CHAPTER V : FINDINGS OF PHASE 2: DESIGN AND DEVELOPMENT OF THE MODEL

5.1 Chapter Overview

This chapter describes the studies conducted using the DDR approach during the model's design and development phase. The design study and the development study of the m-learning hadith model are the two main parts of this study. This phase focuses on designing and developing an m-learning hadith model based on authentic hadith elements. As outlined in Chapter 4, the findings of the needs analysis clearly show the need to develop an m-learning hadith model that focuses on students' acceptance of the use of m-learning. Furthermore, there is a lot of research literature that discusses the need for the use of m-learning in the study of hadith. It also contributes to the development of this m-learning hadith model.

As previously stated, the researcher's focus throughout this phase of the study is on the design of the m-learning hadith model and the development of the m-learning hadith model. For the design phase, the researcher used the Nominal Group Technique (NGT) to obtain expert agreement on the items for the elements in this m-learning hadith model. Meanwhile, in the development phase, the model is developed using the Interpretive Structural Modeling (ISM) approach using Concept Star software. In the next subtopic, the researcher will go through the specifics of how these two methodologies were used to design and develop m-learning hadith models. Thus, this phase focuses on the design and development of the m-learning hadith model based on

authentic hadith elements. The uniqueness of this model is that it is developed based on the consensus of experts who have been selected based on the following research questions:

a) What are the items for the elements in the m-learning hadith model based on authentic hadith elements according to expert consensus?

b) What is the position (ranking) of items for the elements of the m-learning hadith model based on authentic hadith elements according to expert consensus?

c) What is the sequence (priority) of items for the elements of the m-learning hadith model based on authentic hadith elements according to expert consensus?

5.2 Design Analysis of M-learning Hadith Model

This model's design analysis aims to find and extract the elements and items for each model element required to develop the m-learning hadith model. The formation of the m-learning hadith model is based on two existing models. The development of this m-learning hadith model should be considered in the context of hadith study via m-learning. The researcher applied three steps in this design analysis phase to create and produce elements and items for each element required by the m-learning hadith model:

1. Development of m-learning hadith model elements based on existing models.
2. Items development of each element of the model based on expert consensus.
3. Item analysis for each model element based on expert consensus.

5.3 Step 1: Development of m-learning hadith model elements based on existing models

The study on the design of m-learning hadith models is based on two models. The Authentic Hadith Elements and the Inquiry Model are the models in the discussion. Chapter 2 has described in detail the definition of an authentic hadith, which consists of five components:

1. Connected *Isnad* (chains) of narrators
2. *'Adl* (trustworthiness) of narrators
3. *Dhabit* (precision) of narrators
4. No *Syaz* (absence of anomaly)
5. No *I'llah* (absence of defects)

The following are the six components of the inquiry model:

1. Planning
2. Retrieving
3. Processing
4. Creating
5. Sharing
6. Evaluating

In terms of design, there are five elements of the authentic hadith model that have been adapted from the two models described, namely the Authentic Hadith Elements and the Inquiry Model. The model elements used in the formation of the m-learning hadith model based on authentic hadith elements are listed in Table 5.1.

Table 5.1: Design and detailing of the main elements of the m-learning hadith model based on the Authentic Hadith Elements and Inquiry Model

Authentic Hadith Elements	Inquiry Model	M-Learning Hadith	Detail
Connected *Isnad* (chains) of narrators	Planning	Information Validity	The validity of the information refers to the preparation and planning before the start of the learning session to ensure that students are clear on learning. Planning needs to be done to ensure that teaching and learning meet the needs, objectives, and goals of learning. Lecturers must explain the learning objectives to students and assist in ensuring that the information sought is relevant to the learning objectives.
'Adl (trustworthiness) of narrators	Retrieving	Source Reliability	The authenticity of the information obtained should be checked first. The purpose is to ensure the authenticity of the information and avoid obtaining false information. The element of source reliability refers to sources that students can refer to either from hadith books or in online searches. This element is important in ensuring that the resources used by students are of high quality and have been approved by the authorities.
Dhabit (precision) of narrators	Processing	Information Exploratory	The students' task of exploring the learning session begins after they have a clear understanding of the elements of information validity and source reliability. The lecturer explains to the students about hadith *mustolah*, *takhrij* hadith, and methods of identifying the law of hadith in this element. This element is important for students

			to understand the proper method for studying hadith.
No *Syaz* (absence of anomaly) No *I'llah* (absence of defects)	Creating Sharing	Information Analysis	Information analysis is a learning process that requires collaboration between students and lecturers. Students must analyse and present any information acquired, while the lecturer's role is limited to monitoring and providing ideas to the students.
	Evaluating	Information Evaluation	Information evaluation means that the lecturer evaluates the results of the students' findings by making a detailed review. Feedback on the findings from the lecturers is very important. Finally, the lecturer needs to confirm whether the student's findings are accepted or rejected.

The five main elements of the m-learning hadith model serve as the main guide for developing a model. The need to establish the validity of information and the reliability of a source before beginning a learning session should thus be emphasised in the requirement to develop a model that includes the teaching and learning process.

This process involves the construction of items for each element of the authentic hadith model derived from the literature review. In the context of this study, researcher use *takhrij* hadith approach (Faisal 2016), methods of identifying the law of hadith (Faisal 2016), m-learning theory (Miftah 2013), and authentic learning model (Herrington & Oliver, 2000) as a guide to constructing items for each element of the model Table 5.2 displays the construction of items for each element of the model.

Table 5.2: Construction of items for each element of the model

Takhrij Hadith approach (Faisal 2016)	Methods of Identifying the Law of Hadith (Faisal 2016)	M-learning Theory (Miftah, 2013)	Authentic Learning Model (Herrington & Oliver, 2000)
-Takhrij method is based on the narrator of the *sahabat* -Takhrij method is based on the beginning of the word *matan* hadith -Takhrij method based on certain words *matan* hadith -Takhrij method based on hadith theme -Takhrij method is based on the nature or characteristics of *matan* or hadith chain. -Takhrij hadith uses information technology	-Ilmu al-Jarh wa al-Ta'dil -Understanding the method of Tashih and Tad'if -The study of *sanad* -The study of *matan*	-Behaviour -Cognitive -Constructive	-Authentic contexts -Authentic activities -Expert performances -Multiple roles and perspectives -Collaborative Construction of knowledge -Reflection -Articulation -Coaching and scaffolding -Authentic assessment of

The items that had been developed were required to go through a content validation process to evaluate how the items for each model element had been defined (Sekaran & Roger, 2013). According to Burns and Grove (1993), there are three methods for obtaining content validity: literature reviews, representation from relevant populations, and expert panels. According to Creswell (2012), there are two methods to determine the validity of the content: empirical data and a panel of experts in the field studied to validate the questionnaire. Researchers have employed a strategy based on

expert review to obtain content validity, as described by Creswell (2012) and Johnson and Christensen (2012).

In the context of this study, the task of an expert is to evaluate and examine the measurement of a construct, content, or scale and then see to what extent the construct is relevant or related to the concept being measured (Johnson & Christensen, 2012). Three experts have been selected to provide accurate recommendations on the model that will be developed. The following criteria were used to choose the experts:

a) Knowledgeable in the field studied (Delbecq, Van de Ven, & Gustafson, 1975; Hsu & Sandford, 2007; Swanson & Holton, 2009), i.e., at least have a master's in education or a design-related field.

b) Experienced in the field studied. An expert must have experience in the field under study for at least five years (Berliner, 2004a; Hsu & Sandford, 2007).

c) Experts can give their full commitment until the study is completed.

d) Experts have no personal interest in this study. This was done to avoid study bias.

Table 5.3 displays in detail the list of experts involved, where each expert is labelled with EV1, EV2, and EV3. The EV code selection was chosen as an abbreviation for Expert of Validation.

Table 5.3: Demographics of instrument validation experts

Expert	High Education	Expertise	Experience
EV1	Doctor of Philosophy	Al-Qur'an & Sunnah Studies	15
EV2	Doctor of Philosophy	Digital Islamic Studies	5
EV3	Master	Hadith Studies	10

According to Table 5.3, which details the demographics of the selected experts, the impact of expert conversations has resulted in a consensus on the issues, with minor adjustments. The following are the items that the instrument experts have corrected:

5.3.1 Items for Information Validity Elements

1) The lecturers needed to set the objective of learning hadith so that students can confirm the status or authenticity of the hadith using a mobile device

Appropriate

2) The lecturer chose a hadith theme for the assignments that the students had to do using a mobile device.

Appropriate

3) The lecturer guided the students on how to find information related to hadith in the right way.

Appropriate

4) The lecturer introduced the books of hadith for reference by the students.

Appropriate

5) The lecturer introduced the search for hadith on the internet to the students.

Appropriate or more specific to the "hadith search engine".

Suggestions for improvement: The lecturer introduces an authentic hadith search engine on the internet to the students.

6) The lecturer provided an appropriate period for the students to complete the assignment.

Appropriate

7) The lecturer set the appropriate medium to conduct the learning session.

Appropriate

5.3.2 The item for Source Reliability Elements

1) The lecturer revealed the reference sources from the book of Hadith *Muktabar*.

Appropriate

2) The lecturer instructed the students to make hadith-related references from the book of Hadith *Muktabar*.

Appropriate

3) The lecturer checked the reliability of the sources used by the students in completing the assignments from the book of Hadith *Muktabar*.

Appropriate

4) The lecturer revealed hadith-related reference sources from a recognised internet search.

Suggestions for improvement: Lecturers revealed hadith-related reference sources from recognised internet search engines.

5) The lecturer instructed the students to make hadith-related references from recognised internet sources.

Appropriate

6) The lecturers checked the reliability of sources in a recognised internet search.

Suggestions for improvement: Lecturers check the reliability of resources on a recognised internet search engine.

7) The lecturer asked the students to ensure that the internet resources were from an authoritative party.

Appropriate

5.3.3 The item for Information Exploratory Elements

1) The lecturer listed the terms for the types of hadith (*mustolah* hadith)

2) The lecturer introduced the method of *takhrij* hadith

3) The lecturer explained how to identify the narrator of the hadith

4) The lecturer explained how to identify the words in the hadith

5) The lecturer explained how to identify themes, issues, or topics found in the hadith

6) The lecturer explained how to identify certain properties of the chain and the content of the hadith

7) The lecturer explained how to use ICT correctly for *takhrij* hadith

8) The lecturer explained the method of identifying the law/status of a hadith

9) The lecturer introduced the basics of *al-Jarh wa al-Ta'dil*

10) The lecturer introduced the basics of *Tashih* and *Tad'if* methods

11) The lecturer introduced the basics of the study of the hadith chain of narration (Dirasat al-Asanid)

12) The lecturer introduced the basics of the study of hadith textual content (Dirasat al-Matan)

Overall Comment on this Item:

The verbs used should correspond to the elements of the verb 'explore' - to explore, to study, to examine, to research, to investigate - to describe the process of 'investigation'. Terms related to m-learning are also not stated in these statements. Perhaps the medium that exhibits elements of m-learning is expressed.

