

**CHAPTER****An Integration of Islam and Science  
(Comparative Study at Ummul Qura  
University, Macca and State Islamic  
University of Sultan Syarif Riau, Indonesia)**

Nurchahaya, Akbarizan, Srimurhayati, Afdhol  
Rinaldi & Muhammad Absor

**Introduction**

Education is an intentionally done to achieve a certain goal, and to build a better education needs vision, mission, and strategies in accordance with current conditions (Sahertian, 2000, p.165). Education is also designed to master knowledge, technology and behavior for learners. In recent years, in Moslem world, new policy on education has been made by educational policy makers especially for teachers' competences, curriculum review in learning strategies, teaching and learning approach, etc. these are to ensure that goal of education could be achieved. However, the policies are confronted to conceptual framework of knowledge dichotomy. It means to separate Islam and science. Then, new policy tends to direct to Islamic knowledge only in the learning objectives or otherwise.

The policy made triggers to re-conceptualize knowledge or sciences by integrating knowledge and Islam. Islam is religion which covers universal concepts both living in the world and hereafter. An effort had been made to integrated Islam and knowledge by past Moslem scholars in the twentieth century although it was controversial (Mulyadhi, 2000,p. 25). In Indonesia, integration of knowledge conducted through the transformation from the State Institute for Islamic Studies into State Islamic University including State Islamic University of Sultan Syarif Kasim Riau or "UIN Suska Riau". Its transformation drives the university to establish new faculties with some non-Islamic majors.

Then, Muslim sholars have been concerned about some phenomena on certain natural sciences in their academic discussions by integrating their views toward Islamic perspectives. UIN Suska Riau has made an academic policy in responding to such a case. But, the establishment of new programs/majors are still problematic in terms of new recruited lecturers graduated from public universities. Their teaching methods and disciplines are – in some aspects – different from lecturers' Islamic university background as well as way of viewing phenomena and could trigger a gap among them. The gap can be seen in teaching and learning process, e.g in interpreting the source of knowledge. Non-Islamic scholars will view that knowledge is obtained observation as its method. Meanwhile, Moslem scholars argue that source of knowledge is derived from the intuition process and applying heart cleanliness (*kasyf*). A scholar argues that pure knowledge is based on the empirical evidences, and no relation to doctrine of any religion. However, other scholars beleive that all knowledge including natural and social sciences are stated in the holy book.

This is also occurring at almost State Islamic Universities (UIN) event UIN Syarif Hidayatullah, Jakarta (Mulyadhi, 2000, p.25)

Indonesia is the largest Muslim population in the world which has made regulation to integrate multidiscipline into education. This is because the concept of integration of knowledge in Indonesia is not yet fully managed and well formulated especially for the construction of views, structures and systematical concepts. Even, its transformation to universities does not depict the whole concepts of the integration of knowledge in Islam. This view leads to some Moslem scholars to reconceptualize of knowledge integration consisting its typology in Islamic views (Mulyadhi, 2000, p. 25).

In reality, the way of viewing to knowledge dichotomy implicates to the policy makers in taking this issue into implemented regulations made by governments. Indonesian government has formally set up higher education policies to two institution; public based institution and religious institution based in which both institutions are having the discrimination of implemented polices. The facts are clearly seen on budget allocation and facilities provided as well as on programs. Higher religious institution is coordinated and under controlled by Ministry of Religious Affairs (MORA). However, the public institution which has more budget and complete facilities and programs are managed by the Ministry of Education and Culture (Depkeu RI, 2006, p.8).

Facilities and programs are managed by the Ministry of Education and Culture (Depkeu RI, 2006, p.8). The integration of knowledge and Islam has a great possibilities. Hence, all diciplines of knowledge should be basically referred to ontology,

epistemology and axiology. The knowledge on Islam and science is different. This needs a certain scale to ensure its goal. To achieve the goal, there should be any justification in reference to new scientific findings toward Quranic verses and the shift of knowledge paradigms. Those are related to the metaphysics, religious and Quranic verses.

Most importantly, any discipline of knowledge will be naturally dealt with secularism if it is out of the ontology and world view to believe in One God or tauhid. An epistemology will tend to be more exploitative and destructive if it is not referred to Islamic ontology. However, the integration of knowledge construction still needs an axiology. Knowledge integration should consider other realities and empirical bases in ontological views. Then, epistemology pays attention to the position of revelation and intuition. Meanwhile, axiology directs to certain objectives to whole world.

