahfiz institutions, there are still differences in its implementation across these institutions. On the other hand, the focus of the curriculum should not only focus on Quranic memorization, analysis and understanding of its content. Supposedly, these skills are linked with academic components. In fact, naqli (the knowledge from al-Quran) and aqli (the conventional knowledge) should be accurately introduced and taught in parallel to the current world of Islam (Norsalim et al., 2021; Mohamad et al., 2016). Even more disheartening, the huffaz (those who memorise and understand the Quran) are struggling to connect Quranic knowledge with conventional academic knowledge (Ismail, 2016).

Culinary arts are among the most popular vocational courses available at these institutions. Across selected seven Tahfiz institutions that conducted vocational subjects under the *Pendidikan Islam Sepanjang Hayat* programme, culinary is found to be a popular choice (Yusuf, 2016). One of the possible justifications is that they perceived this course would help to enhance their employability. Suhairom (2016) asserts that the culinary

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field offers various job opportunities and is across sectors, such as hospitality and tourism. In fact, culinary arts are considered one of the important fields of work in Malaysia and is categorized as an active National Occupational Skills Standards (NOSS) under hospitality and tourism (Department of Skills Development, 2017, 2021). In addition, the importance of Halal food production and preparation is majorly emphasized in these institutions. They believe that food and its sources are important to understand, as stated in the al-Mu'minun, verse 51:

“O messengers, eat from the good foods and work righteousness. Indeed, I, of what you do, am Knowing.”

Mat Yasim (2011) affirms that Halal food knowledge and preparation are important to the development of these students. Therefore, the understanding of how to prepare and produce food is an important point to be emphasized in these institutions. Realizing its importance to students' overall development in traditional Tahfiz institutions, the introduction of the vocational subject, specifically culinary, is vital. As a result of the poor curriculum design and implementation in traditional Tahfiz institutions, there is a need to look at experts' opinions to make sure that we come up with a good curriculum for a culinary class in these institutions.

1.1. Traditional Tahfiz

Historically, Tahfiz informal education began in mosques and huffaz residences with an informal curriculum aimed at developing basic Quranic reading skills in addition to other Islamic knowledge—“*farḍhu ain*” and “*kifayah*” (Fakhruddin et al., 2020; Hashim 2004; Shuib 1995). This unstructured curriculum and practise was also referred to as “*sekolah pondok*” education, which was conducted and funded by private individuals or non-governmental organisations (Ahmad et al., 2018). He continued by stating that this educational platform is also known as “*Maahad Tahfiz*” and is headed by former students of Tahfiz schools in India and Pakistan. For example, one of Malaysia's oldest Tahfiz schools is Terengganu's Maahad Tahfiz Kubang Bujuk, which was founded in 1982. Students as young as 12 years old are admitted to this school, which focuses on three primary subjects: Alim (the study of Islamic books), Nazari (fluency in Quranic recitation), and memorization of the al-Quran. However, this institution is poorly managed in terms of administration and student admissions (Nawi and Salleh, 2017), and it lacks a formal framework for rewarding students for their excellent Quranic memorization and knowledge (Hameed et al., 2003).

In summary, traditional Tahfiz schools are typically: a) funded by individuals or non-governmental organisations; b) built in a temporary location provided by individuals—either through rental or donation; c) located in outskirts areas, such as village areas; d) managed by the local community and a small percentage of members from political parties and government officers; e) select students solely on the basis of their ability to recite the Quran; and f) award students. Currently, the management body is appointed by the institutions themselves, as funding is derived from fundraising and student fees. Additionally, the certificates awarded to students are frequently rejected by local and international universities, jeopardising their future prospects (Abdullah, 2013).

