CRITICAL THINKING SKILLS IN MALAYSIAN UPPER SECONDARY ISLAMIC EDUCATION TEXT BOOKS¹

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Abstract

This study was carried out to analyze to what extent students have been evenly exposed to the Critical Thinking Skills through the exercises provided for in the KBSM Islamic Education textbooks. The sample in this study consisted of upper secondary (form 4 and form 5) Islamic Education textbooks. 278 exercises and 317 activities in the textbooks were analyzed. An instrument entitled "Critical Thinking Skills Code Analysis" was developed by the researchers, based on the works and ideas of past researchers and experts in the field, forming the basis for the instrument. Data was collected through the use of different types of forms. Frequency count and the percentages were used for data analysis. The results show that most of the exercises and activities in the textbooks focussed more on the Information Gathering and Applying Skills, followed by the Inference Skills and Decision Making skills. There were no exercises directed towards Analogy Forming Skills.

Introduction

Are thinking skill incorporated in textbooks? Is there a need for the exposure of thinking skills through textbooks or other curriculum materials? These have posed

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questions among curriculum designers, researchers, writers and educationalists. Some educationalists and psychologists presumed that thinking skills are a process which occurs only in the human brain and the human himself which is rarely seen in other things. Nevertheless researchers believe that printed matters including textbooks are a form of human communication are transcribed into a form of a book. Therefore, the study related to thinking skills found in the text books is one way of representing the study of human communication pattern which is non-verbal in nature.

This study will look into the content of critical thinking skills categories incorporated in the upper secondary Islamic textbooks. In reality, critical thinking skills cannot be separated from the knowledge of Islamic education. In addition, the quest for knowledge in Islam involves a big deal of the usage of the highly intellectual human mind. This is evident with the existence of various knowledge field of Islam like the revelation knowledge, hadith, kalam(tawhid), mantiq (logic) knowledge, astronomy, fiqh and others (Zaharah Hussin, 1995). Moreover, there are many verses in Quran and the Prophet's hadith which stress on the importance of thinking and oppose those who are reluctant to use their mind. Thus, this study involves only a small part of the process of the exposure of critical thinking skills that will be introduced to schools.

Problem Statement

Textbooks have been generally known as an important curriculum material in schools. It is upon this pretext that the Ministry of Education of Malaysia takes the effort in supplying textbooks which quality control been monitored by the Textbooks Division (BBT). The Integrated Curriculum for Secondary School (ICSS); (1991: 154-156) stated that:

Textbooks have been playing a major role in the teaching and learning process as the major reference source in imparting knowledge, skills and learning experiences in school and even at home. Textbooks also function as the major teaching aid to teachers where the basic knowledge relayed by the teacher as a whole is based on the source, material and information which are referred from the textbooks. Thus, textbooks should be of good quality.

According to most studies carried out in Malaysia, there is a significant correlation between the academic achievement of students in examinations and the usage of textbooks (Ministry of Education Malaysia, 1977 and Isahak Haron, 1977). Nevertheless, many studies still show the need of improving the quality of textbooks (Abdul Hamid Mahmood, 1990; Saedah Siraj, 1990; Idris Mohd. Radzi (1993) and Abdullah Hassan, 1977).

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Since textbooks are the primary channel of message transfer to students, textbooks should highlight various skills especially critical thinking skills. This is due to the fact that research on critical thinking indicate that there is a significant relationship between critical thinking skills and the academic achievement (Tabbada, 1987; Hugo, 1989; Kokinda, 1989; Rachel, 1989; Chennault, 1989; Nirwana Mohd Rashid, 1989; Sulong Karim, 1990; Lumpkin, 1991 and Razali Mat Yassin; 1991). Therefore, the analysis on the existence of critical thinking skills in textbooks is of utmost relevance to the current needs and students' needs particulary in Malaysian context, and in the other countries as well.