5.3.4 The item for Information Analysis Elements

1) The lecturer asked the students to do the assignment of researching hadith information individually or in groups using a mobile device.

Appropriate

2) The lecturer asked the students to research the hadith information from the hadith book.

Appropriate

3) The lecturer asked the students to research the hadith information from an internet search.

Suggestion for improvement: The lecturer asked the students to research the hadith information from the internet search result.

4) The lecturer asked the students to identify the study of hadith information using a mobile device.

Appropriate

5) The lecturer asked the students to compile a study of hadith information using a mobile device.

Appropriate

6) The lecturer asked the students to present a study of hadith information to him/her and their peers using a mobile device.

Appropriate

7) The lecturer asked the students to discuss the study of hadith information with him/her and peers using a mobile device.

Appropriate

8) The lecturer asked the students to analyse the hadith information research with him/her and peers using a mobile device.

Appropriate

9) The lecturers monitored student discussions using mobile devices.

Appropriate

10) The lecturer provided insights in the discussion process to meet the set findings through the use of a mobile device.

Appropriate

5.3.5 The item for Information Evaluation Elements

1) The lecturer asked the students to present the findings of the hadith study for evaluated by the lecturer using a mobile device.

Appropriate

2) The lecturer asked the students to give a convincing argument based on the findings of the hadith study using a mobile device.

Appropriate

3) The lecturer asked the students to conclude the findings of the hadith study using a mobile device.

Appropriate

4) The lecturer read each student's assignment based on the findings of the hadith study.

5) The lecturer evaluated each student's assignment based on the findings of the hadith study.

6) The lecturer gave feedback on each student's assignment based on the findings of the hadith study.

7) The lecturer confirmed the findings of the hadith study to the students.

Overall comments for numbers 4, 5, 6 & 7:

Appropriate but added, "using a mobile device" to show the element of m-learning in the given statement.

All of the experts agreed that items for each element of the model had been proposed at an early stage. However, a group of experts has improved this element in

its sentence structure. Thus, the resulting items for each element of the model will be discussed in the next sub-topic.

5.4 Step 2: Item Development for Each Element of the Authentic Hadith Model

The researcher also displays the findings of the items contained in each element of the model. The following are the findings of the item development study for each element of the model:

5.4.1 Item Development for Information Validity Elements

The validity of the information refers to the preparation and planning before the start of the learning session to ensure that students are clear on learning. Planning needs to be done to ensure that teaching and learning meet the needs, objectives, and goals of learning. Lecturers must explain the learning objectives to students and assist in ensuring that the information sought is relevant to the learning objectives. Table 5.4 shows the items found in the information validity element.

Table 5.4: Item of Information Validity

No	Information Validity
1	The lecturers needed to set the objective of learning hadith so that students can confirm the status or authenticity of the hadith using a mobile device.
2	The lecturer chose a hadith theme for the assignments that the students had to do using a mobile device.
3	The lecturer guided the students on how to find information related to the hadith in the right way.
4	The lecturer introduced the books of hadith for reference by the students.
5	The lecturer introduced an authentic hadith search engine on the internet to the students.
6	The lecturer provided an appropriate period for the students to complete the assignment.
7	The lecturer set the appropriate medium to conduct the learning session.

5.4.2 Item Development for Source Reliability Elements

The authenticity of the information obtained should be checked first. The purpose is to ensure the authenticity of the information and avoid obtaining false information. The element of source reliability refers to sources that students can refer to either from hadith books or in online searches. This element is important in ensuring that the resources used by students are of high quality and have been approved by the authorities. Table 5.5 indicates the items found in the source reliability element.

Table 5.5: Item of Source Reliability

No	Source Reliability
1	The lecturer revealed the reference sources from the book of *Hadith Muktabar*.
2	The lecturer instructed the students to make hadith-related references from the book of *Hadith Muktabar*.
3	The lecturer checked the reliability of the sources used by the students in completing the assignments from the book of *Hadith Muktabar*.
4	Lecturers revealed hadith-related reference sources from recognised internet search engines.
5	The lecturer instructed the students to make hadith-related references from recognised internet sources.
6	Lecturers checked the reliability of resources on a recognised internet search engine.
7	The lecturer asked the students to ensure that the internet resources were from an authoritative party.

5.4.3 Item Development for Information Exploratory Elements

In this element, the students' task of exploring the learning session begins after they have a clear understanding of the elements of information validity and source reliability. The lecturer explains to the students about hadith *mustolah*, *takhrij* hadith, and methods of identifying the law of hadith in this element. This element is important for students to understand the proper method for studying hadith. Table 5.6 indicates the items found in the information survey element.

Table 5.6: Item of Information Exploratory

No	Information Exploratory
1	The lecturer listed the terms for the types of hadith (mustolah hadith) for students to explore using mobile devices.
2	The lecturer introduced the method of *takhrij hadith* for students to explore using mobile devices.
3	The lecturer explained how to identify the narrator of the hadith for students to explore using mobile devices.
4	The lecturer explained how to identify the words in the hadith for students to explore using mobile devices.
5	The lecturer explained how to identify themes, issues, or topics found in the hadith for students to explore using mobile devices.
6	The lecturer explained how to identify certain properties of the chain and the content of the hadith for students to explore using mobile devices.
7	The lecturer explained how to use ICT correctly for *takhrij hadith* for students to explore using mobile devices.
8	The lecturer explained the method of identifying the law/status of a hadith for students to explore using mobile devices.
9	The lecturer introduced the basics of *al-Jarh wa al-Ta'dil* for students to explore using mobile devices.
10	The lecturer introduced the basics of *Tashih and Tad'if* methods for students to explore using mobile devices.
11	The lecturer introduced the basics of the study of hadith chain of narration (Dirasat al-Asanid) for students to explore using mobile devices.
12	The lecturer introduced the basics of the study of hadith textual content (Dirasat al-Matan) for students to explore using mobile devices.

5.4.4 Item Development for Information Analysis Elements

Information analysis is a learning process that requires collaboration between students and lecturers. Students must analyse and present any information acquired, while the lecturer's role is limited to monitoring and providing ideas to the students. Table 5.7 indicates the items found in the information research element.

Table 5.7: Item of Information Analysis

No	Information Analysis
1	The lecturer asked the students to do the assignment of researching hadith information individually or in groups using a mobile device.
2	The lecturer asked the students to research the hadith information from the hadith book.
3	The lecturer asked the students to research the hadith information from the internet search results.

4	The lecturer asked the students to identify the study of hadith information using a mobile device.
5	The lecturer asked the students to compile a study of hadith information using a mobile device.
6	The lecturer asked the students to present a study of hadith information to him/her and their peers using a mobile device.
7	The lecturer asked the students to discuss the study of hadith information with him/her and peers using a mobile device.
8	The lecturer asked the students to analyse the hadith information research with him/her and peers using a mobile device.
9	The lecturer monitored student discussions using mobile devices.
10	The lecturer provided insights in the discussion process to meet the set findings through the use of a mobile device.

5.4.5 Item Development for Information Evaluation Elements

Information evaluation means that the lecturer evaluates the results of the students' findings by making a detailed review. Feedback on the findings from the lecturers is important. Finally, the lecturer needs to confirm whether the student's findings are accepted or rejected. Table 5.8 indicates the items found in the information evaluation element.

Table 5.8: Item of Information Evaluation

No	Information Evaluation
1	The lecturer asked the students to present the findings of the hadith study for evaluation by the lecturer using a mobile device.
2	The lecturer asked the students to give a convincing argument based on the findings of the hadith study using a mobile device.
3	The lecturer asked the students to conclude the findings of the hadith study using a mobile device.
4	The lecturer read each student's assignment based on the findings of the hadith study using a mobile device.
5	The lecturer evaluated each student's assignment based on the findings of the hadith study using a mobile device.
6	The lecturer gave feedback on each student's assignment based on the findings of the hadith study using a mobile device.
7	The lecturer confirmed the findings of the hadith study to the students using a mobile device.

5.4.6 Finding of Item for Elements of M-learning Hadith Model

Following the formation of these items, these will be presented to the experts in a Nominal Group Technique (NGT) session. The questionnaire was built through a google form. The experts would evaluate, confirm, reject, and accept the items produced. In other words, a questionnaire was given to balance the roles of all experts where the researcher did not want the dominant expert to have a large impact on this discussion. Therefore, the views of each study participant are equalised by allowing experts to present their ideas in the voting process conducted through the distribution of questionnaires. In this given questionnaire form, the experts are free to submit their ideas through a vote of either accepting or rejecting the elements that have been proposed as a result of discussions that have been debated previously. The use of a five-point Likert scale was used to see the level of expert agreement on the items to be formed in developing an m-learning hadith model. The level of agreement used is as in Table 5.9 below.

Table 5.9: Level of agreement on a Likert scale for the nominal group technique

Linguistic Variables	*Likert Scale*
Strongly Disagree	1
Disagree	2
Neutral	3
Agree	4
Strongly Agree	5

After all the experts filled out the questionnaire distributed online, the researcher analysed it by transferring all the data into Microsoft Excel. However, these pre-ranked

items can no longer be used before seeing the percentage of expert agreement. This is because, through the Nominal Group Technique (NGT) method, the expert agreement is determined based on the percentage value of the expert agreement. The predetermined condition is that the percentage of expert admissions must be equal to or exceed 70%. This perspective is based on the views of Dobbie, Freeman, Rhodes, and Tysinger (2004), who asserted that the percentage of acceptance of an item is based on the percentage of score value where an item-measured acceptance should be at least 70.0% and above based on the views of study participants. To give a clearer understanding of how the percentage of expert agreement is obtained, the researcher has submitted Table 5.10 that shows an example of calculating the percentage score in detail:

Table 5.10: Example of Score Percentage Calculation

Example:
Number of Experts = 7
Highest Score = 5 (Strongly Agree)
Expert X Highest Score = 7 x 5 = 35
(Total Score / Expert X Highest Score) x 100%

Example items:	Score
The lecturers needed to set the objective of learning hadith that students can confirm the status/information of hadith using a mobile device	34

Score Percentage = (34/35) X 100% = 97 %

The percentage scores for each item can be referenced in Table 5.10. Based on the calculation of the percentage score in Table 5.10, it is found that the percentage of acceptance for all items exceeds 70%. Accordingly, all these items were unanimously accepted by experts. The priority position of the items must be determined before they can be entered into the Concept Star software. The ranking of items has been sorted based on the highest percentage to the lowest percentage using the NGT procedure, which has resulted in a comprehensive list of all items sorted by priority.

