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Content Analysis of Science Books for Upper Primary Stage in Jordan and Intermediate Stage in Saudi Arabia from an Islamic Perspective: Analytical Comparative Study

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Abstract
This study aims to identify the current situation of science books in Jordan and Saudi Arabia from an Islamic perspective. For this end, the content analysis approach has been used through the analysis of the unit concept in the science books for the seventh, eighth and ninth grades in the academic year (2015/2016) in Jordan and Saudi Arabia. The Researchers set an instrument to investigate the dimensions of the Islamic Perspective in the targeted books. The tool consisted of (28) signs, that cover five main dimensions. The content analysis indicated that the dimension of the field "presenting Islamic evidence and Norms" came in the first place among Jordanian and Saudi books since it had 39 frequencies in the Jordanian books with the percentage of 65%, compared to 52 frequencies in the Saudi Science Books, with a percentage of 49.06%. By contrast, the other dimensions (fields) showed a low citation percentage in the Jordanian and Saudi books alike. In the last place for the Jordanian books came the dimension "Man's relationship with the universe" with three frequencies (5%). On the other hand, in the last place of the targeted Saudi books came the dimensions "observing the scientific method in thinking" and "developing the Islamic attitudes and values" with 5 frequencies for each (4.72%).The results also showed a significant difference at ($\alpha \leq 0.05$) between the dimensions of the Islamic perspective included in the content of science books. This difference can be attributed to the 'grade' variable in favor of the upper grades compared to the lower ones in the Jordanian books, and in favor of the second intermediate class in comparison with the first and third intermediate classes in Saudi books.On the other hand, the results revealed the inclusion of the Islamic perspective dimensions on the whole scale in favor of the Saudi books compared to the Jordanian ones: there were 106 frequencies in the Saudi books compared to only 60 frequencies in the Jordanian books. In light of the abovementioned results, the researchers recommend the development of the content of science books in Jordan and Saudi Arabia so that they can contribute to Islamic rooting in the scientific knowledge. The researchers also recommends that these books observe integration and follow-up in the inclusion of the Islamic perspective dimensions in science books.
Keywords: The content of science books, Islamic rooting of knowledge.

Introduction and Theoretical Framework

The textbook is one of the most important inputs of the learning process since it is considered as a reference for both of the teacher and the student Burns,2006;Ivey,2010). In addition, it constitutes the written official document for the curriculum with all its contents. It also conveys a message of pedagogical content (Gurung and Martin 2011; Fang 2014). The purpose of that message is to influence students so that they can build, develop or modify the applied, emotional or intellectual aspects that can have various social, economic and intellectual dimensions.

One of the most prominent contribution of modern life is the merger between science and technology in an integrated system that makes it hard to separate one from the other. This has affected the nature of the scientific knowledge in a way or another (Lemmer et al. 2008; Laçin-Şimşek 2011, Lavakare 2013). This, in turn, justifies the need of the school curricula for a reference that combines scientific knowledge on one hand and the society's values, beliefs, and morals on the other. The combination will make it possible to convey knowledge to students and develop their interaction with it within the religious and cultural context of the society.

Many studies (e.g. Al-Humaidi 2013, Al-Ghamidi 2012, Al-Ustaz 2011, Saeed 2011, Shahbeer 2007, Al-Ameer 2005, 'asquool 2004) stressed the need of scientific curricula in general and sciences in particular to reviewing, analysis, evaluation, and development in light of contemporary world trends and in accordance with the Islamic beliefs and intellectual bases. These all have a positive role in preparing educated teachers and providing them with all information, life skills they need to live in a religious and safe environment.