To cope with the issue on knowledge dichotomy, a scientific research needs to be conducted at higher education or university level. In Indonesia, there have been some State Islamic Universities (UIN) transformed from State Institute for Islamic Studies (IAIN), and this would be pathway to the shift of knowledge dichotomy into integration of knowledge. Then, UIN is expected to be the solution toward knowledge dichotomy in Indonesia. Besides, a study on this issue should be conducted to have more scientific information on knowledge integration and its comparison with some universities in Muslim countries as well. And some universities in Middle East countries including Saudi Arabia could become a reference to this study since there would be some similarities to do an academic research to such

issue. Then, doing an academic work with universities in Saudi Arabia is because Indonesian and Saudi Arabia are becoming one of the largest Muslim populations and both countries have been conducting mutual cooperation in various sectors including economy, culture and education. Both countries have productively enhanced ties in areas of education and culture. For example, in 2009, Indonesian students were about 308 studying at six universities and significantly increased to 507 students in 2012.

Moreover, there are some considerations why this study would be conducted in Saudi Arabia. The first is that Saudi Arabia becomes the center of Muslim in the world, and direction to pray for Moslems is to this country. Another assumption is that Muslim in Saudi Arabia apply their Islamic teachings in ruling government or nation . The second, an increase on international students' intake to study at some universities in Saudi Arabia for science and technology programs. In the past, Saudi Arabia was well-known for Islamic studies, for instances, al-quran, hadist, fiqh, and aqidah. But, in last decades, this country has shifted to develop tremendous universities for the science and technology programs. The third, many opportunities given to Indonesian lecturers and researchers to work at various universities in Saudi Arabia. The forth, the increase of amount of scholarship provided to Indonesian and almost 300 students. Then, Islamic University of Madinah has annually accepted 150 students from Indonesia. Government and universities in Saudi Arabia require to all candidates to undertake a series of strict tests and complete documents (Republika, 2012).

Referring to the above explanation and evidences, there would still be needed to conduct a scientific research on the

integration of knowledge in both universities. This research will be not discussing on the issue of scholars who agree with or reject to knowledge integration rather than how the concept of integration are applied at hihger education context.

## **Research Questions**

The main questions addressed in this study are as follows:

1. What are the characteristics of the Ummul Qura University and UIN Sultan Syarif Kasim Riau?
2. How the knowledge integrations are constructed at Ummul Qura University and UIN Sultan Syarif Kasim Riau?
3. What are role models of knowledge integrations being transformed by Ummul Qura University (UQU), Mecca and State Islamic University of Sultan Syarif Kasim Riau?

## **Research Method**

This research was designed into the field research study and content analyses was employed to analysis an applied curriculum at both universities. Books and other resources discussing on the issue of knowledge integration will be employed. Zuchdi (1998, p. 28) argues that content analyses are applying some phases starting from data collection, data reduction, data analyses to data inference. Then, data was obtained from applied curriculum books in Indonesia and Saudi Arabia in terms of goal, teaching materials, strategies, methods, and evaluations.

## Discussion

### 1. The Characteristics of the Universities

Umm Al-Qura University (UQU) is a large public university in Mecca, Saudi Arabia. The university was established as the College of Sharia (Islamic Law) in 1949 before being joined by new colleges and renamed as Umm Al-Qura by royal decree in 1981. UQU started primarily as an Islamic university offering degrees in Islamic Law and Arabic language studies. It now offers more courses in such diverse subjects such as Technology Management, Business Management, Islamic Economics, Marketing, Engineering, Technology, Medicine, Education, Architecture, as well various Applied, Social and Engineering Sciences. Then, In 1949 King Abdulaziz al-Saud established the College of Sharia (Islamic Law) in Mecca, making it the first higher education institution in the country. It constituted the kernel of Umm Al-Qura University. It was followed by the establishment of the Teachers' College in 1952. This continued until 1959 when the College of Shari'a took the responsibility of teachers' preparation and became the College of Shari'a and Education. In 1962 the College of Education was established as an independent college.