The following are the findings of the items for each element of the model using NGT:

Table 5.11: Findings of items for information validity elements

No	Information Validity	Score	%	Result	Ranking
1	The lecturers needed to set the objective of learning hadith so that students can confirm the status or authenticity of the hadith using a mobile device.	34	97	Accepted	4
2	The lecturer chose a hadith theme for the assignments that the students had to do using a mobile device.	29	83	Accepted	7
3	The lecturer guided the students on how to find information related to the hadith in the right way.	34	97	Accepted	5
4	The lecturer introduced the books of hadith for reference by the students.	35	100	Accepted	1
5	The lecturer introduced an authentic hadith search engine on the internet to the students.	34	97	Accepted	6
6	The lecturer provided an appropriate period for the students to complete the assignment.	35	100	Accepted	2
7	The lecturer set the appropriate medium to conduct the learning session.	35	100	Accepted	3

Table 5.12: Findings of items for source reliability elements

No	Source Reliability	Score	%	Result	Ranking
1	The lecturer revealed the reference sources from the book of *Hadith Muktabar*.	34	97	Accepted	3
2	The lecturer instructed the students to make hadith-related references from the book of *Hadith Muktabar.*	35	100	Accepted	1
3	The lecturer checked the reliability of the sources used by the students in completing the assignments from the book of *Hadith Muktabar.*	34	97	Accepted	4
4	Lecturers revealed hadith-related reference sources from recognised internet search engines.	33	94	Accepted	7

5	The lecturer instructed the students to make hadith-related references from recognised internet sources.	34	97	Accepted	5
6	Lecturers checked the reliability of resources on a recognised internet search engine.	34	97	Accepted	6
7	The lecturer asked the students to ensure that the internet resources were from an authoritative party.	35	100	Accepted	2

Table 5.13: Findings of items for Information Exploratory elements

No	Information Exploratory	Score	%	Result	Ranking
1	The lecturer listed the terms for the types of hadith (mustolah hadith) for students to explore using mobile devices.	31	89	Accepted	12
2	The lecturer introduced the method of *takhrij hadith* for students to explore using mobile devices.	33	94	Accepted	4
3	The lecturer explained how to identify the narrator of the hadith for students to explore using mobile devices.	33	94	Accepted	5
4	The lecturer explained how to identify the words in the hadith for students to explore using mobile devices.	34	97	Accepted	1
5	The lecturer explained how to identify themes, issues, or topics found in the hadith for students to explore using mobile devices.	33	94	Accepted	6
6	The lecturer explained how to identify certain properties of the chain and the content of the hadith for students to explore using mobile devices.	32	91	Accepted	11
7	The lecturer explained how to use ICT correctly for *takhrij hadith* for students to explore using mobile devices.	33	94	Accepted	7
8	The lecturer explained the method of identifying the law/status of a hadith for students to explore using mobile devices.	34	97	Accepted	2
9	The lecturer introduced the basics of *al-Jarh wa al-Ta'dil* for students to explore using mobile devices.	33	94	Accepted	8

10	The lecturer introduced the basics of *Tashih and Tad'if* methods for students to explore using mobile devices.	34	97	Accepted	3
11	The lecturer introduced the basics of the study of hadith chain of narration (Dirasat al-Asanid) for students to explore using mobile devices.	33	94	Accepted	9
12	The lecturer introduced the basics of the study of hadith textual content (Dirasat al-Matan) for students to explore using mobile devices.	33	94	Accepted	10

Table 5.14: Findings of items for Information Analysis elements

No	Information Analysis	Score	%	Result	Ranking
1	The lecturer asked the students to do the assignment of researching hadith information individually or in groups using a mobile device.	35	100	Accepted	1
2	The lecturer asked the students to research the hadith information from the hadith book.	35	100	Accepted	2
3	The lecturer asked the students to research the hadith information from the internet search results.	33	94	Accepted	9
4	The lecturer asked the students to identify the study of hadith information using a mobile device.	34	97	Accepted	3
5	The lecturer asked the students to compile a study of hadith information using a mobile device.	33	94	Accepted	10
6	The lecturer asked the students to present a study of hadith information to him/her and their peers using a mobile device.	34	97	Accepted	4
7	The lecturer asked the students to discuss the study of hadith information with him/her and peers using a mobile device.	34	97	Accepted	5
8	The lecturer asked the students to analyse the hadith information research with him/her and peers using a mobile device.	34	97	Accepted	6
9	The lecturer monitored student discussions using mobile devices.	34	97	Accepted	7

10	The lecturer provided insights in the discussion process to meet the set findings through the use of a mobile device.	34	97	Accepted	8

Table 5.15: Findings of items for Information Evaluation elements

No	Information Evaluation	Score	%	Result	Ranking
1	The lecturer asked the students to present the findings of the hadith study for evaluation by the lecturer using a mobile device.	34	97	Accepted	1
2	The lecturer asked the students to give a convincing argument based on the findings of the hadith study using a mobile device.	34	97	Accepted	2
3	The lecturer asked the students to conclude the findings of the hadith study using a mobile device.	34	97	Accepted	3
4	The lecturer read each student's assignment based on the findings of the hadith study using a mobile device.	32	91	Accepted	6
5	The lecturer evaluated each student's assignment based on the findings of the hadith study using a mobile device.	31	89	Accepted	7
6	The lecturer gave feedback on each student's assignment based on the findings of the hadith study using a mobile device.	34	97	Accepted	4
7	The lecturer confirmed the findings of the hadith study to the students using a mobile device.	34	97	Accepted	5

After determining the priority position for each item, these items are entered into the Concept Star software according to their priority. These items will be matched with other elements throughout the ongoing ISM session that will be discussed in the next sub.

5.5 Step 3: Analysis of the Development of M-learning Hadith Model

Model development analysis is the second part of the design and development phase of m-learning hadith models. As discussed earlier, the study conducted was aimed at producing a model called the m-learning hadith model, which contains several model elements and items for each element agreed upon by experts involved and experienced in the field of hadith. In the development of m-learning hadith models, researcher use the Interpretive Structural Modeling (ISM) approach as a tool to develop models. In the process of developing the model, there is also a group of experts selected to conduct a vote on the items contained in each element of the model, which is analysed using the Nominal Group Technique (NGT) conducted by researcher in the model design. The purpose of the vote is to determine the order and priority of items contained in the elements of information validity, source reliability, information exploratory, information analysis, and information evaluation that should be conducted by lecturers in conducting learning sessions to ensure information accuracy.

In the development phase of the authentic hadith model, there are five steps to obtaining the findings of the model development. The breakdown of each step performed is as follows:

1. Expert validation of items in the developed model elements
2. Final Item List For Each Model Element Before Going Through Expert Voting
3. Construction of relational and contextual phrases
4. Development of an m-learning hadith model using Interpretive Structural Modeling (ISM) software
5. Presentation and evaluation
6. Analysis and interpretation of the model

5.5.1 Expert Validation of Items in Each Model Element

In this step, a group of experts verified each element in the main elements before the voting process was carried out. The researcher has acted as a facilitator by presenting data consisting of model elements and items for each model element that have been analysed using the method (Nominal Group Technique). All recommendations of the expert panel in the findings of the elements and items for each element of this model are also included and presented to experts to be discussed and agreed upon before the voting is conducted using the Interpretive Structural Modeling (ISM) approach. In step 1 as well, the facilitator re-explained the items for each element of the model before the voting process is completed. All the panel of experts who participated in the voting agreed that the items for each element of the model contained within them were appropriate to the context of the study.

In retrospect, the Interpretive Structural Modeling (ISM) approach is a process that can develop a model based on votes (voting) conducted by a panel of experts in a field. A group of experts must also do this approach face-to-face. The following are seven panels of experts involved in voting using Interpretive Structural Modeling (ISM):

1. Have a PhD-level education in the field of hadith.

2. Have served for more than 5 years.

2. Know the teaching of hadith.

3. Have published articles on the study of hadith related to technology.

5.5.2 Final Item List for Each Model Element

There were seven accepted items for the information validity element, which comprised preparation and planning before beginning the learning session. Experts also agreed on

seven items for source reliability. Meanwhile, the experts accepted and agreed on twelve items for the information exploratory element. The experts agreed on ten items for the information analysis element, while the expert also agreed on seven items for the information evaluation element.

Table 5.16 is a list of final items for information validity elements that were validated by experts before the voting was conducted.

Table 5.16: Final Item for Information Validity

Ranking	**Information Validity**
1	The lecturer introduced the books of hadith for reference by the students.
2	The lecturer provided an appropriate period for the students to complete the assignment.
3	The lecturer set the appropriate medium to conduct the learning session.
4	The lecturers needed to set the objective of learning hadith so that students can confirm the status or authenticity of the hadith using a mobile device.
5	The lecturer guided the students on how to find information related to the hadith in the right way.
6	The lecturer introduced an authentic hadith search engine on the internet to the students.
7	The lecturer chose a hadith theme for the assignments that the students had to do using a mobile device.

Table 5.17 lists seven items for source reliability elements that were agreed upon by the expert panel before the voting process was conducted to see the sequence of items first.

Table 5.17: Final Item for Source Reliability

Ranking	**Source Reliability**
1	The lecturer instructed the students to make hadith-related references from the book of *Hadith Muktabar*.
2	The lecturer asked the students to ensure that the internet resources were from an authoritative party.
3	The lecturer revealed the reference sources from the book of *Hadith Muktabar*.
4	The lecturer checked the reliability of the sources used by the students in completing the assignments from the book of *Hadith Muktabar*.
5	The lecturer instructed the students to make hadith-related references from recognised internet sources.
6	Lecturers checked the reliability of resources on a recognised internet search engine.
7	Lecturers revealed hadith-related reference sources from recognised internet search engines.

Table 5.18 is a final list of twelve items for the information exploratory elements agreed upon by the expert panel before the voting process was conducted.