The association between the content of science books and the Islamic perspective is vital for achieving the targeted goals of learning and teaching whose philosophy stem from believing in Allah. The association between the two is compliant with the local and regional trends which call for getting rid of the cultural subsidence and subjugation, aiming for achieving contemporary knowledge as well as adopting the Islamic rooting of education and its goals. In fact, this is what drove many studies such as Al-Humaidi 2013, Badri 2008, Fino 2007, Madkour 2002, Al-miman 2002, Yaldgin 1996 to direct their efforts towards the islamization of knowledge, especially in the field of school curricula. These scholars were hoping to create a generation of Islamic awareness who contributes effectively to start a life that pleases the Lord. However, this cannot be achieved without having a mutual integrated relationship between Faith and science. It is that moral science which enhances and supports faith. Bear in mind that scientific curricula are the most likely to have knowledge unity, integration and rooting.

Study Problem and Questions

The United States tended to adopt several reform movements related to Science curricula. The most important projects in this field were: Science, Technology and Society (STS); Science for All Americans, (2061) Project; National Science and Education Criteria (NSEC); SS&C project; State Scientific Education Criteria; Trends in International Mathematics And Science Study (TIMSS).

Many countries have followed this trend including Jordan and Saudi Arabia. Such a move has two sides: a positive one represented in reforming and developing science curricula that enable the learner to gain life, innovative and epistemological experiences. On the other hand, the negative side as the possibility of presenting information and experiences that contradict Islamic thought and vision, or ignore, intentionally or unintentionally the Islamic frameworks. This, in turn, widens the gap between religion and science, presents knowledge away from the Islamic framework, contributes to creating a state of religious and intellectual alienation, and spreads the materialistic, secularist disposition over the spiritual aspects.

Since Islam is the official religion of Jordan and Saudi Arabia alike, the philosophical bases for building the curriculum in both countries should be built upon the principles of Islam. Thus, knowledge has to be characterized and confined by the Islamic thought. This is what the Hashemite Kingdom of Jordan has called for in 1994 and Kingdom of Saudi Arabia in 2003.

In light of the fundamental changes that science curricula witnessed in order to improve and develop these curricula to cope with the scientific and technological advancements that the world is encountering, the researcher finds that there is a real problem that makes it necessary to investigate the inclusion of the Islamic perspective dimensions in these books. Therefore, the study problem can be stated through the following question:

What is the state of science books for the upper primary stage in Jordan, and the content of the science books for the intermediate stage in Saudi Arabia from an Islamic perspective? This questions can be further divided into the following questions:

1. What are the dimensions of the Islamic perspective in the content of science books for the upper primary stage in Jordan?
2. Do the dimensions of the Islamic perspective in the content of science books for the upper primary stage in Jordan differ according to ‘class/grade’?
3. What are the dimensions of the Islamic perspective in the content of science books for the intermediate stage in Saudi Arabia?
4. Do the dimensions of the Islamic perspective in the content of science books for the intermediate stage in Saudi Arabia differ according to ‘class/grade’?
5. What is the total inclusion of the dimensions of the Islamic perspective in the content of science books in Jordan and Saudi Arabia?

Study Objectives

This study aims to identify the state of the content of science books for the upper primary stage in Jordan and for the intermediate stage in Saudi Arabia from an Islamic perspective. In particular, the study aims to:

1. Identify the dimensions of the Islamic perspective that must be included in the content of science books.
2. Reveal the extent of integration of the dimensions of the Islamic perspective in the targeted books.
3. Hold a comparison between the content of science books in Jordan and Saudi Arabia to find out the extent of including Islamic perspective dimensions in both curricula (Jordan and Saudi Arabia).

Significance of the Study

The significance of the study lies in:

1. Identifying the degree of correspondence between the main policies of science books curricula and the educational philosophy, and the actual content of science books curricula.

2. Launching an integration between religion and science and building science curricula on Islamic intellectual bases since Islamic rooting is a religious intellectual necessity that deepens the students' religious attitudes.
3. Addressing the content of science books in the upper primary stage in Jordan and its equivalence in Saudi Arabia. These stages have been chosen because of their importance in developing science based on the students' Islamic religious beliefs.
4. Contributing to presenting a feedback that benefits the designers and developers of science curricula in order to enrich these curricula with Islamic perspective bases and to relate the content to Islamic rooting of scientific knowledge.
5. Presenting a feedback to the supervisors of science curricula in order to help science teachers to adopt an Islamic perspective in learning.
6. Benefitting other scholars and researchers to reveal the dimensions of Islamic perspective in other curricula or stages.