1.2. Industry-based curriculum

One of the important aspirations of UNESCO-UNEVOC is to TVET is able to enhance general education outcomes, graduates' employability and their life-long learning skills (UNESCO, 2011, 2018). TVET is a potential education platform to produce more skilled workers for a country and close the poverty gaps (UNESCO, 2011, 2018). TVET has the potential to produce more skilled workers for a country while also closing poverty gaps (UNESCO, 2011, 2018). An industry-based curriculum is the fundamental concept used within TVET institutions. This curriculum, according to Jamaludin et al. (2021), and Nagendra et al. (2013), serves as a guideline for students to develop relevant working skills and

performance requirements for future jobs. Jamaludin et al. (2021), and Odora and Naong (2014) describe this curriculum as focusing on enriching students' technical knowledge and competencies through experiential and entrepreneurship training. As a result, student involvement in industry for teaching and learning is a critical component of this curriculum. This means that educational institutions will provide theoretical and practical learning experiences, as well as industrial training, to ensure that students are able to link and apply what they have learned while completing a real task in an industrial setting. This is consistent with the Cognitive Apprenticeship theory. Collins, Brown, and Newman (1987) emphasised the importance of practical work and learning from industry experts in this theory to help students strengthen their knowledge and improve their working competencies.

In a nutshell, an industry-based curriculum is one that includes: a) clear targets for developing working skills and academic knowledge; b) an organised framework for developing knowledge and skills related to work and career development; c) a clear focus on personal and social skills; and d) activities related to their future work (Wellington, 1993).

1.3. The current study

Concerns regarding ineffective curriculum design in present traditional Tahfiz institutions are warranted (Hameed et al., 2003; Ismail, 2016; Norsalim et al., 2021). Additionally, to ensure that the outcomes of these institutions align with our educational aspiration to produce students who are knowledgeable, skilled, and possess a high level of employability skills (MOEM, 2012, 2015), a skills-based curriculum must be implemented in the current traditional Tahfiz institutions. To this purpose, the current project aims to create a skills-based curriculum for a culinary course offered at traditional Tahfiz institutions. As a result, this study will attempt to address the following research questions:

- (1) What are the relevant objectives for the proposed curriculum, based on the experts' opinions?
- (2) What is the relevant content of learning for the proposed curriculum, based on the experts' opinions?
- (3) What is the relevant method of delivery for the proposed curriculum, based on the experts' opinions?
- (4) What is the relevant method of assessment for the proposed curriculum, based on the experts' opinions?

2. Methodology

The Fuzzy Delphi Method or FDM was used to reach consensus among selected experts on the objectives, content of learning, delivery method, and assessment method for introducing Culinary Courses in traditional Tahfiz institutions. This method employs an evaluation cycle to reach expert consensus on relevant suggestions or opinions regarding a specific field of study (Kaufman and Gupta, 1988; Siraj et al., 2013). According to Mustapha and Darusalam (2018), the FDM is a widely used method in research to:

- (1) avoid bias in judgement, as the panel of experts are remained anonymous.
- (2) ensure that the feedback is thorough in its representation of relevant suggestions.
- (3) statistically, based on expert consensus, determine the most pertinent suggestions.

A thorough review of the literature was used to generate the initial recommendations for learning objectives, content, delivery method, and assessment. The literature's pertinent suggestions were evaluated, and additional suggestions were gathered during an initial interview with six experts in Tahfiz and culinary arts. This is implemented to maintain that the context of the study and the curriculum design process are relevant to the preliminary findings from the literature (Ellis and Levy, 2010; Siraj

et al., 2013). Following that, the FDM instrument was developed and distributed to all of the selected experts (20 from both the Tahfiz and culinary fields). The findings from this process were used to develop the curriculum.

2.1. Sampling

A total of 20 experts from the Tahfiz and culinary (in TVET institutions) fields were selected for this study using a purposive sampling technique. This technique was selected to help achieve relevant results for the conducted study (Chua, 2010; Mustapha and Darusalam, 2018; Siraj et al., 2013). In this study, the number of experts selected was acceptable for FDM because it exceeded the minimum sampling of ten experts (Siraj et al., 2013). Because the study only included a panel of experts from TVET and Tahfiz institutions, all experts provided written consent, agreeing that their responses could be recorded, used, and quoted without revealing their personal information. The following are the selection criteria for TVET culinary experts:

- (1) have working experience more than five years
- (2) have at least degree in respective TVET fields
- (3) have experience in teaching and training in respective TVET fields.

On the other hand, for Tahfiz experts, the selection criteria are as follows:

- (1) have working experience more than five years
- (2) have at least certificate in Quranic memorization
- (3) be actively involved in any Tahfiz organization
- (4) be administrators or owners of any Tahfiz institutions.