Table 5.18: Final Item for Information Exploratory

Ranking	**Information Exploratory**
1	The lecturer explained how to identify the words in the hadith for students to explore using mobile devices.
2	The lecturer explained the method of identifying the law/status of a hadith for students to explore using mobile devices.
3	The lecturer introduced the basics of *Tashih and Tad'if* methods for students to explore using mobile devices.
4	The lecturer introduced the method of *takhrij hadith* for students to explore using mobile devices.
5	The lecturer explained how to identify the narrator of the hadith for students to explore using mobile devices.
6	The lecturer explained how to identify themes, issues, or topics found in the hadith for students to explore using mobile devices.
7	The lecturer explained how to use ICT correctly for *takhrij hadith* for students to explore using mobile devices.
8	The lecturer introduced the basics of *al-Jarh wa al-Ta'dil* for students to explore using mobile devices.
9	The lecturer introduced the basics of the study of hadith chain of narration (Dirasat al-Asanid) for students to explore using mobile devices.
10	The lecturer introduced the basics of the study of hadith textual content (Dirasat al-Matan) for students to explore using mobile devices.
11	The lecturer explained how to identify certain properties of the chain and the content of the hadith for students to explore using mobile devices.
12	The lecturer listed the terms for the types of hadith (mustolah hadith) for students to explore using mobile devices.

Table 5.19 is a final list of ten items for the information analysis elements agreed upon by the expert panel before the voting process is conducted.

Table 5.19: Final Item for Information Analysis

Ranking	**Information Analysis**
1	The lecturer asked the students to do the assignment of researching hadith information individually or in groups using a mobile device.
2	The lecturer asked the students to research the hadith information from the hadith book.

3	The lecturer asked the students to identify the study of hadith information using a mobile device.
4	The lecturer asked the students to present a study of hadith information to him/her and their peers using a mobile device.
5	The lecturer asked the students to discuss the study of hadith information with him/her and peers using a mobile device.
6	The lecturer asked the students to analyse the hadith information research with him/her and peers using a mobile device.
7	The lecturer monitored student discussions using mobile devices.
8	The lecturer provided insights in the discussion process to meet the set findings through the use of a mobile device.
9	The lecturer asked the students to research the hadith information from the internet search results.
10	The lecturer asked the students to compile a study of hadith information using a mobile device.

Table 5.20 is a final list of seven items for the information evaluation element agreed upon by the expert panel before the voting process is carried out to see the sequence of information evaluation that needs to be carried out first.

Table 5.20: Final Item for Information Evaluation

Ranking	**Information Evaluation**
1	The lecturer asked the students to present the findings of the hadith study for evaluation by the lecturer using a mobile device.
2	The lecturer asked the students to give a convincing argument based on the findings of the hadith study using a mobile device.
3	The lecturer asked the students to conclude the findings of the hadith study using a mobile device.
4	The lecturer gave feedback on each student's assignment based on the findings of the hadith study using a mobile device.
5	The lecturer confirmed the findings of the hadith study to the students using a mobile device.
6	The lecturer read each student's assignment based on the findings of the hadith study using a mobile device.
7	The lecturer evaluated each student's assignment based on the findings of the hadith study using a mobile device.

5.5.3 Construction of relational and contextual phrases

The contextual relationship is defined as a goal to be achieved by fulfilling all the conditions of limitation or boundaries. From another perspective, it may be defined as

establishing contextual relationships in terms of how the items for each element of the model will be generated and integrated. Expets need to validate and agree the contextual relationships before the ISM session begins. Before beginning the ISM session, the researcher must ensure that all experts agree on the relational and contextual phrases to be used. This may be accomplished by using relational and contextual phrases. In the context of this study, all experts agreed to use the following contextual and relational phrases:

Contextual Phrases: To develop an m-learning hadith model based on authentic hadith elements, item…

Relationship Phrases: Must be a priority before...

To provide a clear understanding of the phrase contextual relationship, the researcher has further detailed by giving the following examples:

To develop an m-learning hadith model based on authentic hadith elements, item *the lecturer introduced the books of hadith for reference by the students* should be a priority before item *the lecturer provided an appropriate time for the students to perform the assignment*.

5.5.4 Development of m-learning hadith model using Interpretive Structural Modeling (ISM) software

This phase involves a voting process by the experts to make a decision through the ISM software i.e. Concept Star involves each pair of items displayed by the software. As a consequence, a moderator from the previous NGT process will act as a facilitator in this phase explaining the process presented by the Concept Star software. A voting process was also conducted on items for each element of the model consisting of information validity, source reliability, information exploration, information analysis, and

information evaluation. Experts will vote on the relationship between the items that have been displayed.

Figure 5.1 shows the formation of a model for information validity elements based on expert voting through the Interpretive Structural Modeling (ISM) approach.

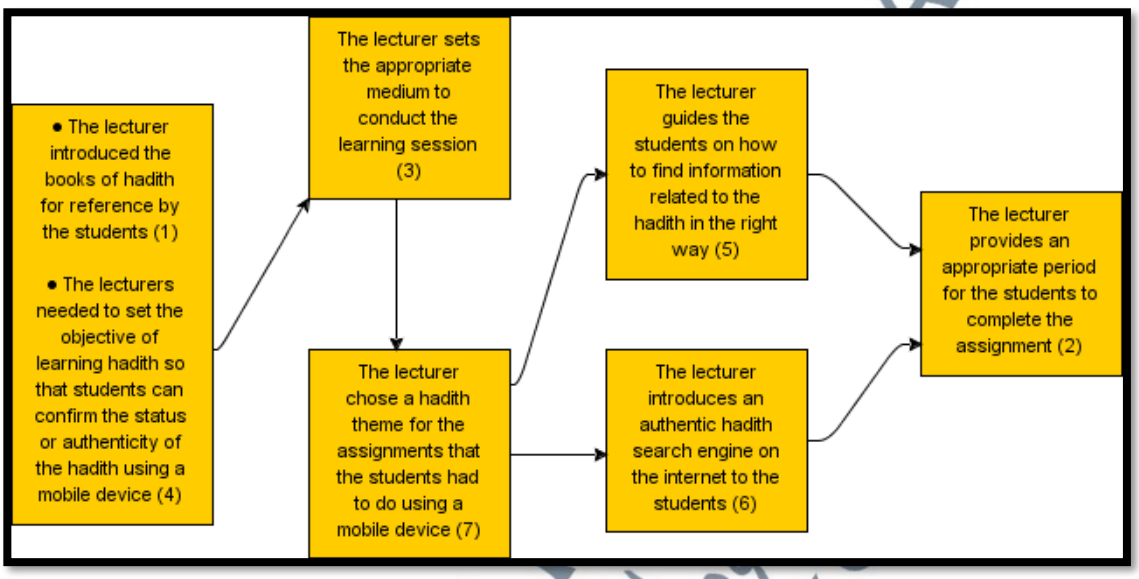

Figure 5.1: Model Information Validity

Based on Figure 5.1, it clearly shows the order of priority for the information validity elements. Figure 5.2 shows the model structure for the source reliability element based on the experts voting using Interpretive Structural Modeling (ISM) software.

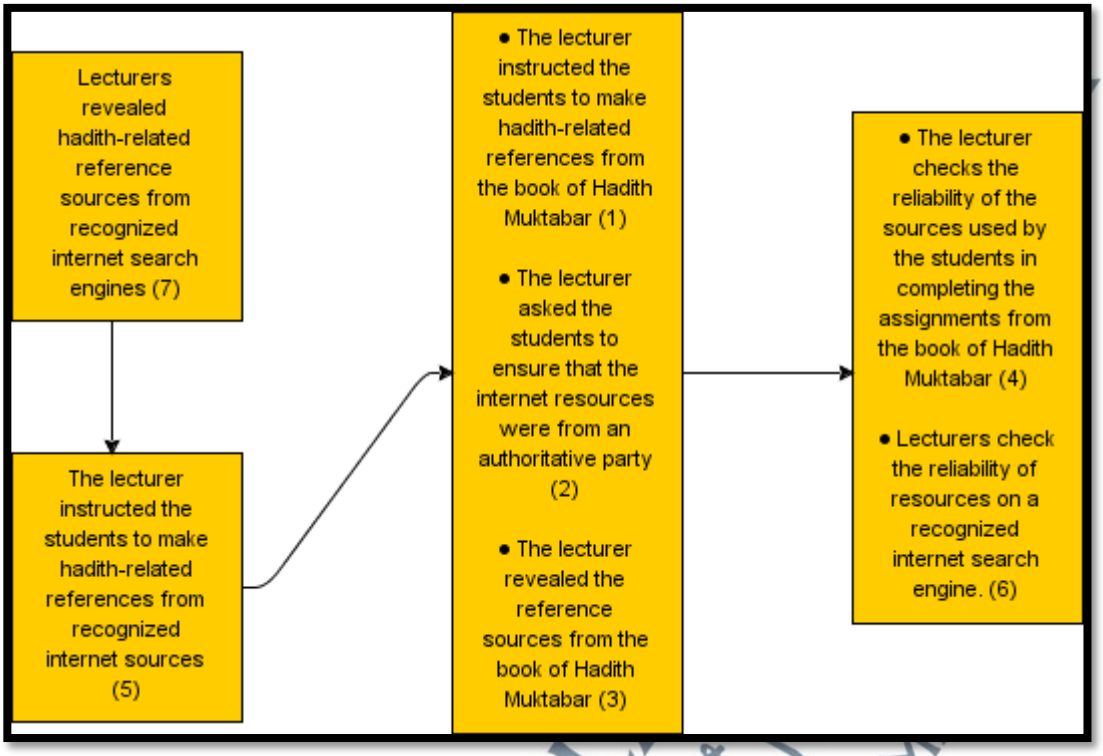

Figure 5.2: Model Source Reliability

Meanwhile, Figure 5.3 shows the results of the experts voting using Interpretive Structural Modeling (ISM) for the information exploratory element.