Limitations of the Study

The study was limited according to:

1. The academic subject which was confined to 'science' books:
   a. 'Science' books of the upper primary stage in Jordan. These have been designated by the Ministry of Education (MoE) for the seventh and Eighth grades in (2007), and for the ninth grade in (2015). The latter comprises four books: chemistry, physics, geology and environment. The study was confined to these three grades and excluded the tenth grade books since the 7th, 8th, and 9th grades equate to the intermediate stage in Saudi Arabia with which the comparison will be held.
   b. 'Science' Books for the intermediate stage in Saudi Arabia. These have been designated by the Saudi Ministry of Education in (2014/2015). These books have been based on the American (McGraw Hill) series. They have been translated by Obeikan Institution for Research and Development. The curricula have been modified to suit the Saudi environment under the supervision of the Saudi Ministry of Education. The books have been put into effect since 2010/2011.
   The current study included all the intermediate stage science books in Saudi Arabia except the scientific experiments handbook that the first intermediate class studies.
2- A list of the Islamic Perspective dimensions. The list included 5 dimensions: "Presenting Islamic evidence and Norms", "Displaying the greatness of the Creator", "Human relationship with the universe" "Observing the scientific method in thinking", "Developing the Islamic attitudes and values".
3- Time Limit: the study was conducted in the second semester of the academic year 2015/2016.

Procedural Definitions

- Content: Swe & Ed (2014) define content as a set of definitions, concepts, relations, rules, theories, skills, values and attitudes that form the learning material in a textbook. These all are chosen and organized according to certain scientific criteria in order to achieve the goals of education. Bezemer & Kress (2010) see that the content needs to include facts, branches of knowledge, concepts, generalizations, principles, rules and theories.
- Content Analysis: Erbac et al. define it as the continuous process of studying and diagnosis that aim to identify the strength and weakness points in a curriculum in order to improve and develop it in light of certain preset acceptable educational goals.
-Content Evaluation: a process of collecting, analyzing and interpreting the data of the textbook content (Shield & Dole 2013). The aim of this process is to modify, delete, add, prepose or postpose some of the textbook content. These modifications are proposed to suit the educational and mental levels of the students, and cope with the variables of the age as well as with the education philosophy and policies (Atkinson et al. 2009).
-Upper Primary Stage: the stage of the upper mandatory primary education in Jordan. It includes 7th, 8th, 9th, and 10th grades.
- Intermediates Stage: the stage of the mandatory education in Saudi Arabia which lies between the elementary and secondary stages. It includes 1st, 2nd, 3rd intermediate grades.
- Islamic Perspective of the curricula: relating the content structure to the fundamentals of Islamic Shari'a and the principles of Islamic thought and its doctrine's bases. The dimensions of this rooting has been represented by 28 signs covering 5 related fields: "Presenting Islamic evidence and Norms", "Displaying the greatness of the Creator", "Man's relationship with the universe" "Observing the scientific method in thinking", "Developing the Islamic attitudes and values".

Study instrument and procedures

Study Methodology

The researchers used the 'content analysis' method which is based on the analytical descriptive survey

methodology to obtain the required data. The theme was first determined as a unit for content analysis since it is the most appropriate in this field (Erbac et al. 2012). In addition, frequency was designated as a unit of count and record in order to count the frequencies of the inclusion of the Islamic perspective dimensions and their signs in each book. The content analysis included: titles, subtitles, paragraphs, pictures, drawings, activities, experiments, case studies, examples, questions and self-evaluation.

Study Population and Sample

The study sample was taken from the study population which is the science textbooks for the 7th, 8th, and 9th grades in Jordan in the academic year (2015/2016), and the science textbooks of the 1st, 2nd, 3rd intermediate grades in Saudi Arabia.