Rationale of the Study

This study is carried out upon a few rationales. Allah S.W.T. encourages human beings to think often. This is evident based on the study on his verses which urge humans to think. In the Holy Quran, the word Fikr (Thought) appears 16 times, whereas the word Aql (reason) appears 44 times and the word al-albab (people who are mindful) is repeated 16 times (Ahmad Hasan, 1320 H). Among the verses of Allah which encourage human beings to think are in the Al-Qur'an, Surah 3: Verse 190-191. The meaning of the verses as below:

"In creation of the heaven and the earth, and in the alternation of nights and day, there are signs for men of sense; those that remember Allah when standing, sitting, and lying down and reflect on the creation of the heavens and the earth (saying):

'Lord, you have not created these in vain. Glory be to you! Save us from the torment of the fire, Lord."
(Al-Qur'an, Surah 3: Verse 190-191)

Empirical studies carried out all over the world indicated that thinking skills have specific significance:

- There is a significant relationship between critical thinking skills and students academic performance (Tabbada,1987; Hugo, 1989; Kokinda, 1989; Lumpkin, 1991; Rachel, 1989; Chennault, 1989; Nirwana Mohd Rashid, 1989; Sulong Karim, 1990 and Razali Mohd. Yassin, 1991)
- 2. The effectiveness of thinking skills programmes and activities on students critical thinking ability do exist. (Mc Cune, 1989; Hugo'1989; Poole, 1989 and Yogarajah, 1991; Hill & Hannafin 1997; Eisenberg, M., Berkowitz, B. & Murray, 2000).
- 3. Critical thinking strategies need to be exposed to students in school through teaching and learning activities (Hugo, 1989; Rollins, 1989; Tarkington,

- 1989 and Thorpe, 1990), text books and relevant curriculum materials (Thorpe, 1990; Henri, 1991; Graham & Metaxas, 2004).
- 4. Critical thinking skills are more appropriate to be exposed to students of higher level than those who are in lower level (Lumpkin, 1991 and Razali Mohd. Yassin, 1991).
- 5. Based on these rationales, this research is very significant to the needs of the present and future education.

Aim, Questions and Limitation of study

The aim of this study is to find out to what extent the main and the sub-category of Critical Thinking Skills could be found in the secondary level Islamic education text books. Based on this aim, the questions of this study are focused on:

- (a) To what extent is the main category of Critical Thinking Skills is exhibit in the form 4 and form 5 levels of Islamic education textbooks?
- (b) To what extent the differences exhibit among the sub-Critical Thinking Skills between the levels in the textbooks?

The scope of the study is only limited to 4 main thinking skills (elaborated further in methodology of study) and the analysis is focussed on the exercises and the activities in these Islamic education text books.

Method of the Study

This study uses the content analysis method. The method is a research technique which is more objective, systematic and has a quantitative description and is normally used in various communicational materials especially printed materials (Borg and Gall, 1953).

The study uses an instrument developed by the researcher by using the procedures carried out by Schiller, 1975; Faiza, 1985 and Saedah Siraj, 1990). The procedures used by the researcher in forming the instrument namely Critical Thinking Skills Code Analysis for this study are:

- (1) Reviewing of theories and thinking skills models of other researchers.
- (2) Library references on studies on Critical Thinking Skills and their effectiveness on students' performances.
- (3) References on studies in the form of content analysis on textbooks.
- (4) Code construction based on necessity and suitability of the study.
- (5) Testing of instruments by several expert teachers of Islamic Education.
- (6) Certification of code content by several experts.
- (7) The re-construction of the instruments for the real study.

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The construction of the instrument which is called the 'Critical Thinking Skills Code Analysis (refer to Appendix 1) is based on several focuses on the thinking skills categories introduced by the past researchers. However the main focus on three models of Critical Thinking Skills which are formed by Ennis Model (1985), California State Board of Education Model (1988) and Beyer Model (1988).

The Critical Thinking Skills Code Analysis is divided into three main divisions:

- First Division
 Main Category: There are 4 main categories of Critical Thinking Skills namely:
 i) Information Gathering and applying skills, ii) Decision making skills, iii)
 Inference Skills and, iv) Analogy forming skills. Each main Critical Thinking
 - Inference Skills and, iv) Analogy forming skills. Each main Critical Thinking Skills category is categorised under thinking skills which are based on certain rationales.
- Second Division
 Sub-categories: The fraction of each main category is listed under the sub-categories of Critical Thinking Skills. There are 10 sub-categories in the Code Analysis.
- 3. Third Division
 Sub-sub-categories: The fractions of sub-categories of Critical Thinking Skills
 are listed under each sub-category. These categories are the most specific Critical
 Thinking Skills. Fractions of sub-categories would ease the work of analysis
 because they are easily identified in the textbooks. There are 49 fractions of subcategories of Critical Thinking Skills listed in the Code Analysis.