2.2. Instrument

The FDM instrument was initially developed following a thorough examination of the literature on skill-based curriculum for culinary and Tahfiz education. This instrument used a five-point Likert scale, with 1 representing 'strongly disagree' and 5 representing 'strongly agree.' This scale was chosen because it is comprehensive and reliable in collecting data (Chua, 2010; Mustapha and Darusalam, 2018). Initially, this instrument was presented to six carefully chosen experts for revision. Additional pertinent information was incorporated, and the final instrument, which contains 55 items (refer to Table 1) divided into five distinct sections (Section A: Demographic (5 items), Section B: Objectives (8 items), Section C: Content of Learning (18 items), Section D: Methods of Delivery (12 items), and Section E: Methods of Assessment (12 items), was presented to all 20 experts.

2.3. Data analysis

The current study follows the six-step FDM data analysis suggested by Siraj et al. (2013). The first step is to identify relevant experts for FDM. In

Table 1. The domains in the instrument.

Section	Domain	No. of items
A	Demographic of respondents	5
B	Objectives	8
C	Content of learning	18
D	Methods of delivery: learning activities	7
	Methods of delivery: teaching delivery modes	5
E	Methods of assessment: assessment activities	6
	Methods of assessment: assessment levels	6
	Total	55

this study, 20 experts were selected from both the Tahfiz and culinary fields. Second, once the instrument has been completed, the five-point Likert scale responses were converted into fuzzy scales, as shown in Table 2.

This means that if the response to an item is "strongly agree," the fuzzy scale is (0.60, 0.80, 1.00). All items must be converted to this scale in order to be converted to fuzzy numbers (linguistic scale).

Third, the calculation of the average distance between two fuzzy numbers was conducted. The calculation follows the following formula (1):

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

- d = threshold value
- m₁ = average of the minimum value
- m₂ = average of the average value
- m₃ = average of the maximum value
- n₁ = fuzzy number (minimum)
- n₂ = fuzzy number (average)
- n₃ = fuzzy number (maximum)

Next, the d value and consensus value were identified based on the above formula. Mustapha and Darusalam (2018), and Siraj et al. (2013) cautioned that the d value (for each item based on the expert's response) must be equal or smaller than 0.2, and the group consensus must be above 75%. The calculation of group consensus was based on the average of the threshold value (d) for each item in the instrument that was accepted (d ≤ 0.2). However, if the value did not meet the criteria, the second round of FDM should be conducted.

For instance, in Figure 1, for Item 6, there are four experts' responses that reach d value above 0.2. Consequently, the number of items that achieved d < 0.2 was six and the consensus value was only 60%.

In the next step, once all values (d and consensus values) have been achieved, the fuzzy assessment values were aggregated. This was followed by a procedure known as defuzzification, which included converting the value to a crisp actual number (Siraj et al., 2013). The items were ranked from most acceptable to least agreeable using defuzzification values ranging from 0 to 1 (Mustapha and Darusalam, 2018). Items having a high degree of unanimity were chosen as pertinent components for this curriculum design.

3. Findings

3.1. Demographic of selected experts

Table 3 below summarises the demographic characteristics of the experts selected for this study. Twelve Tahfiz education experts were drawn from Maahad Tahfiz and Maahad Tahfiz TVET (eight experts each), as well as the Tahfiz Association (four experts each), which included Persatuan Institusi Tahfiz al Quran Kebangsaan (PINTA), Persatuan Madrasah Tahfiz al Quran Malaysia (PERMATA), and Persatuan Institusi Tahfiz al Quran Negeri Selangor (PITAS). The remaining four experts represented a range of TVET institutions, including the Department of Skills Development, Universiti Teknologi MARA, Community

Table 2. Fuzzy scale.

Linguistic scale	Fuzzy scale
Strongly disagree	(0.00, 0.10, 0.20)
Disagree	(0.10, 0.20, 0.40)
Slightly agree	(0.20, 0.40, 0.60)
Agree	(0.40, 0.60, 0.80)
Strongly agree	(0.60, 0.80, 1.00).