Study instrument

The used tool was an analysis sketch that the researcher himself built to analyze the targeted textbooks. The final draft of the tool consisted of (28) signs covering (5) main dimensions (See the Appendix).

Study Validity

To make sure that the analysis sketch was valid, the researchers first reviewed related studies as well as related literature. Then, he built the analysis sketch-outline which initially consisted of (6) fields with (34) signs. The sketch was judged by (7) reviewers who have expertise in the field and who work in teaching and supervision at university and school levels. After obtaining feedback from the reviewers, some suggested changes were made. Thus, the final list comprised only (28) signs divided into (5) main dimensions (fields).

Reliability of the Tool

Reliability of the analysis refers to giving the same results if the analysis is conducted by the same researchers at different times, or if the analysis was carried out by another analyst provided that the same rules of analysis were observed (Keppel 1991). The researchers, here, took the 'theme' as a unit of analysis. They , further, carried out the analysis more than once. The co-efficient between the two analyses was calculated based on the following equation (Ott;Longnecker, 2008):

Concordance percentage= (Number of concordance occurrences between the two analysis ÷ Number of concordance occurrences + number of differences) × 100%.

The concordance percentage between the two analyses was (87%) which, in turn, indicates that the analysis list and methodology were reliable and that the tool was appropriate for the study.

Results and discussion

Results related to Question One:

What are the dimensions of the Islamic perspective in the content of science books for the upper primary stage in Jordan?

To answer this question, the frequencies had been recorded and turned into percentages. The dimensions were then ordered and classified according to the semester and book in which they appeared as shown in table (1):

Table 1: the dimensions of the Islamic perspective in the content of science books for the upper primary stage in Jordan according to 'grade'

Dimension (field)	Grade						Total	%	order
	7th grade		8th grade		9th grade				
	Semester 1	Semester 2	Semester 1	Semester 2	Semester 1	Semester 2			
Presenting Islamic evidence and Norms	-	1	7	2	12	17	39	65%	1
Displaying the greatness of the Creator	-	-	2	2	-	2	6	10%	3
Man's relationship with the universe	1	-	-	-	-	2	3	5%	5
Observing the scientific method in thinking	-	-	-	1	4	3	8	13.33%	2
Developing the Islamic attitudes and values	1	1	-	1	-	1	4	6.67%	4
Total	2	2	9	6	16	25	60	%100	
'Semester' Percentage	3.33%	3.33%	15%	10%	26.66%	41.66%	100%		
'Grade' Percentage	6.67%		%25		68.33%		100%		

As seen in Table (1) above, the dimensions of Islamic perspective in the Jordanian science books scored (60) occurrences. The dimension "Presenting Islamic evidence and Norms" ranked first (65%). The researcher sees that the reason behind that is the easiness of quoting Quranic verses or sayings of the prophet since such quoting is superficial; it does not relate the scientific content to the Islamic rooting of knowledge. In most cases, the authors of the textbooks sufficed themselves to only mentioning these verses or sayings without actually relating it actively to the content of the lesson. They neither interpret the religious text nor made any comment on it.

On the other hand, the results displayed in Table (1) indicate that the other dimensions were minimally

included in the targeted books. "Observing the scientific method in thinking" came in the second place with only (8) frequencies (13.33%). "Displaying the greatness of the Creator" came third (10%). Then, came "Developing the Islamic attitudes and values" (6.67%). In the last place came "Man's relationship with the universe (5%). Generally, the results indicate a low percentage of including the dimensions of Islamic perspective in the content of science books for the upper primary stage. The results may be ascribed to a confusion in the Islamic vision to root the scientific knowledge on the part of the authors of science books and education planners in Jordan. The results also show that there was no coordination with specialists who could associate scientific knowledge to religious and educational perspective.