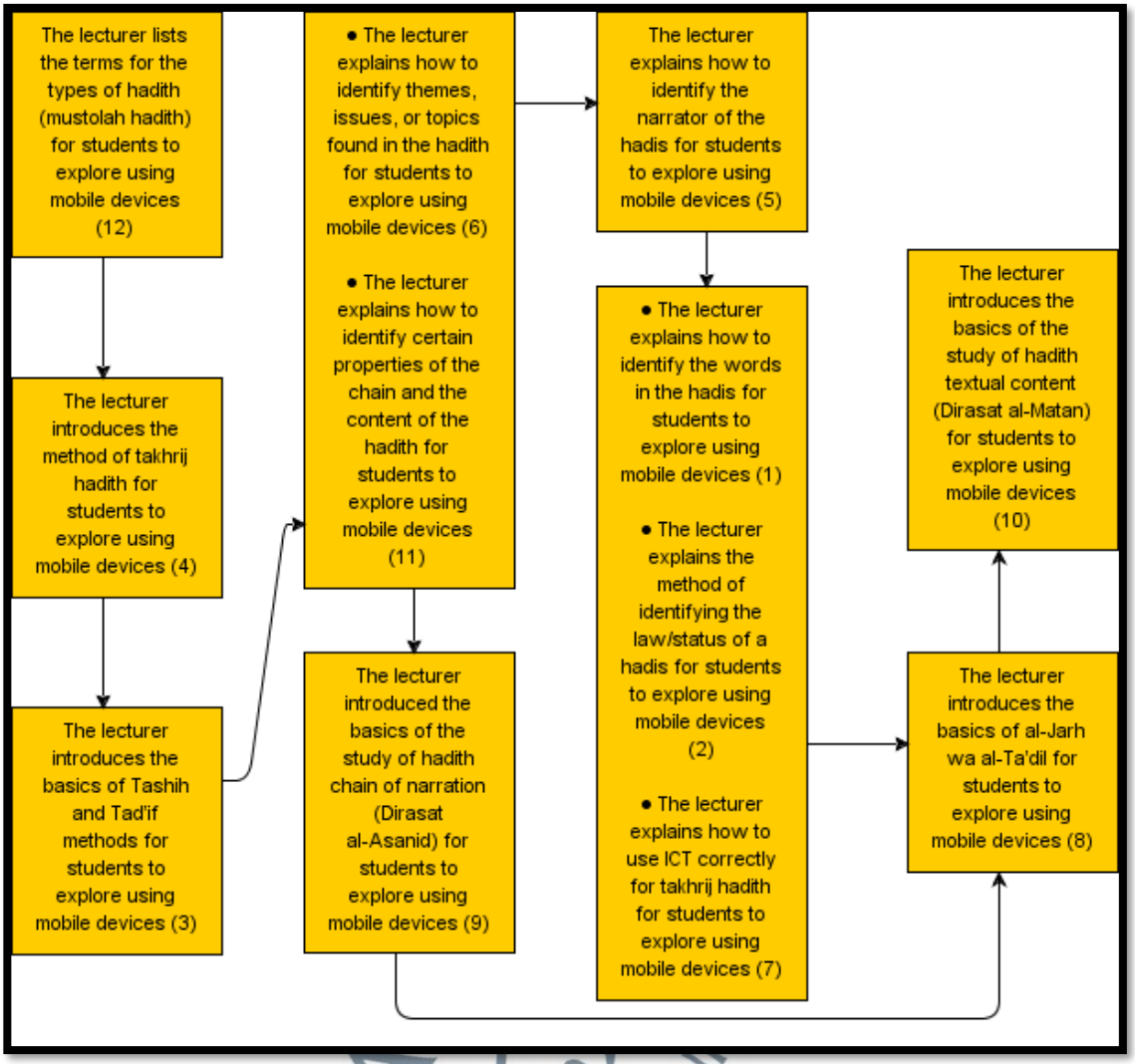

Figure 5.3: Model Information Exploratory

Figure 5.4 shows the priority of the model structure for the elements of information analysis based on expert voting through Interpretive Structural Modeling (ISM) software.

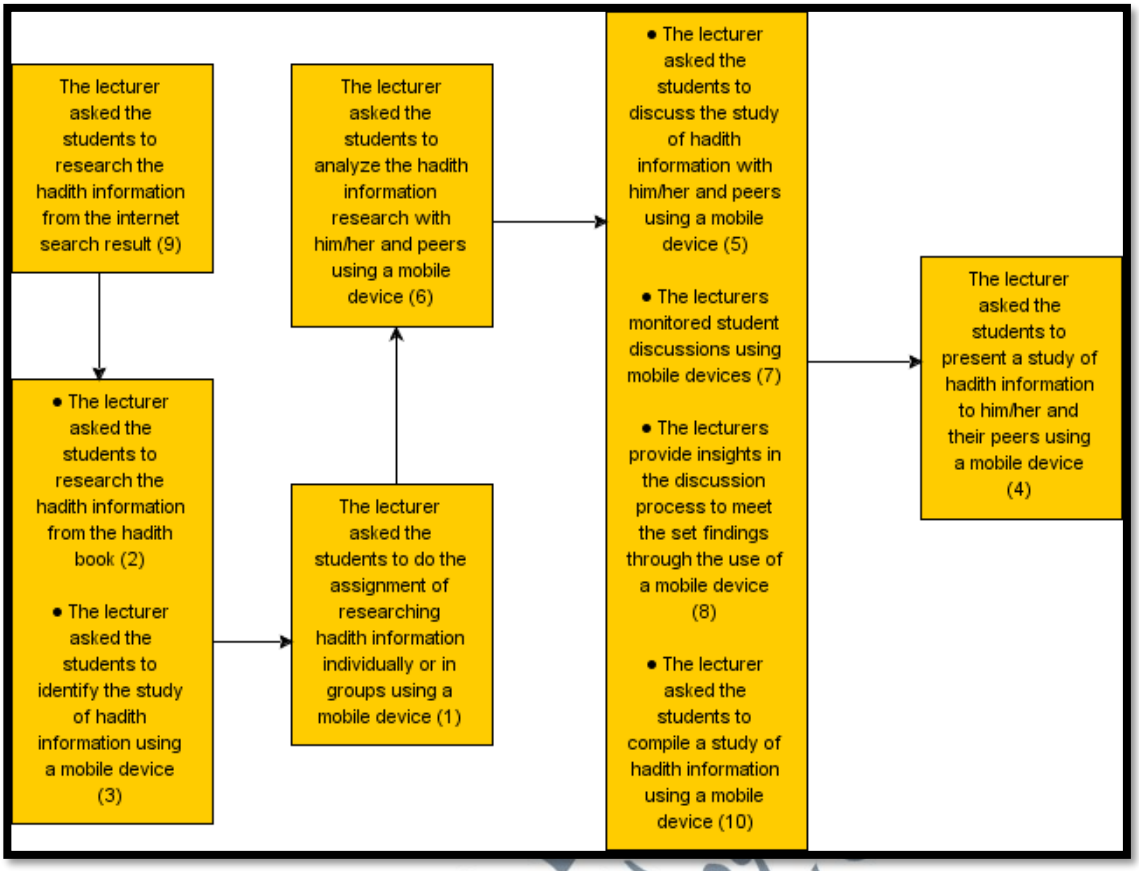

Figure 5.4: Model Information Analysis

The last element in the authentic hadith model is the element of information evaluation. Figure 5.5 shows the priority and structural arrangement of the information evaluation elements.

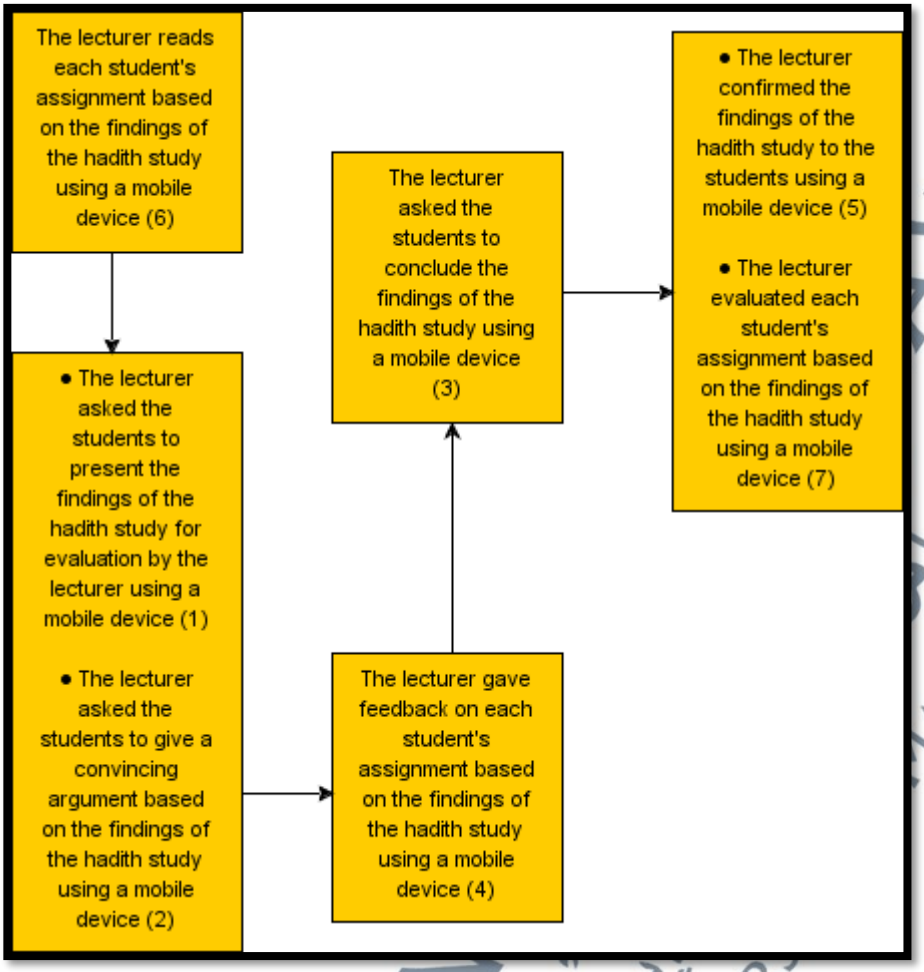

Figure 5.5: Model Information Evaluation

Figure 5.6 shows the m-learning hadith model based on authentic hadith elements. The model is divided into five elements consisting of information validity, source reliability, information exploratory, information analysis, and information evaluation that have been agreed upon by the expert group. Furthermore, each element of this model also contains items that are discussed and agreed upon by experts. These items are required for each element of the model and should be implemented in order of priority. If observed, this model shows a model focused on the accuracy of information to ensure the authenticity of the hadith is maintained.