EXPERT	ITEM							
	1	2	3	4	5	6	7	8
1	0.1	0.1	0.3	0.1	0.1	0.1	0.2	0.1
2	0.2	0.1	0.1	0.2	0.2	0.3	0.1	0.2
3	0.1	0.3	0.3	0.1	0.2	0.3	0.2	0.2
4	0.2	0.3	0.1	0.1	0.1	0.1	0.1	0.1
5	0.1	0.4	0.4	0.1	0.1	0.4	0.1	0.1
6	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2
7	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
8	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
9	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
10	0.2	0.1	0.1	0.2	0.1	0.3	0.2	0.2
d value for each item	1.276	1.240	1.240	1.150	1.348	1.438	1.474	1.474
Total of d value	10.639/(10X8)=0.133							
d value for construct	0.133							

	ITEM							
	1	2	3	4	5	6	7	8
Total of accepted items	10	7	7	10	10	6	10	10
Consensus value (%)	100%	70%	70%	100%	100%	60%	100%	100%
Overall total of accepted item	70							
Overall consensus value (%)	(70/80)*100=87.5%							

Figure 1. Calculation of d (for each item based on the expert's response) and consensus values.

College, and other regional TVET institutions. The majority of experts (eight experts) have advanced degrees in their professions and have worked in their fields for more than 10 years (ten experts).

3.2. Objectives

For objectives of the proposed curriculum design, all eight items were accepted by experts. These items have achieved a consensus value of 85% and above. The overall findings of FDM analysis for this construct are presented in Table 4 below.

The experts agreed that the objective of the proposed curriculum design should:

- (1) instil entrepreneurship values among Tahfiz students
- (2) provide direction to further their studies in the skills-based field
- (3) provide direction for their future career
- (4) equip Tahfiz students with added values
- (5) encourage Tahfiz students to be actively involved in community
- (6) ensure Tahfiz students feel accepted in the mainstream education
- (7) provide organized co-curricular activities that can be awarded certification

Table 3. Demographic of selected experts.

Working Institution		Field of Expertise	
Institution	Frequency	Field	Frequency
Maahad Tahfiz	8	Culinary (TVET)	8
Higher Education	8	Tahfiz Education	12
Tahfiz Association	4	Total	20
Total	20	Working Experience	
Education Level		Years	
Level	Frequency	Five to ten years	Frequency
Certificate	2	More than ten years	10
Diploma	2	Total	20
Degree	8		
Master's Degree	6		
Doctoral Degree	2		
Total	20		

- (8) reduce the drop-out rate due to stress among Tahfiz students.

3.3. Content of learning

For the content of learning in the proposed curriculum design, only 14 out of 18 items were accepted by experts. These items have achieved a consensus value of 85% and above. The overall findings of the FDM analysis for this construct are presented in Table 5 below.

The experts agreed that the content of learning for the proposed curriculum design should focus on:

- (1) kitchen cleanliness, safety and food management
- (2) foundation of entrepreneurship

Table 4. Objectives of the curriculum.

Item	Total of accepted items (d < 0.2)	Consensus value	Defuzzification value	Rank
1. Instill entrepreneurship values among Tahfiz students	19	95	0.790	1
2. Provide direction to further their studies in the skills-based field	18	90	0.780	2
3. Provide direction for their future career	18	90	0.780	2
4. Equip Tahfiz students with added values	18	90	0.780	2
5. Encourage Tahfiz students to be actively involved in community	17	85	0.770	5
6. Ensure Tahfiz students feel accepted in the mainstream education	20	100	0.760	6
7. Provide organized co-curricular activities that can be awarded certification	20	100	0.760	6
8. Reduce the drop-out rate due to stress among Tahfiz students	19	95	0.720	8

- (3) industrial training
- (4) the foundation of cost control
- (5) cooking techniques
- (6) Malaysian delights (local kuih)
- (7) basic cake making and decoration production
- (8) main dishes
- (9) introduction to local cuisine
- (10) introduction to bread and pastry
- (11) breakfast meals
- (12) appetizers
- (13) foundation of pastry and confectionary
- (14) introduction to Western cuisine.

Nevertheless, the experts disagreed that the content of learning should be focusing on:

- (1) hawker ethnic food
- (2) Indian ethnic food
- (3) Chinese ethnic food
- (4) Malay ethnic food.