The results of our study are congruent with the study of (Al-Adili, Samara & al-Hawamleh 2014) which aimed to identify the Quranic verses about the 'environment' and how these verses were employed in the science books of the first primary grades in Jordan. The study concluded that the science books of the 1st and 2nd primary grades lack any verse that talk about the environmental education. However, there were only two Quranic texts included in the 3rd grade science book.

This is similar to the results of Al-Tarawneh's study (2006) which tried to uncover the extent that the upper primary stage science books in Jordan include Quranic verses that refer to natural phenomena. Al-Tarawneh concludes that the targeted books are devoid of Quranic verses though the natural phenomena in the science books which can have evidence in the Holy Quran are (78) phenomena out of a total of (92).

The Palestinian curricula are very similar to the Jordanian ones. For instance, Shheiber (2007) conducted a study to evaluate the content of the 10th grade science books in Gaza in light of the Islamic criteria. The results showed that the Islamic criteria in the 10th grade science book are low since it scored (53%) from the teachers' perspective. This is what Al-Ustath's study (2011) assured. His study aimed to analyze the primary stage science books in Palestine from an Islamic standpoint. The results revealed that there are only (46) occurrences in the 20 science books designated for the primary stage.

Results related to Question Two:

Do the dimensions of the Islamic perspective in the content of science books for the upper primary stage in Jordan differ according to 'class/grade'?

To answer this question, a Chi-square test was conducted to compare the percentages related to each dimension of the Islamic perspective which were included in the upper primary stage science books in Jordan according to class/grade. Table (2) displays the results:

Table 2: Chi-square test: comparing the percentages related to each dimension of the Islamic perspective included in the upper primary stage science books in Jordan according to class/grade

Dimension (field)	Noticed and Expected	7th grade		8th grade		9th grade		Total	Chi-square	df	Sig.
		freq	%	freq	%	freq	%				
Presenting Islamic evidence and Norms	Noticed	1	2.56	9	23.08	29	74.36	39	32.00	2	0.000
	Expected	13	33.33	13	33.33	13	33.33				
Displaying the greatness of the Creator	Noticed	-	-	4	66.67	2	33.33	6	0.667	1	0.414
	Expected	-	-	3	50	3	50				
Man's relationship with the universe	Noticed	1	33.33	-	-	2	66.67	3	0.333	1	0.564
	Expected	1.5	50	-	-	1.5	50				
Observing the scientific method in thinking	Noticed	-	-	1	12.5	7	87.5	8	4.500	1	0.034
	Expected	-	-	4	50	4	50				
Developing the Islamic attitudes and values	Noticed	2	50	1	25	1	25	4	0.500	2	0.779
	Expected	1.3	32.5	1.3	32.5	1.3	32.5				
Total	Noticed	4	6.67	15	25	41	68.33	60	36.00	2	0.000
	Expected	20	33.33	20	33.33	20	33.33				

As evident in table (2), there are significant difference when ($\alpha \leq 0.05$) between the dimensions of the Islamic perspective included in the content of science books for the upper primary stage in Jordan that could be referred to 'class/grade' in favor of the higher class. The 9th grade had (41) frequencies (68.33%), the 8th grade had (15) frequencies (25%), and the 7th grade had only (4) frequencies (6.67%). Although the percentages of the three grades were variant, the results indicate that the national authors' team in MoE in Jordan are keen on

designing science books for these three grades according to the integrative successive approach. This, in turn, will pave the way for building hierarchical knowledge and experiences that combine science and religion.

Results related to Question Three:

What are the dimensions of the Islamic perspective in the content of science books for the intermediate stage in Saudi Arabia?

To answer this question, the frequencies and percentages were scored then classified according to the semester and grade of the science book in the intermediate stage in Saudi Arabia as represented in table (3).