Several drafts were constructed to evaluate the validity and the reliability before they are used in the study. For the first draft of the instrument, five expert teachers in the field of Islamic Education were selected by the researcher to validate the instrument by analysing ten lessons as a sample. Inter-coder analysis was used to harmonize the instrument. Three experts among academics in the area of critical thinking, Islamic education and content analysis were selected to validate the content of the instrument.

The samples used in the study were form 4 and form 5 Islamic Education textbooks as below:

- (1) Form 4 Islamic Education textbook, published by Dewan Bahasa and Pustaka.
- (2) Form 5 Islamic Education textbook, published by Dewan Bahasa and Pustaka. The selected 278 exercises and 317 activities in the textbooks were analyzed.

Three types of fill-in forms which are used for data collection purposes consist of Critical Thinking Skills Code Analysis List, Critical Thinking Skills Analysis Form and Big Column of Critical Thinking Skills Categories. For the purpose of analysis, the frequency count and the percentages of the data which are accumulated in the Big Column of Critical Thinking Skills Categories will be calculated. The data were tabulated to show the frequency count and the percentages of the Critical Thinking Skills categories applied in these textbooks.

Research Findings

The analysis of the data of the study is to answer the questions aroused which were presented earlier. Major findings of this study are;

(a) Main categories of Critical Thinking Skills

The analysis on the main categories of Critical Thinking Skills which are found in the Islamic Education textbooks' exercises and activities indicates that the questions presented in the exercises in the upper secondary Islamic education textbooks mainly targeting on the Information Gathering and Applying Skills. There are only a few ones which gear the students towards the Decision Making Skills. However there are no instructions of the questions which gear students towards Analogy Forming Skills. Result of the study depicts in Table 1.

The instructions of the activities in both textbooks indicate that there is no balance in the even distribution among the main categories of Critical Thinking Skills. Findings also show that there is not even one of Analogy Forming Skills exhibited in the activities instructions of these textbooks. The result depicts in Table 2.

Table 1: Frequency of critical thinking skills main category in the exercises of form 4 and form 5 textbooks

ain c	ategory	equency	Percentage
1.	Information Gathering and Applying Skills	(192)	69.1
2.	Decision Making Skills	(22)	7.9
3.	Inference Skills	(64)	23.0
4.	Analogy Forming Skills	(0)	0.0
	Total	(278)	100.0

Table 2: Frequency of critical thinking skills main category in the activities instruction of form 4 and form 5 textbooks

Main category	Frequency	Percentage
 Information Gathering and applying skills Decision making skills Inference Skills Analogy forming skills 	(223) (22) (72) (0)	70.4 6.9 22.7 0.0
Total	(317)	 100 www.SID.ir

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(b) Sub-categories of Main Critical Thinking Skills

Information Gathering and Applying Skills in the exercises of Form 4 and Form 5 textbooks

Table 3: Analysis on the frequency of the fraction of the Information Gathering and Applying Skills in the Islamic Education Textbooks' exercises Form 4 and Form 5

Main Category/ Sub- categories	Fraction of Sub-categories	FORM 4	FORM 5
Categories		Freq. %	Freq. %
A.	i. Giving Definition which is Similar in	0.0	0 00
Terminology	meaning	0.0	0.0
Defining	ii. Giving Definition which is Opposite i	n _{2 50.0}	3 27.3
Skill	meaning	2 50.0	8 72.7
	iii. Giving Stipulative Definition		
	iv. Giving Advanced Definition		
	Total	4 100 0	11 100.0
D. I C		9 15.5	4 13.8
B. Information		0 0.0	2 6.9 5 17.3
Elaborating	ii. Stating the Similarity in Information	8 13.8 1 1.7	5 17.5 1 3.4
Skill	iii. Stating the Differences in Information	R 13.8	6 20.7
	iv. Elaborate Comparison of Information	0 0.0	2 6.9
	v. Identify Examples in Information	32 55.2	9 31.0
	vi. Specify Concrete Proofs/ 'Nas'		
	vii. Extract Concepts/Information Facts		
	Total	58 100,0	29 100.0
C. Information	i. Determine Laws	4 10,0	7 140
	**	21 52.5 8 20.0	30 60 0 8 16.0
Applying	ii. Provide Views /Facts	8 20.0 2 5.0	2 40
Skill	iii. Proving Views/Opinions	5 12.5	2 4.0
	iv. Elaborate Chain of Cause	0.0	1 2.0
	 v. Elaborate Chain of Effect 		
	vi. Design Information Output		
	Total	40 100 0	50 100.0