3.4. Methods of delivery

The methods of delivery construct is divided into two parts: a) learning activities and b) teaching modes. For the learning activities of the proposed curriculum design, all seven items were accepted by the experts. These items have achieved a consensus value of 85% and above. The overall findings of the FDM analysis for this construct are presented in Table 6 below.

The experts agreed that the learning activities for the proposed curriculum design should include:

- (1) field visit
- (2) teacher demonstration
- (3) practical
- (4) group works
- (5) theory
- (6) community project
- (7) industrial training.

On the other hand, for the learning modes of the proposed curriculum design, only two items were accepted by experts. These items have

achieved a consensus value of 80% or above. The overall findings of the FDM analysis for this construct are presented in Table 5.

The experts agreed that the learning modes for the proposed curriculum design should be conducted as:

- (1) full learning in Tahfiz school
- (2) part-time learning in the Private Skills-based Colleges.

Nevertheless, the experts disagreed that learning modes for the proposed curriculum design should be conducted as:

- (1) modular courses conducted in neighbouring Community College during weekends (part-time)
- (2) National Dual Training System format, conducted as part-time learning in registered companies
- (3) short courses conducted by Giat Mara.

3.5. Methods of assessment

The methods of assessment construct is divided into two categories: a) assessment activities and b) assessment levels. For assessment activities of the proposed curriculum design, only five items were accepted by experts. These items have achieved a consensus value of 85% or above. The overall findings of the FDM analysis for this construct are presented in Table 7 below.

The experts agreed that the assessment activities for the proposed curriculum design should be conducted through:

- (1) teacher observation
- (2) individual practical work
- (3) student demonstration
- (4) written test
- (5) portfolio.

As for the assessment activities, the experts disagreed that it should be done by looking at the lab report.

On the other hand, for the assessment levels of the proposed curriculum design, only three items were accepted by experts. These items have achieved a consensus value of 80% and above. The overall findings of the FDM analysis for this construct are presented in Table 6.

The experts agreed that the assessment levels for the proposed curriculum design should be:

Table 5. Content of learning.

Item	Total of accepted items (d < 0.2)	Consensus value	Defuzzification value	Rank
1. Kitchen cleanliness, safety and food management	19	95	0.753	1
2. Foundation of entrepreneurship	20	100	0.753	1
3. Industrial training	18	90	0.753	1
4. Foundation of cost control	18	90	0.741	4
5. Cooking techniques	18	90	0.729	5
6. Malaysian delights (local <i>kuih</i>)	18	90	0.706	6
7. Basic cake making and decoration production	18	90	0.706	6
8. Main dishes	18	90	0.694	8
9. Introduction to local cuisine	18	90	0.694	8
10. Introduction to bread and pastry	18	90	0.694	8
11. Breakfast meals	17	85	0.682	11
12. Appetizers	17	85	0.682	11
13. Foundation of pastry and confectionary	17	85	0.682	11
14. Introduction to Western cuisine	17	85	0.659	14
15. Hawker Ethnic Food	15	75	0.541	Rejected
16. Indian Ethnic Food	15	75	0.541	Rejected
17. Chinese Ethnic food	14	70	0.529	Rejected
18. Malay Ethnic Food	9	45	0.588	Rejected

Table 6. Methods of delivery.

Item	Total of accepted items (d < 0.2)	Consensus value	Defuzzification value	Rank
Learning Activities				
1. Field visit	18	90	0.780	1
2. Teacher demonstration	17	85	0.770	2
3. Practical	17	85	0.770	2
4. Group works	17	85	0.770	2
5. Theory	19	95	0.740	5
6. Community project	19	95	0.740	5
7. Industrial training	18	90	0.700	7
Teaching Modes				
1. Full learning in <i>Tahfiz</i> school	16	80	0.643	1
2. Part-time learning in the Private Skills-based Colleges	16	80	0.550	2
3. Modular courses conducted in neighbouring Community College during weekends (part-time)	5	25	0.630	Rejected
4. National Dual Training System format, conducted as part-time learning in registered companies	4	20	0.590	Rejected
5. Short courses conducted by Giat Mara	5	25	0.590	Rejected

- (1) short course certificate
- (2) modular certificate
- (3) certification by the school.