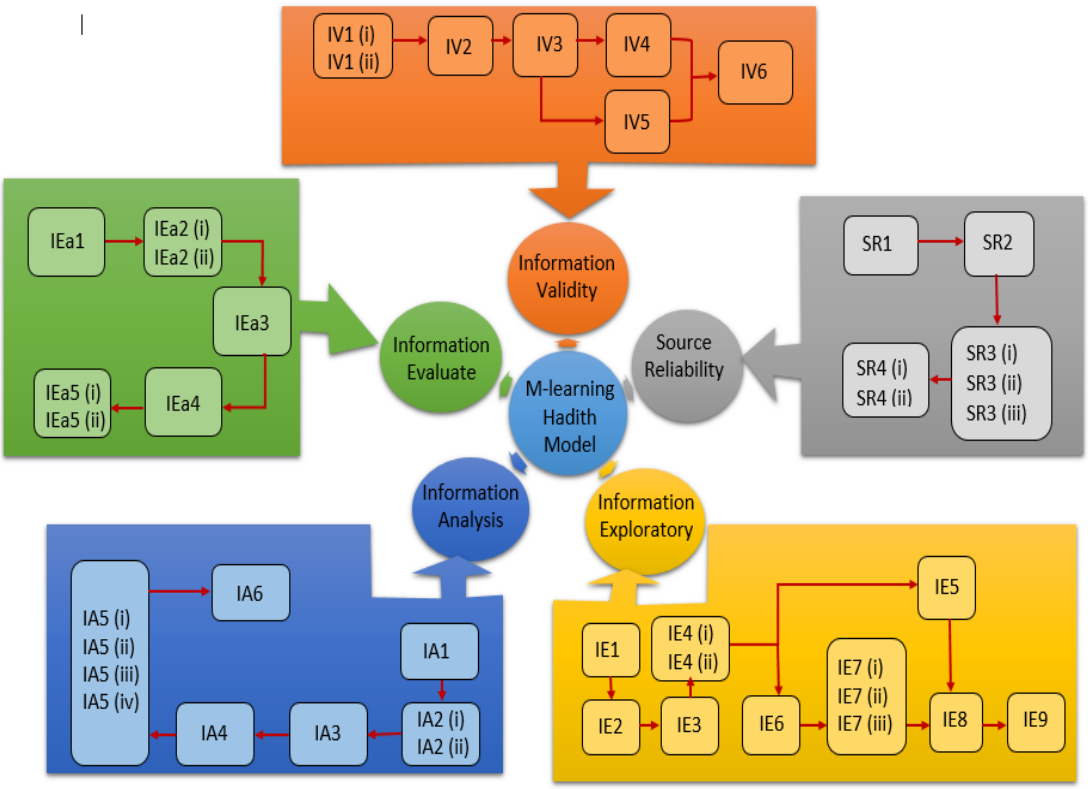

Figure 5.6: M-learning Hadith Model

Table 5.21 displays the items for each abbreviation found in Figure 5.6.

Table 5.21: Statements for abbreviations in the m-learning hadith model

	Information Validation
Abbreviation	**Item**
IV1 (i)	The lecturer introduced the books of hadith for reference by the students
IV1 (ii)	The lecturers needed to set the objective of learning hadith so that students can confirm the status or authenticity of the hadith using a mobile device
IV2	The lecturer set the appropriate medium to conduct the learning session
IV3	The lecturer chose a hadith theme for the assignments that the students had to do using a mobile device
IV4	The lecturer guided the students on how to find information related to the hadith in the right way
IV5	The lecturer introduced an authentic hadith search engine on the internet to the students

IV6	The lecturer provided an appropriate period for the students to complete the assignment
	Source Reliability
Abbreviation	**Item**
SR1	Lecturers revealed hadith-related reference sources from recognised internet search engines
SR2	The lecturer instructed the students to make hadith-related references from recognised internet sources
SR3 (i)	The lecturer instructed the students to make hadith-related references from the book of Hadith *Muktabar*
SR3 (ii)	The lecturer asked the students to ensure that the internet resources were from an authoritative party
SR3 (iii)	The lecturer revealed the reference sources from the book of Hadith *Muktabar*
SR4 (i)	The lecturer checked the reliability of the sources used by the students in completing the assignments from the book of Hadith *Muktabar*
SR4 (ii)	Lecturers checked the reliability of resources in a recognised internet search engine.
	Information Exploratory
Abbreviation	**Item**
IE1	The lecturer listed the terms for the types of hadith (*mustolah* hadith) for students to explore using mobile devices
IE2	The lecturer introduced the method of *takhrij* hadith for students to explore using mobile devices
IE3	The lecturer introduced the basics of *Tashih and Tad'if* methods for students to explore using mobile devices
IE4 (i)	The lecturer explained how to identify themes, issues, or topics found in the hadith for students to explore using mobile devices
IE4 (ii)	The lecturer explains how to identify certain properties of the chain and the content of the hadith for students to explore using mobile devices
IE5	The lecturer introduced the basics of the study of hadith chain of narration (Dirasat al-Asanid) for students to explore using mobile devices
IV6	The lecturer explained how to identify the narrator of the hadith for students to explore using mobile devices
IE7 (i)	The lecturer explained how to identify the words in the hadith for students to explore using mobile devices

IE7 (ii)	The lecturer explained the method of identifying the law/status of a hadith for students to explore using mobile devices
IE7 (iii)	The lecturer explained how to use ICT correctly for *takhrij* hadith for students to explore using mobile devices
IE8	The lecturer introduced the basics of *al-Jarh wa al-Ta'dil* for students to explore using mobile devices
IE9	The lecturer introduced the basics of the study of hadith textual content (Dirasat al-Matan) for students to explore using mobile devices
	Information Analysis
Abbreviation	**Item**
IA1	The lecturer asked the students to research the hadith information from the internet search result
IA2 (i)	The lecturer asked the students to research the hadith information from the hadith book
IA2 (ii)	The lecturer asked the students to identify the study of hadith information using a mobile device
IA3	The lecturer asked the students to do the assignment of researching hadith information individually or in groups using a mobile device
IA4	The lecturer asked the students to analyse the hadith information research with him/her and peers using a mobile device
IA5 (i)	The lecturer asked the students to discuss the study of hadith information with him/her and peers using a mobile device
IA5 (ii)	The lecturers monitored student discussions using mobile devices
IA5 (iii)	The lecturer provided insights in the discussion process to meet the set findings through the use of a mobile device
IA5 (iv)	The lecturer asked the students to compile a study of hadith information using a mobile device
IA6	The lecturer asked the students to present a study of hadith information to him/her and their peers using a mobile device
	Information Evaluation
Abbreviation	**Item**
IEa1	The lecturer read each student's assignment based on the findings of the hadith study using a mobile device
IEa2 (i)	The lecturer asked the students to present the findings of the hadith study for evaluation by the lecturer using a mobile device
IEa2 (ii)	The lecturer asked the students to give a convincing argument based on the findings of the hadith study using a mobile device
IEa3	The lecturer gave feedback on each student's assignment based on the findings of the hadith study using a mobile device

IEa4	The lecturer asked the students to conclude the findings of the hadith study using a mobile device
IEa5 (i)	The lecturer confirmed the findings of the hadith study to the students using a mobile device
IEa5 (ii)	The lecturer evaluates each student's assignment based on the findings of the hadith study using a mobile device

5.5.5 Presentation and evaluation

After undergoing the presentation of the model by the researcher as a moderator to the experts, the researcher explained the relationship between items for each element of the model, starting with the elements of information validity, source reliability, information exploratory, information analysis, and information evaluation. The experts act to make evaluations, comments, and recommendations on the model that has been developed after the voting process has been carried out.

Referring to the elements of information validity, items 1 and 4, *the lecturer introduced the books of hadith for reference by the students*, and *the lecturers needed to set the objective of learning hadith so that students can confirm the status or authenticity of the hadith using a mobile device*. Specifically, students can verify the status or information of hadith using shared mobile devices in the first position. This implies that the veracity of the first two pieces of information, i.e., item 1 and item 4, should be verified once based on expert opinion. Item 3 is the second position in which *the lecturer set the appropriate medium to conduct the learning session*, followed by item 7, in which *the lecturer chose a hadith theme for the assignments that the students had to do using a mobile device*. Following that, item 5 is listed in the fourth position, *the lecturer guided the students on how to find information related to the hadith in the right way*, whereas in item 6, *the lecturer introduced an authentic hadith search engine on the internet to the students* in the fifth place. Each is present following the verification of the third piece of information's veracity. This indicates that there is a

breakdown in the model sequence. Finally, item 2, *the lecturer provided an appropriate period for the students to complete the assignment*, is listed as the information validity element's final position.

For the element of source reliability, item 7, *the lecturer reveals hadith-related reference sources from recognised internet search engines* to be the first position, followed by the second position which is item 5, *the lecturer instructed the students to make hadith-related references from recognised internet sources*. Next, the third position is shared by items 1, 2, and 3, namely, *the lecturer instructs the students to make hadith-related references from the book of Hadith Muktabar, the lecturer asked the students to ensure that the internet resources were from an authoritative party*; and *the lecturer reveals the reference sources from the book of Hadith Muktabar*. Item 4 and item 6, namely, *the lecturer checks the reliability of the sources used by students in completing assignments from the book of Hadith Muktabar* and *the lecturer checks the reliability of the resources in the recognised internet search engine* as the last position.

Next, the following elements are the information-exploratory elements. Starting with item 12, *the lecturer listed the terms for the types of hadith (mustolah hadith) for students to explore using mobile devices* as the first position. Following that, in item 4, *the lecturer introduced the method of takhrij hadith for students to explore using mobile devices*. Item 3, i.e., *the lecturer introduced the basics of Tashih and Tad'if methods for students to explore using mobile devices*, is in the third position, and items 6 and 11 share the fourth position, i.e., *the lecturer explained how to identify themes, issues, or topics found in the hadith for students to explore using mobile devices*, and *the lecturer explains how to identify certain properties of the chain and the content of the hadith for students to explore using mobile devices*. However, there is a sequence breakdown after the fourth position, then the fifth position and the sixth position are built. In the fifth

position, which is item 5, *the lecturer explained how to identify the narrator of the hadith for students to explore using mobile devices*. In the seventh position, which is items 1, 2, and 7, *the lecturer explained how to identify the words in the hadith for students to explore using mobile devices, the lecturer explained the method of identifying the law/status of a hadith for students to explore using mobile devices,* and *the lecturer explained how to use ICT correctly for takhrij hadith for students to explore using mobile devices*. While on item 9, *the lecturer introduced the basics of the study of hadith chain of narration (Dirasat al-Asanid) for students to explore using mobile devices*. The sixth and seventh positions are followed by the eighth and final position, which is item 8, *the lecturer introduced the basics of al-Jarh wa al-Ta'dil for students to explore using mobile devices,* and end with the ninth position, which is item 10, *the lecturer introduced the basics of the study of hadith textual content (Dirasat al-Matan) for students to explore using mobile devices*.