Table 3: Dimensions of the Islamic perspective in the science books in the intermediate stage in Saudi Arabia according to class/grade

Dimension (field)	Grade						Total	%	order
	7th grade		8th grade		9th grade				
	Semester 1	Semester 2	Semester 1	Semester 2	Semester 1	Semester 2			
Presenting Islamic evidence and Norms	**10**	**14**	**7**	**13**	**8**	**-**	**52**	**49.06%**	**1**
Displaying the greatness of the Creator	**3**	**9**	**3**	**14**	**2**	**3**	**34**	**32.08%**	**2**
Man's relationship with the universe	**-**	**-**	**1**	**7**	**-**	**2**	**10**	**9.43%**	**3**
Observing the scientific method in thinking	**2**	**1**	**1**	**-**	**-**	**1**	**5**	**4.72%**	**4**
Developing the Islamic attitudes and values	**1**	**-**	**1**	**1**	**1**	**1**	**5**	**4.72%**	**4**
Total	**16**	**24**	**13**	**35**	**11**	**7**	**106**	**%100**	
'Semester' Percentage	**15.10%**	**22.64%**	**12.26%**	**33.02%**	**10.38%**	**6.60%**	**100%**		
'Grade' Percentage	**37.73%**		**45.28%**		**16.98%**		**%100**		

It can be seen in table (3) above that the dimensions of the Islamic perspective included in the Saudi Arabia science books for the intermediate stage were (106) frequencies that covered the dimensions and sign randomly. This is what the big difference in the frequencies of each dimension refers to. Thus, the dimension of 'presenting Islamic evidence and norms' came in the first place with (49.06%), followed by 'displaying the greatness of the Creator' (32.08%), then 'Man's relationship with the universe (9.43%). 'Observing the scientific method in thinking' came in the fourth place and finally 'developing the Islamic attitudes and values' with (4.72%) each.

The results generally indicate that the first dimension was higher than the others. This suggests that the authors of science books tried to add a spiritual religious flavor to the scientific content of the books. The results are congruent with the reform and development movements of the international science curricula. The results also second what Al-Dhal'an, Al-Shayegh and Al-Zugheibi (2015), Oseilan (2011), Khaz'ali (2009), Khataybeh, Al-shu'eili and Shinan (2006) have found.

The researcher sees that the reason for that lies in the easiness of providing Quranic verses, prophet sayings and common Islamic sayings in order to create a state of horizontal association and integration between the scientific content and the Islamic rooting. This, in fact, is a positivity in the writing and preparation of the science books for the intermediate stage in Saudi Arabia.

On the other hand, these results show a decrease in the inclusion of most Islamic dimensions in the target books. The results here second what Al-dugheim (2012) has concluded when he initially investigated the Islamic perspective in the science books for the intermediate stage in Saudi Arabia. The researchers had assigned seven main fields for the Islamic perspective dimensions. However, the researcher did not address the sub-fields of each dimension. Generally, the results also indicated a low inclusion of the Islamic perspective dimensions in the target books.

The study is also consistent with Mazhar's study (1994) which aimed to evaluate the content of science books for the intermediate stage in Saudi Arabia in light of the Islamic criteria from the supervisors and teachers' point of view. The study revealed a low representation of the dimensions of the Islamic perspective in the target books. This is also what Al-tuweiti (2009) concluded when he studied the science books of the 7th, 8th, and 9th grades in Yemen. His study found that the science books lack all the Islamic criteria listed for that study.

Results related to Question Four:

Do the dimensions of the Islamic perspective in the content of science books for the intermediate stage in Saudi Arabia differ according to 'class/grade'?