However, the experts disagreed that the assessment levels for the proposed curriculum design should be:

- (1) Skills Certificate Level 3
- (2) Skills Certificate Level 2
- (3) Recognition of Prior Achievement.

4. Discussion

Currently, the emphasis of teaching and learning at Tahfiz institutions is divided into two categories: a) solely on the production of huffaz; and b) solely on al-Quran memorising and academic subjects (Awang et al., 2019; Yahaya et al., 2018). However, in traditional Tahfiz, the emphasis is mostly on memorising and understanding the Quran. What is concerning is the low level of education offered at these schools. Previous research, such as those conducted by Taat et al. (2021), Hashim (2010), and Abd Rahim (2008), has shown that ineffective curriculum design has had a detrimental effect on the quality and results of teaching and learning in these institutions. As a significant educational platform, the Ministry of Education Malaysia (2012, 2015) stated that these schools should contribute to the production of graduates who are informed, skilled, and exhibit good characteristics, and who will be well accepted by the industry in the future. The government also noted in the Malaysian Education Blueprint 2015–2025 that contemporary industry providers require graduates to have a solid foundation of technical knowledge and skills, as well as critical thinking abilities. As a result, Tahfiz institutions should be able to assist students in developing these talents.

Recognizing the critical nature of increasing the employability of Tahfiz graduates, a number of Tahfiz associations, including the PINTA, PERMATA, and PITAS, a skills-based curriculum for culinary arts is being developed in this study for the traditional Tahfiz institutions based on expert recommendations and an exhaustive analysis of the literature.

According to the findings of FDM, the proposed curriculum design should be capable of: a) developing relevant employability skills (entrepreneurship and positive values), b) guiding students toward further studies and career advancement, c) recognising their academic achievements with appropriate credentials, and d) assisting students in feeling accepted in mainstream education and lowering the drop-out rate. These results corroborate Wellington's (1998) description of an effective industry-based curriculum. He said that a solid curriculum should have a defined objective and programmes that align with the national curriculum, promote the development of personal and social skills, provide direction for both teaching and learning, as well as career education and guidance. Additionally, the present results provide a feasible solution to the traditional Tahfiz institutions' low performance (Ismail, 2016; Taat et al., 2021).

On the other hand, the curriculum should begin with an introduction to kitchen cleanliness, safety, and food management, as well as the fundamentals of entrepreneurship and industrial visits to assist students grasp the fundamental skills and how they are used in real-world work situations. In keeping with Techanamurthy, Alias, and DeWitt's (2018) research on the establishment of culinary art modules in TVET

Table 7. Methods of assessment.

Item	Total of accepted items (d < 0.2)	Consensus value	Defuzzification value	Rank
Assessment Activities				
1. Teacher observation	17	85	0.770	1
2. Individual practical work	18	90	0.770	1
3. Student demonstration	20	100	0.760	3
4. Written test	20	100	0.730	4
5. Portfolio	19	95	0.720	5
6. Lab report	6	30	0.620	Rejected
Assessment Levels				
1. Short course certificate	17	85	0.700	1
2. Modular certificate	19	95	0.690	2
3. Certification by the school	16	80	0.670	3
4. Skills Certificate Level 3	10	50	0.620	Rejected
5. Skills Certificate Level 2	11	55	0.610	Rejected
6. Recognition of Prior Achievement	5	25	0.570	Rejected

institutions, they advocated an introduction to cooking hygiene, safety, and food management, followed by other pertinent culinary skills. Additionally, the recommendation to integrate entrepreneurship as a foundational talent is critical, since it has been identified as a critical employability skill in Malaysia (Jamaludin et al., 2019; MOE, 2012; Malaysian Qualifications Agency (MQA), 2017).

Apart from that, students should be taught cost management skills. In the Secretary's Commission on Achieving Necessary Abilities (SCANS) framework, cost management skills may be considered resource management skills (SCANS, 1992). Indeed, companies place a premium on these talents (Jamaludin et al., 2019; Lerman, 2013; MQA, 2017), and thus, teaching and learning should assist students in developing these abilities.