Regarding the information analysis element, item 9, *the lecturer asked the students to research the hadith information from the internet search result*, which in the first position. While items 2 and 3 were discussed, *the lecturer asked the students to research the hadith information from the hadith book* and *the lecturer asked the students to identify the study of hadith information using a mobile device*. Based on expert vote, the results were shared in the second position. Following that comes item 1, in which *the lecturer asked the students to do the assignment of researching hadith information individually or in groups using a mobile device*. This is followed by the fourth place, item 6, in which *the lecturer asked the students to analyse the hadith information research with him/her and peers using a mobile device*. For the fifth position, item 5, *the lecturer asked the students to discuss the study of hadith information with him/her and peers using a mobile device*; item 7, *the lecturers monitored student discussions*

using mobile devices; item 8, *the lecturer provided insights in the discussion process to meet the set findings through the use of a mobile device*; and item 10, in which *the lecturer asked the students to compile a study of hadith information using a mobile device*. Item 4, i.e., the *lecturer asked the students to present a study of hadith information to him/her and their peers using a mobile device* in the last position.

The information evaluation element's findings indicate that item 6, namely *the lecturer read each student's assignment based on the findings of the hadith study using a mobile device*, should be the first position that students should emphasise. Following that are items 1 and 2, where *the lecturer asked the students to present the findings of the hadith study for evaluation by the lecturer using a mobile device* and *the lecturer asked the students to give a convincing argument based on the findings of the hadith study using a mobile device*. Item 4 received unanimous expert approval as the third position during the voting process, namely that *the lecturer gave feedback on each student's assignment based on the findings of the hadith study using a mobile device*. Following that is item 3, in which *the lecturer asked the students to conclude the findings of the hadith study using a mobile device* as the fourth-placed. For the last position, two elements are combined, namely items 5 and 7, with *the lecturer confirmed the findings of the hadith study to the students using a mobile device* and *the lecturer evaluates each student's assignment based on the findings of the hadith study using a mobile device*.

5.5.6 Analysis and Interpretation Model

This section is considered a critical finding in interpreting the resulting model. If recalled, the production of model design is based on literature review and expert views using the Nominal Group Technique (NGT) analysis approach, while model

development uses expert panel voting through the Interpretive Structural Modeling (ISM) approach. Concept Star software in this ISM approach will produce a sequence for each item in the authentic hadith model element.

In the Interpretive Structural Modeling (ISM) approach, the production of driving power and dependence power is used in the context of this study. Both of these powers serve to show the priority in which the element that has the dependence power will always be influenced by the element that has the driving power. Driving power refers to an element that must be prioritised or implemented first and it greatly influences the next element. This is in line with the view of Azar & Bayat (2013) and Singh & Kant (2008), who asserted that driving power has the power of influence on the driven element (next element), while dependence power is an element that has dependence power on the previous element. In this study, the use of the arrow to the right (→) translated to that the item before the arrow was more primary, needed to be implemented, or needed to be prepared first based on each element of the model.

For the analysis and interpretation of information validity elements, the existence of driving power and dependence power can be seen in Figure 5.7. This figure shows item 1 and item 4 have the highest power of influence in the information validity element and end with the last position, which is item 2.

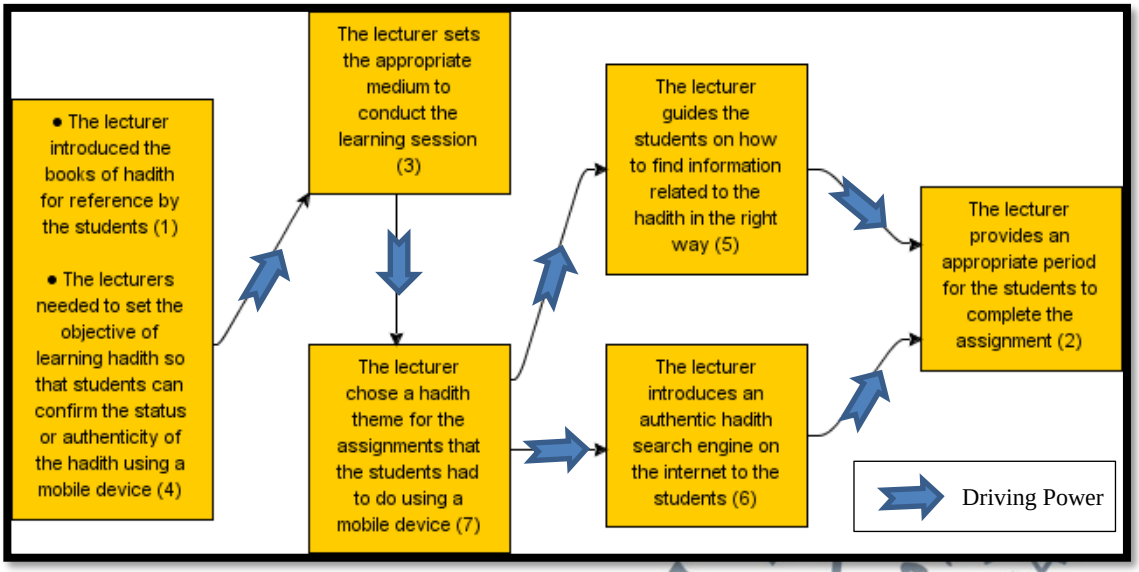

Figure 5.7: Diagraph of driving power for information validation element

Figure 5.8 shows the relationship between driving power and dependence power on the item for the source reliability element. Figure 5.8 clearly shows that item 7 is the most important element that should be run first and it is followed by item 5. Item 1, item 2, item 3, and ending with item 4, item 6, share the same position.

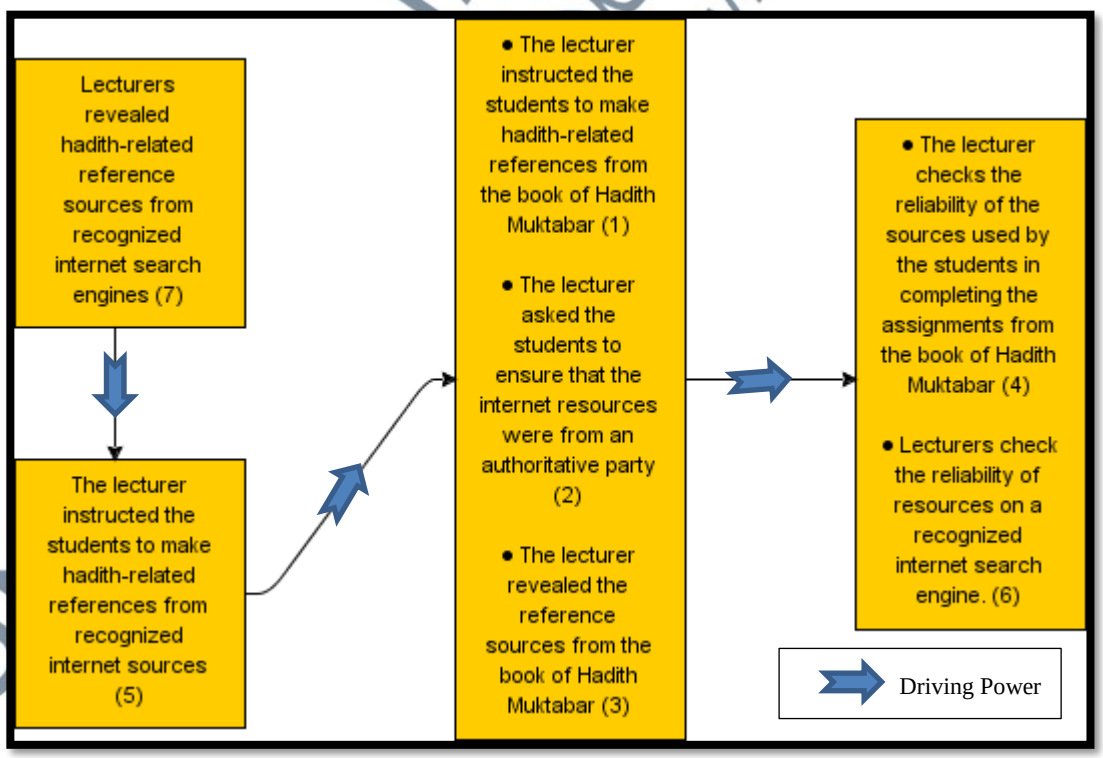

Figure 5.8: Diagraph of driving power for source reliability element

The power of influence and dependence power for the information exploratory element can be seen in Figure 5.9. From this figure, it is clear that item 12 has a very high power of influence on all items, and it ends with item 10.

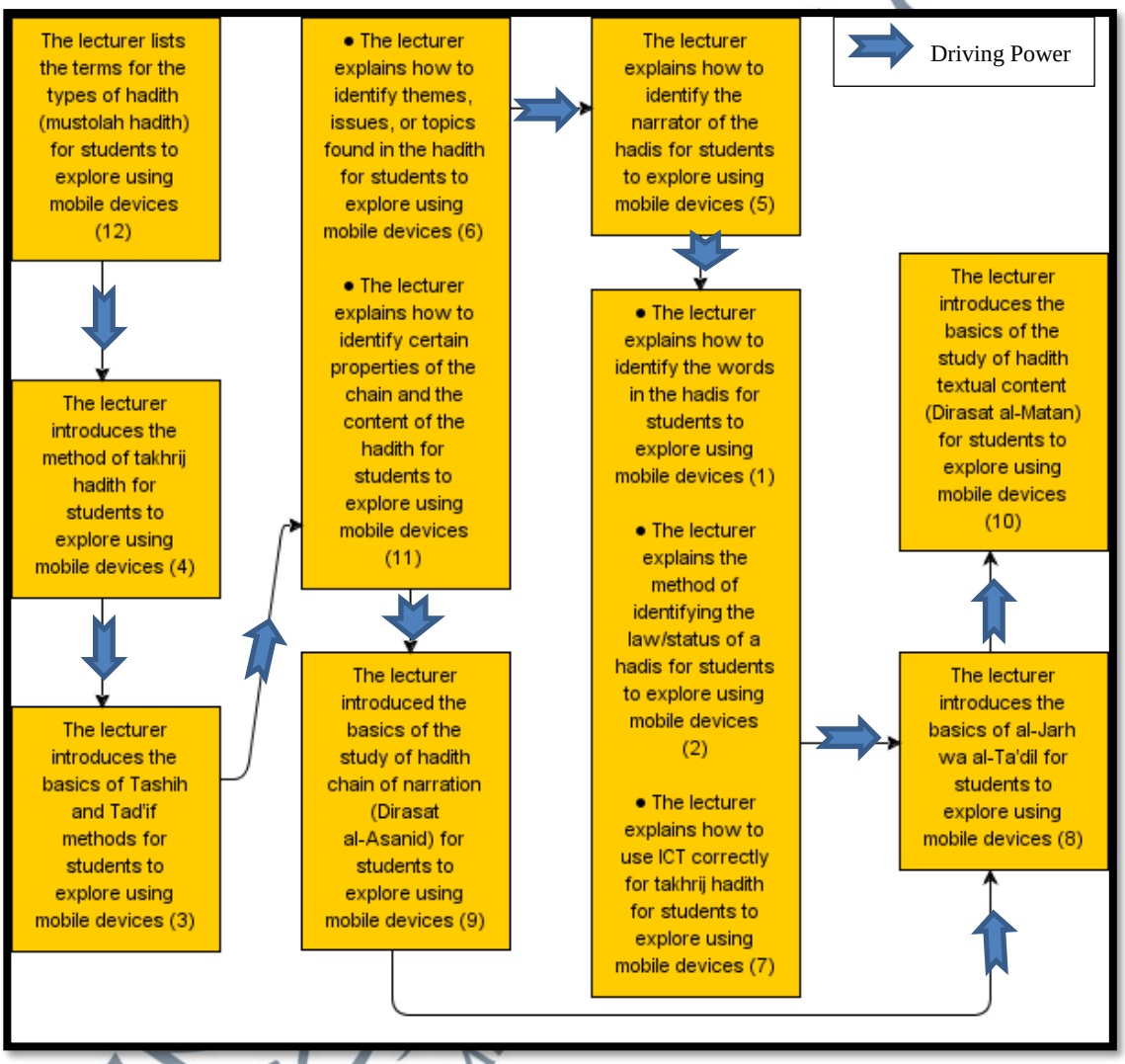

Figure 5.9: Diagraph of driving power for information exploratory element

The next element is the information analysis element. Figure 5.10 shows the position of items that needs to be prepared and prioritised in the information analysis element. The item with primary driving power is item 9 and ends with item 4.