To answer this question, a Chi-square test was conducted to compare the percentages related to each dimension of the Islamic perspective which were included in the intermediate stage science books in Saudi Arabia according to class/grade. Table (4) displays the results:

Table 4: Chi-square test: comparing the percentages related to each dimension of the Islamic perspective included in the intermediate stage science books in Saudi Arabia according to class/grade

Dimension (field)	Noticed and expected	7th grade		8th grade		9th grade		Total	Chi-square	df	Sig.
		freq	%	freq	%	freq	%				
Presenting Islamic evidence and Norms	noticed	24	46.15	20	38.5	8	15.38	52	8.00	2	0.018
	expected	17.3	32.7	17.3	32.7	17.3	32.7				
Displaying the greatness of the Creator	noticed	12	35.3	17	50	5	14.7	34	6.412	2	0.041
	expected	11.3	33.33	11.3	33.33	11.3	33.33				
Man's relationship with the universe	noticed	-	-	8	80	2	20	10	3.600	1	0.058
	expected	-	-	5	50	5	50				
Observing the scientific method in thinking	noticed	3	60	1	20	1	20	5	1.600	2	0.449
	expected	1.7	33.3	1.7	33.3	1.7	33.3				
Developing the Islamic attitudes and values	noticed	1	20	2	40	2	40	5	0.40	2	0.819
	expected	1.7	33.3	1.7	33.3	1.7	33.3				
Total	noticed	40	37.74	48	45.9	18	16.98	106	13.66	2	0.001
	expected	35.3	33.3	35.3	33.3	35.3	33.3				

As evident in table (4), there are significant difference when ($\alpha \leq 0.05$) between the dimensions of the Islamic perspective included in the content of science books for the intermediate stage in Saudi Arabia that could be referred to 'class/grade' in favor of the 2nd intermediate class which had (48) frequencies (45.9%). In comparison, the 3rd intermediate grade obtained (18) frequencies (16.98%), and the 1st intermediate grade had (40) frequencies (37.74%). These results suggest a random integrative successive distribution in the dimensions of the Islamic perspective in the content of the target science books. In addition, the results indicate that the signs of the Islamic perspective had been forced into randomly in the science books without establishing these dimensions on sound developing bases. The researcher refers these results to the fact that these books were not designed according to an integrative approach in these successive grades. Therefore, there is no hierarchical knowledge. It is a spectrum of randomness in the vertical axis of the students' knowledge experiences. The reason for that may be attributed to the lack of knowledge on the part of the science curricula developers or the non-educational, illogical consideration of the matter. Bear in consideration the fact that the science books had been designed and prepared by McGraw Hill, the American educational series. Then, these books were translated by Obeikan Institution for Research and Development. This, in fact, created a big gap between the environment of the original books and the Saudi environment. As this study indicates, one of the most prominent aspects of this gap is the randomness distribution of the dimensions of the Islamic perspective in the science books as well as the low percentage of the Islamic rooting for many of the knowledge branches in the target books.

Results related to Question Five:

What is the total inclusion of the dimensions of the Islamic perspective in the content of science books in Jordan and Saudi Arabia?

To answer this question, the researcher recorded the percentages of the inclusion of the dimensions of the Islamic perspective in the Jordanian science books for each class/grade and their equivalents in the Saudi books as shown in table (5).

Table 5: The total of the dimensions of the Islamic perspective in the Jordanian and Saudi science books

Dimension	**7th grade 1st intermediate class**		**8th grade 2nd intermediate class**		**9th grade 3rd intermediate class**	
	Jordan	**Saudi Arabia**	**Jordan**	**Saudi Arabia**	**Jordan**	**Saudi Arabia**
Presenting Islamic evidence and Norms	1	24	9	20	29	8
Displaying the greatness of the Creator	-	12	4	17	2	5
Man's relationship with the universe	1	-	-	8	2	2
Observing the scientific method in thinking	-	3	1	1	7	1
Developing the Islamic attitudes and values	2	1	1	2	1	2
Total	4	40	15	48	41	18
***grade total percentage**	2.41%	24.1%	9.04%	28.91%	24.7%	10.84%

*The grade total percentage = the total of each grade/ total of the dimensions of Islamic perspective included in the Jordanian and Saudi science books (166 signs).

The table shows that the Saudi intermediate stage science books had higher percentage of inclusion

than the Jordanian ones since the former had (106) occurrences whereas the latter had (60) in the Jordanian books.