Apart from that, the curriculum for culinary skills should emphasise the development of cooking techniques, Malaysian delicacies (local "kuih"), basic cake making and decorating, main dishes, appetisers, breakfast meals, traditional Malaysian cuisine, and Western cuisine. The experts' recommended material is consistent with the content of culinary courses offered by TVET colleges. These recommended topics are featured in the Food Production and Preparation course (HT-012-02) of the Malaysian Skills Certificate (Level 2) (Department of Skills Development, 2017).

The experts recommended that both theoretical and practical learning could have been used to offer learning activities. Theoretical learning may be accomplished via activities such as instructor demonstrations and theory classes that convey the foundations of important culinary knowledge and skills. This is significant since the experts' earlier topics required students to learn the fundamentals of: a) kitchen cleanliness, safety, and food management; b) entrepreneurship; and c) cost management skills. On the other hand, to engage students actively, practical activities such as group activities, community work, and industrial training are critical to assisting students in applying their knowledge. Both theoretical and practical activities are consistent with what is currently being implemented in Malaysian TVET colleges. According to Alias et al. (2018), these institutions place an emphasis on improving graduates' technical knowledge and skills in order to prepare them for future employment. Indeed, Collins et al. (1987) emphasised the relevance of practical work in reinforcing theoretical knowledge as described in the Cognitive Apprenticeship Theory.

Even more intriguing, the experts said that the proposed learning activities might be completed as part of a full-time or part-time course at Tahfiz institutions or private skill-based colleges. Unsurprisingly, the proposed suggestion is consistent with the current effort to integrate TVET into Tahfiz institutions. For example, Maahad Tahfiz Vokasional Aman Bistari in Puchong is a pioneer in offering Tahfiz students TVET courses in culinary, fashion, automotive, agriculture, khat, craft, and animation (Maahad Tahfiz Vokasional Aman Bistari, 2018). Therefore, if institutions are adequately equipped and have been granted authorization by appropriate agencies such as the Ministry of Human Resources to conduct such culinary courses, they may completely conduct this course throughout. Alternatively, part-time courses may be offered at nearby Private Skilled Colleges. Collins et al. (1987) stated in the Cognitive Apprenticeship theory that students should be able to train in almost identical settings to those of their future employment in order to develop their working skills other than technical skills and knowledge.

Finally, experts indicated that assessment methods include teacher observation, individual practical work, student demonstration, a written test, and portfolio. The recommended activities are among the assessment methods that are appropriate in our local TVET contexts. According to Alias et al. (2018), assessment should include both theoretical and practical work. Indeed, teaching and learning in TVET are weighted 70:30 (70 percent on practical work, 30% on theoretical knowledge) (MOEM, 2012).

Additionally, the experts proposed that students should be issued skills-based certifications in the form of a short course, modular certification, or school certification. According to Ariffin and Wahid (2016),

the primary focus of Tahfiz TVET is still Quranic memorization and knowledge, and so certification of skills-based courses in the suggested forms is appropriate for awarding to students.

5. Conclusion

In short, the proposed curriculum design can be used as a guide for developing an effective curriculum and, more specifically, modules for culinary courses in traditional Tahfiz institutions. To accomplish the goal of increasing the number of skilled workers in our country, all educational institutions should be capable of providing a supportive learning environment and a curriculum that adequately prepares students for the workforce (MOEM, 2012, 2015). As a significant provider of education, Tahfiz institutions should be able to develop the Quranic knowledge, academic, and professional skills required by today's industry. Thus, the proposed curriculum design paves the way for the development of critical technical knowledge and skills required in Malaysia's culinary industry.

A distinctive pedagogical module should be developed in order to implement Culinary Courses effectively in Traditional Tahfiz institutions. Given that this study is limited to proposing pedagogical components for the course, it is suggested that future researchers develop a specific pedagogical module for introducing Culinary Courses in these institutions.

Declarations

Author contribution statement

Naimah Muhammad: Conceived and designed the experiments; Performed the experiments; Analyzed and interpreted the data; Wrote the paper.

Norlidah Alias; Khairul Azhar Jamaludin: Conceived and designed the experiments; Analyzed and interpreted the data; Wrote the paper.

Hutkemri Zulnadi: Analyzed and interpreted the data; Wrote the paper.

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Additional information

No additional information is available for this paper.

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