Table 3 shows the fractions of the sub-categories of Information Gathering and Applying Skills which are Terminology Defining skills, Information Elaborating skills and Applying Information skills in the exercises of the form 4 and form 5 Islamic Education textbooks. The table shows a form of uneven distribution among the skills mentioned. Most of the questions in the form 4 textbook's exercises focussed on the fraction of the sub-category of the Concepts Extracting Skills and the fraction of the sub-category of Provide Views/Facts Skills; whereas form 5 textbook's exercises focussed on the fraction of the sub-category of Provide Views/Facts.

Problem Solving Skills in the exercises of Form 4 and Form 5 textbooks

Tables 4 indicates that only few questions in both form 4 and form 5 textbooks' exercises exhibited the fraction of Problem Solving Skills sub-category. The Credibility of Judgement Solution Skills only exhibited on the form 4 textbook's exercise.

Inference Skills in the exercises of Form 4 and Form 5 textbooks

On the sub-category of Inference Skills, study shows most of the exercises and activities gear towards Speculation skills and Denotative Concluding skills. However, there are very few ones on Connotative Concluding skills. The distribution of the sub-categories of Inference skills is uneven to one another as depicts in Table 5.

Table 4: Analysis on the frequency of the fraction of the Problem Solving Skills in the Islamic Education Textbooks' exercises Form 4 and Form 5

Main Category/ Sub-categories Problem Solving Skills		Fraction of Sub-categories		FC	ORM 4	FC	ORM 5
				Free	1. %	Fre	4. %
		i)	Identification of the problem	0	0.0	1	6.7
	Problem Solving Skills	ii)	Explanation of the identified problem	0	0.0	0	0.0
		iii)	Identifying of the factors/causes	1	25.0	5	33.3
		iv)	Listing the alternatives based on the factors	3	75.0	9	60.0
				4	100.0	15	100.0
		i)	Elaborating the strength	0	0.0	0	0.0
	Credibility of	ii)	Elaborate the weakness	0	0.0	0	0.0
	Judgement	iii)	Choosing the best alternative	3	100.0	0	0.0
	Solution Skills	iv)	Identify the validity of the alternative	0	0.0	0	0.0
				3	100.0	0	0.0

Table 5: Analysis on the frequency of the fraction of the Inference Skills in the Islamic Education Textbooks' exercises Form 4 and Form 5

Main Category/ Sub-categories	Fraction of Sub-categories	FORM 4	FORM 5		
INFERENCE SKILLS		Freq. %	Freq. %		
Summarizing Written surface	Identifying General Conclusion Giving Main Ideas Identifying Minor Ideas Elaborating ideas in new ways Synoptic summarization	3 21.4 3 21.4 2 14.3 5 35.8 1 7.1	3 27.3 3 27.3 0 0.0 4 36.4 1 9.0		
		14 100.0	WW 100.0		

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	Identifying Conclusion Contrastive	0	0.0	0	0.0
Summarizing	Ideas				
Internally Skills	Giving Main Contrastive Ideas	0	0.0	0	0.0
	Giving Minor Contrastive Ideas	0	0.0	2	100.0
	Interpreting Contrastive Ideas	1	100.0	0	0.0
	Interpreting New Contrastive Ideas	0	0.0	0	0.0
	Synoptically				
		1	100.0	2	100.0
	Forming Generalization of Projecting	1	3.7	1	11.1
Projecting Skills	Ideas				
	Forming Specific ecting Ideas	1	3.7	1	11.1
	Giving Projecting Ideas	12	44.4	4	44.5
	Interpreting New Ideas	11	40.7	2	22.2
	Application of True Evident / Evident				
	for New item	0	0.0	I	11.1
	Preventing / Proving New Ideas	0	0.0	1	11.1
		27	100.0	9	100.0

As a conclusion, the comparison between the Islamic the textbooks' exercises of form 4 and form 5 indicates a similar presentation of the main categories in both textbooks. The focus is on the Information Gathering and Applying Skills but no activities instructions gearing towards Analogy Forming Skills. There is no significant difference between the two textbooks.