The frequencies of the dimensions of the Islamic perspective in the 7th grade science books was only (4) occurrences compared to (40) occurrences for the Saudi 1st intermediate class. In the Jordanian 8th grade, there were (15) occurrences compared to (48) in the Saudi 2nd intermediate class. The big difference in these two cases may suggest that the science books Saudi developers were trying to root the scientific knowledge from a religious perspective especially in the presence of governmental institutions that do care about these matters such as 'The scientific miracles in the Quran and Sunnah' in Mekka. In addition, the presence of many holy places in Saudi Arabia paves the way for following religion and associating religion and science.

The results also show that there was a big contrast between (41) occurrences in the Jordanian 9th grade science books in comparison with (18) only in the Saudi 3rd intermediate class. The difference is in reverse of the previous ones. The researchers attributes the fact that the science books in Jordan comprise four branches of knowledge: chemistry, physics, biology, and geology. This has definitely given it more weight compared to the Saudi science books. Moreover, this goes hand in hand with the psychological and educational principles that requires the accumulation and succession of knowledge as the student's grade or age increase. This is exactly what has been taken into consideration in the Jordanian science books whether it was done deliberately or non-deliberately.

Recommendations

Based on the results of the current study, the researchers recommend:

- Developing the content of science books for the upper primary stage in Jordan and the intermediate stage in Saudi Arabia so as to root the Islamic perspective of knowledge and science.
- Cooperating between the bodies and institutions that are concerned with rooting the Islamic knowledge in the curricula and the MoE institutions and curriculum developers. Such cooperation is hoped to direct sciences and islamize knowledge in the curricula.
- Observing the gradual transition of Islamic knowledge in the inclusion of the dimensions of Islamic perspective in the science books in order to fit with the mental growth and class.
- Integrating the two parts (semesters) of the science books as well as the integration between the successive grades. Such integration of the Islamic rooting of knowledge should be based on successful models that have preset weights.
- Conducting more research papers to study the availability of Islamic rooting of knowledge in the different textbooks and different stages and classes.

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Appendix

An Outline to analyze science books of the upper primary stage in Jordan and the intermediate stage in Saudi Arabia according to the Islamic dimension and the related sub-evidence

Dimension	order	Sign 'evidence'
Presenting Islamic evidence and Norms	**1**	**Providing Quranic verses or prophet sayings**
	2	**Displaying efforts of Arab and Muslim scholars**
	3	**Displaying pictures of Islamic footprint**
	4	**Relating the content to any of the miracle aspects, esp. scientific.**
	5	**Explaining the Islam's viewpoint of the scientific theories that go against it**
Displaying the greatness of the Creator	**1**	**Pinpointing that Allah is the creator of life and death**
	2	**Pinpointing Allah's magnificent creation**
	3	**Allah controls the universe**
	4	**Universe rules that Allah created**
	5	**Voiding the co-incidence theory and refuting the development theory**
	6	**Calling for contemplating Allah's creation**
Human relationship with the universe	**1**	**Man is a distinguished and appreciated creature that differs from other creatures**
	2	**All the universe is for the service of man**
	3	**Urging people not to against Allah's rules in the universe**
	4	**Conserving environment and asking not to spoil it**
Observing the scientific method in thinking	**1**	**Scientific thinking is an Islamic must**
	2	**Beneficial knowledge is what made man responsible for building the universe**
	3	**Man's senses are incapable of realizing everything in the universe**
	4	**Man' understanding of the universe rules is changing and developing**
	5	**Refusing the superficial and blind imitation**
	6	**Refuting the idea that genes are capable of controlling man and his motives and behaviors**
	7	**Relating the scientific content to one's contemporary life**
Developing the Islamic attitudes and values	**1**	**Acquiring good habits derived from Islamic regulations**
	2	**Developing learners' faith**
	3	**Appreciating Islam's roles to urge people to think and gain knowledge**
	4	**Instilling morals in learners**
	5	**Urging learners to meet their needs through Islamic ways**
	6	**Enhancing aesthetic values and concepts**