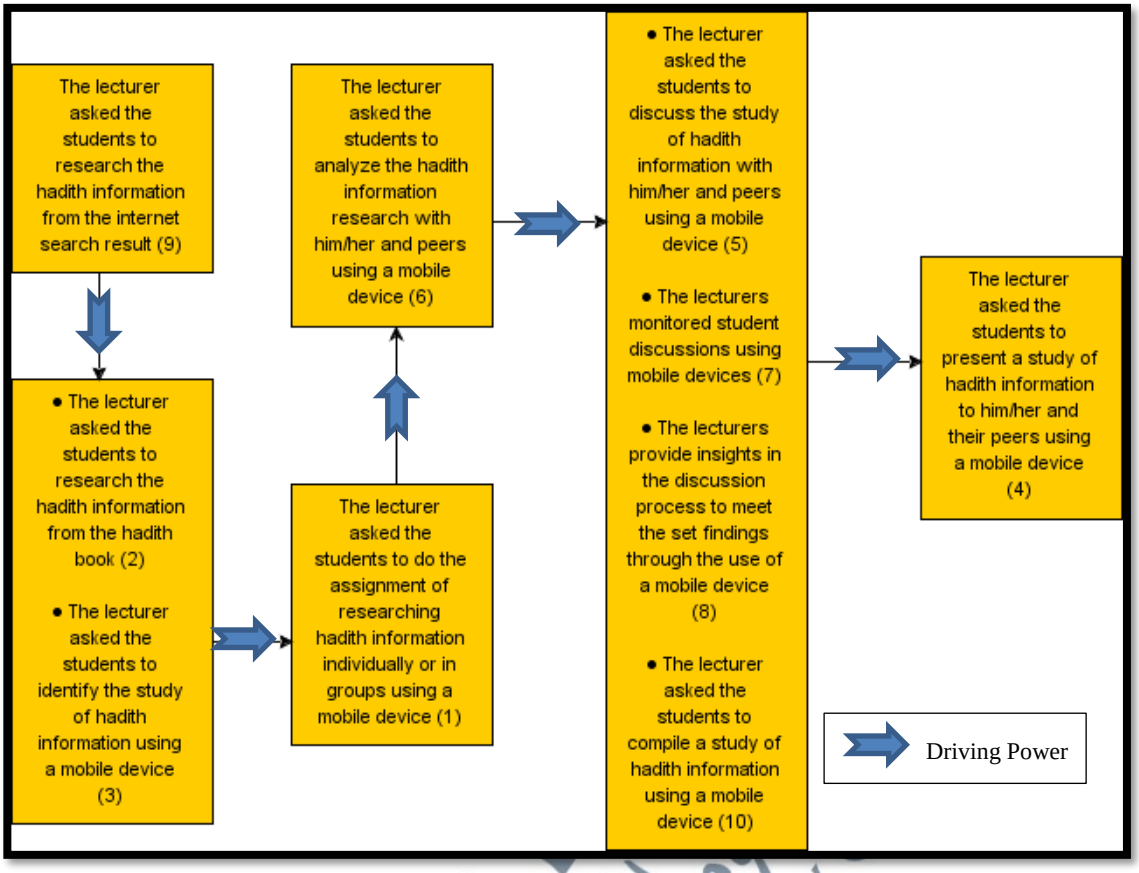

Figure 5.10: Diagraph of driving power for information analysis element

Figure 5.11 shows the information evaluation element is the last model element whose seven items have been voted by the experts. The results show that item 6 has a high power of influence and ends with item 5 and item 7.

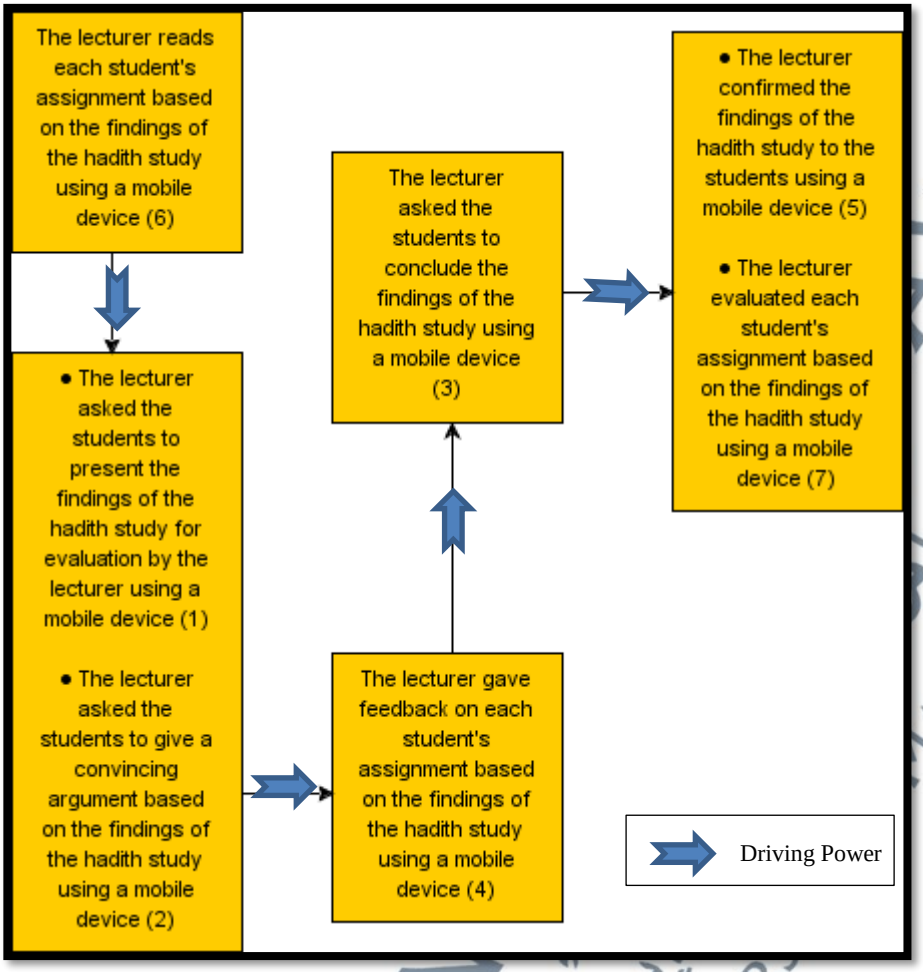

Figure 5.11: Diagraph of driving power for information evaluation element

Based on the figure for each element of the m-learning hadith model displayed above, it clearly shows the sequence and priorities agreed upon by experts, which can be guidelines and reference for lecturers in conducting learning sessions to ensure the authenticity of hadith is maintained. The formation of the sequence in this model is based on the agreement of the panel of experts in the voting process conducted using Interpretive Structural Modeling (ISM) software. This voting process has produced a very good and useful guide in the context of the study conducted by the researcher.

5.6 Summary

If highlighted, the design and development phase of the m-learning hadith model shows that it is a very important and critical phase. This phase is divided into two sub-phases, where the first sub-phase is the model design phase, and the second sub-phase is the model development phase. In the design sub-phase, the researcher conducted a literature review, element tagging process, and design process for each item in the model element based on the agreement and consensus of the expert group using the Nominal Group Technique (NGT) method. The second sub-phase is intended to develop a model, and it is known as the model development phase.

In this second sub-phase, the researcher has applied the use of Interpretive Structural Modeling (ISM) software in developing a model based on votes from experts selected based on their high expertise and experience in the context of the study. As highlighted in the literature, the use of the Interpretive Structural Modeling (ISM) approach can help solve the problems of a group of experts in developing a structure, framework, and model. This is in line with the view that asserts that the Interpretive Structural Modeling (ISM) approach is a very high-strength qualitative tool that can be applied in various fields (Talib, Rahman & Qureshi, 2011). The Interpretive Structural Modeling (ISM) approach is also capable of driving the parsing of a complex issue.

In implementing this approach based on Interpretive Structural Modeling (ISM), a group of experts was gathered and the approval process on the items in each model element formed in the design sub-phase through the Nominal Group Technique (NGT) method was carried out. This expert gathering process is very important to ensure that the items formed through the sub-phases of development are accurate in the context of the study. Once the process of discussion and agreement of items for each element of the model is completed, the expert voting process takes place to develop this authentic

hadith model. Seven experts were selected, each of whom is significant and experienced in the field of study, and all of whom are university lecturers.

Based on the expert discussion, all experts agreed that this m-learning hadith model has five model elements consisting of information validity, source reliability, information exploratory, information analysis, and information evaluation. Each element of this model also has several items that are also agreed upon by the expert panel. Next, voting using Interpretive Structural Modeling (ISM) was conducted. Each element of the model will be merged into another to form a model in which the items are in order of priority. This model is also iterative, starting from the validity of information, reliability of sources, information exploratory, information analysis, and information evaluation. In retrospect, the m-learning hadith model is a model developed to conduct learning sessions to ensure the authenticity of the information. From the construct of this model, the researcher have conducted an analysis of the driving power (driving power) and dependence power (dependence power) for each item in each element of the model.