Information Gathering and Applying Skills in the Activities of Form 4 and Form 5 textbooks

The analysis on the activities also shows almost the same findings as the ones on the exercises. As shown in Table 6, Elaborating Skill & Information Applying Skill exhibited more frequent than the other skills in the form 4 textbook, whereas in the form 5 textbook, Extract Concepts/Information Facts skill and Elaborate Chain of Cause skill exhibited more compare to other skills.

Table 6: Analysis on the frequency of the fraction of the Information Gathering and Applying Skills in the Islamic Education Textbooks' Activities of Form 4 and Form 5

Main Category/ Sub- categories		Fraction of Sub-categories	FOR	M 4	FOR	M 5
			Freq.	%	Freq.	%
Λ.	a)	Giving Definition which is Similar in	0	0.0	0	0.0
Terminology		meaning				
Defining	b)	Giving Definition which is Opposite in	0	0.0	0	0.0
Skill		meaning				
	c)	Giving Stipulative Definition	0	0.0	1	12.5
		Giving Advanced Definition	0	0.0	7	87.5
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	d)	Total	0	100.0	8	100.0
B. Information	c)	Introduction to Information	9	15.0	4	2.2
Elaborating	I)	Stating the Similarity in Information	0	0.0	ó	0.0
Skill	g)	Stating the Differences in Information	0	0.0	2	4.4
	h)	Elaborate Comparison of Information	3	5.0	6	13.3
	i)	Identify Examples in Information	2	3.3	6	13.3
	j)	Specify Concrete Proofs/ 'Nas'	0	0.0	θ	0.0
,	<u>k)</u>	Extract Concepts/Information Facts	46	76.7	30	66.8
	1)	Total	60	100.0	45	100.0
C. Information	m)	Determine Laws	4	7.1	2	3.6
Applying	n)	Provide Views /Facts	8	14.3	18	32.I
Skill	0)	Proving Views/Opinions	7	12.5	9	16.1
	p)	Elaborate Chain of Cause	9	16.1	12	21.4
	q)	Elaborate Chain of Effect	1	1.8	6	10.7
-	<u>r)</u>	Design Information Output	27	48.2	9	16.1
		Total	56	100.0	56	100.0

Problem Solving Skills in the Activities of Form 4 and Form 5 textbooks

The analysis on the sub-category of the Decision Making skills indicates that a number of exercises gearing towards the Problem Solving sub-category skills but no activities cater for Judging the Credibility of Solutions skills as depicts in Table 7.

Table 7: Analysis on the frequency of the fraction of the Problem Solving Skills in the Islamic Education Textbooks' activities Form 4 and Form 5

Main Category/ Sub-categories	ories Fraction of Sub-categories		ORM 4	FORM 5	
Problem Solving Skills			eq. %	Freq. %	
A. Problem Solving Skills	Identification of the problem Explanation of the identified problem Identified problem Identifying of the factors/causes Listing the alternatives based on the factors	2 0 0 2	50.0 0.0 0.0 50.0	1 0 5 9	6.7 0.0 33.3 60.0
		4	100.0	15	100.0
	a) Elaborating the strength	0	0.0	0	. 0.0
Credibitlity of	b) Elaborate the weakness	0	0.0	0	0.0
Judgement	 c) Choosing the best alternative 	0	0.0	0	0.0
Solution Skills	d) Identify the validity of the alternative	0	0.0	0	0.0
		0	0.0	0	0.0

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Inference Skills in the Activities of Form 4 and Form 5 textbooks

The analysis on the sub-category of the Inference Skills in the Activities of Form 4 and Form 5 textbooks shows that the Identifying General Conclusion skill exhibited the highest in form 4 textbook and Elaborating ideas in new ways in form 5. Comprehensive Summarization Skill exhibited in form 5 textbook only. The Projecting Skills exhibited in almost every fraction of sub-skills in both textbooks.

Table 8: Analysis on the frequency of the fraction of the Inference Skills in the Islamic Education Textbooks' activities Form 4 and Form 5

Main Category/ Sub-categories	Fraction of Sub-categories	FO	RM 4	FO	RM 5
INFERENCE SKILLS		Free	q. %	Fre	q. %
	i) Identifying General	13 4	54.2 16.7	4	21.1 15.8
Lateral Summarization	Conclusion	0	0.0	0	0.0
Skills	ii) Giving Main Ideas	7	29.1	9	47.3
	iii) Identifying Minor Ideas	ĺ	0.0	3	15.8
	iv) Elaborating ideas in new ways		0	_	
	v) Synoptic summarization				
		24	100.0	19	100.0
	i) Identifying Conclusion	0	0.0	0	0.0
B. Comprehensive	Contrastive Ideas				
Summarization	ii) Giving Main Contrastive Ideas	0	0.0	0	0.0
Skills	iii) Giving Minor Contrastive Ideas	0	0.0	4	100.0
Janus -	iv) Interpreting Contrastive Ideas	0	0.0	0	0.0
	v) Interpreting New Contrastive	0	0.0	0	0.0
	Ideas Synoptically				
		1	100.0	4	100.0
	i) Forming Generalization of	0	0.0	3	25.0
C. Projecting	Projecting Ideas			1	
Skills	ii) Forming Specific Projecting	2	15.4	0	0.0
	Ideas	4	30.7	5	41.7
	iii) Giving Projecting Ideas	5	38.5	2	16.7
	iv) Interpreting New Ideas				
	v) Application of True Evident	2	15.4	1	8.3
	/ Evident for New	0	0.0	1	8.3
	item				
	vi) Preventing / Proving New				
	Ideas	i			
		13			12
		100	0.0	<u> </u>	100.0

The comparison between the exercises and activities exhibited in both textbooks indicate a similar presentation of the main categories. The focus is on the Information Gathering and Applying Skills but no instructions of activities gearing towards Analogy Forming Skills. There is no significant difference between the two textbooks.

Conclusion and Discussion

From the data analysis, there are few conclusions which could be highlighted by the researchers:

- 1. The study indicates that the exercises and the activities found in the Malaysian Islamic Education textbooks are too academic which gear mainly towards the Information Gathering and Applying skills. The heavy emphasize in the Islamic Education knowledge is actually a good sign but to the students, these phenomena could lead to boredom in reading the textbooks or worse trying to answer the questions in the exercises given in the books.
- 2. Islamic Education is a knowledge field which is 'lively' in nature. Thus, the exposure of the exercise instructions and the activities should suit the students and the current situations so that what they have learnt could be applied in solving their daily problems. The current learning has developed towards 'Problem Based Learning', therefore the sections of 'Ibadah' (Feqah), 'Akhlak' (Moral and Ethic) and 'Aqidah' (Tawhid) in the Malaysian Islamic Education should consists of skills which would gear towards students' problem solving. If the exercises and the activities in the textbooks could cater for these thinking skills, students would experience direct exposure to real life experiences and these are easy to be applied in students' daily lives.
- 3. The teaching and learning tasks carried out by the teacher also play a significant role in cultivating students' ability to think critically. Nevertheless, if the teaching and learning aids could not provide input for the teachers to construct effective lessons, hopes to produce great thinkers among students would be hampered. Therefore, it is suggested that the writings of teacher's resource materials including textbooks, specification of the syllabus and other similar materials in Malaysia should take into consideration the categories of the Critical Thinking Skills in order to give a clear picture to the teacher how to implement them in the teaching and learning.
- 4. From the analysis of the anecdote data, the researcher also detected other weaknesses in the writing of the Malaysian Islamic Education textbooks. For example, the presentation of the illustrations is weak and unappealing, cited examples which are irrelevant to the students, Al-Quran's verses which sometimes irrelevant to the topics, lack of sequence in the sub-topics, no conclusions or summations at the end of the topics, similar and stereotype instructions and activities, too many instructions in a question and more. These weaknesses also give an impact to the presentation of the textbooks which prove ineffective in their usage, be it inside the classroom or outside. Thus the presentation of the new textbooks should avoid these weaknesses in order to produce Islamic Education textbooks of high quality. More important this move would cultivate students' love towards this lesson.

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APPENDIX 1

MAIN CATEGORY/ SUB-CATEGORY	SIID	TO SUB-CATEGORY
D SKILL OF GATHERING AND	a∪D i	TO SUB-CATEUUK I
APPLYING INFORMATION		
THE PRODUCTION	-ix	Defende CM
A. Terminology Definition Skills	i) ii)	Definition of Meaning
A: reminiology Definition Skins		Definition of Opposite Meaning
	iii)	Stipulative Definition (Create Own Definition)
	iv)	Advance Definition (Extra)
	,	Knowing Information
	ii) iii)	Stating Similarity of Information
B. Elaborating Information kills	iv)	Stating Differences of Information
	v)	Elaborating Information Comparatively
	vi)	Identification of Examples in the Information
İ	vii)	Identification of Nas-Nas/ True Evident
		Telling Concept/ Facts/Information
İ	i) ii)	Identifying the judgment
C. Skill of Using the Information	iii)	Present Argument/Opinion
	iv)	Elaborating the succession of causes
1		Elaborating the succession of impacts
II) PROBLEM SOLVING SKILLS	v)	Designing the Outcomes Information
B) TROBLEM SOLVING SKILLS	:\	Ideal Control
A. Problem Solving Skill	i) ii)	Identification of the problem
7. Clonical Solving Skill	iii)	Explanation of the identified problem
	iv)	Identifying of the factors/causes
		Listing the alternatives based on the factors
B. Credibitlity of Judgement	i)	Elaborating the strength
B. Credibitlity of Judgement Solution Skill	ii) iii)	Elaborate the weakness
Solution 3km	iv)	Choosing the best alternatives
	,	Identify the best action
III) INFERENCE SKILLS	v)	Identify the validity of the alternative
THE THE THE THE THE THE THE THE THE THE	i)	Identifying Coneral Construies
	ii)	Identifying General Conclusion
A. Literary Summarization		Giving Main Ideas
	iii)	Identifying Minor Ideas
	iv)	Elaborating ideas in new ways
· · · · · · · · · · · · · · · · · · ·	v)	Synoptic summarization
	i)	Identifying Conclusion Contrastive Ideas
B Comprehensive ummarization	ii)	Giving Main Contrastive Ideas
The state of the s	iii)	Giving Minor Contrastive Ideas
	iv)	Interpreting Contrastive Ideas
	v)	Interpreting New Contrastive Ideas Synoptically
	i)	Forming Generalization of Projecting Ideas
C. Projecting Skills	ii)	Giving Projecting Ideas
c. rojecting axins	iii)	Interpreting New Ideas
	iv)	Application of True Evident / Evident for New item
į.	_v)	Preventing / Proving New Ideas
V) ANALOGY FORMING SKILLS		
	i)	Identifying of Main Subject Analogy
A. Subject Summarizing of	ii)	Identifying the category of subject (same/difference) nalog
		Identifying of Main Subject Analogy Identifying the category of subject (same/difference) nalog Summarizing the similarity of ideas between two subjects
A. Subject Summarizing of	ii) iii)	Identifying the category of subject (same/difference) nalog Summarizing the similarity of ideas between two subjects nalogy
A. Subject Summarizing of	ii) iii) i)	Identifying the category of subject (same/difference) nalog Summarizing the similarity of ideas between two subjects nalogy Interpreting simple analogy from the same subject
Analogy Skills	ii) iii) i) ii)	Identifying the category of subject (same/difference) nalog Summarizing the similarity of ideas between two subjects nalogy Interpreting simple analogy from the same subject Interpreting simple analogy from different subject
A. Subject Summarizing of	ii) iii) i)	Identifying the category of subject (same/difference) nalog Summarizing the similarity of ideas between two subjects nalogy Interpreting simple analogy from the same subject