In 1971 the Colleges of Shari'a and Education became part of King Abdul Aziz University in Jeddah and constituted its branch in Mecca. However, The University of Umm Al-Qura was established in 1981 by the royal decree number 39 in 1981 and the colleges of Shari'a and Education were detached from King Abdul Aziz University and joined by new departments to form a new university. This university grew faster on every areas including the number of faculties, campus facilities, etc. At the

time of establishment, this university developed on two faculties, and now has twenty-one faculties.

The vision of the Ummul Qura University is to become a recognized university in areas of teaching and education, conducting scientific research and community development at national and international level. Then, the mission of this university is to develop professional human resource, sophisticated infrastructures and facilities, study programs, research priorities on the knowledge development, good governance on finance and public administration. Moreover, this university has set up the motto to become (1) the first choice for society and trust, (2) international recognition of the academic reference for Islamic law (syariah) and Arabic language, (3) the most visited destination and Muslim historical heritage, (4) global creative environment for knowledge development. Then, Ummul Qura University has some objectives, (1) to provide complete facilities for undergraduate and post graduate program to prepare professional generations and skillful in developing Muslim community especially for Fiqh, Islamic beliefs, applied and social science and linguistics, (2) to play its role in research programs and support to establish research centers to deal with current problematic issues and develop new science and technology, (3) to prepare the Muslim scholars and specialist in certain areas, (4) to take part in meeting with Muslim world's needs and give chance to their son/daughter to get and share knowledge.

Meanwhile, the State Islamic University of Sultan Syarif Kasim Riau (UIN Suska Riau) was inaugurated by President of the Republic of Indonesia on February 9, 2005 based on the rule of the President number 2, 2005 issued on January 4, 2005. UIN Suska Riau is the upgrading of State Islamic Institute of



Islamic Studies of Sulthan Syarif Qasim Pekanbaru which was established on September 19, 1970 by the decree of the Minister of Religious Affairs, number 194, 1970. UIN Suska Riau is one of the State Islamic universities in Indonesia that have changed from IAIN (State Islamic Institute) after State Islamic University of Syarif Hidayatullah Jakarta, State Islamic University of Sunan Kalijaga, and State Islamic University of Malang. Since the change, State Islamic University of Sultan Syarif Kasim Riau has prepared itself to achieve its vision. Nowadays, State Islamic University of Sultan Syarif Kasim Riau is striving to hold various innovations in developing the University both institutionally and academically. so far, State Islamic University of Sultan Syarif Kasim Riau has produced many alumni that are able to mobilize social transformation through their participation in different institutions both traditional religious institutions like Pesantren and modern institution in the sector of education, legislative, government, NGOs, and political parties dominated by alumni of other universities previously.

This university has vision to establish a world class Islamic university and an internationally recognized institution of higher education that integrates Islamic teachings, science, technology and arts by the year 2023. Meanwhile, the missions of the university are as follows:

1. To conduct the teaching and learning integrated with Islam and science to create qualified and professional graduates;
2. To conduct knowledge based research to develop the disciplines, technologies, and arts integrated with Islam and sciences;

3. To make the best use of knowledge, technologies and arts integratedly to contribute for the community development and civilization;
4. To apply good governance management for institution development in facilitating the autonomy of knowledge integration effectively, transparent and accountable;
5. To develop the human resources which are having good capabilities, integrities, hard working in implementing the higher education principles within Islamic knowledge integration.

Besides setting up the vision and mission, UIN Suska Riau has its characteristics as mentioned as follows:

1. Developing various branches and paradigm of knowledge through Islamic approaches and are emphasized by a sense of a faith and believe in one God or tauhid
2. Integrating of science and Islam
3. Creating a madani academic environment
4. Manifesting academic excellence and professionalism based on Islamic morals

Below is the description, differences and characteristics for both universities:

Table 1: The Comparison Of Ummul Qura University An UIN Suska Riau

<b>Characteristics</b>	<b>Ummul Qura University (UUQ)</b>	<b>UIN Suska Riau</b>
History	Starting from Syariah Faculty, and then establishing non-Islamic faculties like sciences and medicine.	Establishing the Faculty of Syariah (Law), Tarbiyah (Education) and Ushuluddin (Theology), and then, Faculty of Science and Technology and Faculty of Agriculture and Animal Science
Vision	The integration of knowledge is not explicitly mention in the university vision	UIN Suska Riau explicitly state the developments of science and its integration with Islamic teaching
Mission	<ol style="list-style-type: none"> <li>1. International academic reference Syari`at knowledge and Arabic</li> <li>2. Scientific works for diverse knowledge internationally</li> </ol>	<ol style="list-style-type: none"> <li>1. Academic quality and professional and Muslim Scholars</li> <li>2. Science and technology with Islamic perspective</li> </ol>
Objective	<ol style="list-style-type: none"> <li>1. To prepare the professionals based on the Islamic principles.</li> <li>2. To provide Muslim scholas and specialist</li> </ol>	<ol style="list-style-type: none"> <li>1. To develop the Islamic values on every disciplines</li> <li>2. To empahise on Iman and believe in One God or <i>tauhid</i></li> <li>3. To appear Islam on every disciplines</li> </ol>

## 2. Academic Content

Description on academic content developments done by both UUQ and UIN Suska Riau is given in the following table:

Table 2: The Comparison on Academic Content at UUQ and UIN Suska Riau

	Ummul Qura University	UIN Suska Riau
Campus Facility	Central mosque and Islamic center are to develop the Islamic studies and lab for knowledge and research development	Central mosque and Islamic center are to develop the Islamic studies and lab for knowledge and research development
Number of Lecturer	Number of lectures are 7.575	Number of lecturers are 1.086
Lecturer's responsibilities	To become Islamic attitudes as lectures' obedience	To state integration of knowledge with Islam

## 3. The Contruction of Content Knowledge

UQU has ran twelve faculties. They are College of Da'wa and Usuluddin, College of Arabic Language, College of Business (CoB), College of Education (in Makkah), College of Applied Sciences, College of Social Science, College of Engineering and Islamic Architecture, and Faculty of Dentistry. In addition, College of Medicine, College of Computer and Information Systems, College of Pharmacy, and College of Applied medical Science are other colleges or faculties running at this university.

Furthermore, UQU has 100 (a hundred) majors, for examples, Syari'ah, Islamic History and Civilization, Acounting, Islamic Studies, Dakwah and Tsaqafah Islamiyah, Al-Kitab Wassunnah, Aqidah Islam, Al-Qiraat, Islamic Economics, Islamic Banking and Marketing, Islamic Insurance, Islamic Capital and Investment, Biology, Physics, Chemistry, Zoology, Functional

Organs, Surgery and Microbiology. Medicine and Antibiotic, Genetics, Mental Doctor, Pediatrician, Public Health, Islamic Education, and Education Management are the programs conducted by this university. There are also many other programs having by UQU either for Islamic programs or non-Islamic programs such as Environment Studies, Public Service Management, Linguistics, Nahwu dan Sharaf, and so forth. Academically, UQU has obligated to all students studying the required courses from first to fourth semester. They are *Ats-Tsaqafah Al-Islamiyah*, *Al-Quran*, *Sirah Nabawiyah*. *Ats-Tsaqafah Al-Islamiyah* consists of tauhid, fiqh, hadis.

Meanwhile, UIN Suska Riau has 8 (eight) faculties. They are Syariah and Law Faculty, Tarbiyah and Education Faculty, Ushuluddin or Theology Faculty, Da'wah and Communication Faculty. Then, this university has the Faculty of Science and Technology, Faculty of Psychology, Faculty of Economy and Social Science, and the Faculty of Agriculture and Animal Science. The total of programs is 39 (thirty-nine). They are Islamic Education, Arabic, English Education, Mathematics, Economy Education, Chemistry Education, *Ahwal Al-Syakhsiyyah*, Muamalah, Mazhab and Law Comparison, Islamic Economy, *Syari'ah Banking*, Law, Islamic Community Development, Islamic counseling, Informatics Engineering, Industrial Engineering, etc. The applied curriculum at UIN Suska Riau obligates to all students to learn 16 (sixteen) required courses namely Indonesian Philosophy, Civic Education, Introduction to Islamic Studies, Methodology in Islamic Studies, Hadis, Aqidah (Tauhid), Akhlak Tasawuf, Fiqh, Indonesian, Arabic, English, Islamic Civilization, Islamic Studies in Southeast Region, Islam and Malay Civilization.

Below is the description and comparison of UQU and UIN Suska Riau, as follows:

Table 3: The Comparison on Content Knowledge at UQU and UIN Suska Riau

ITEM	UMMUL QURA UNIVERSITY	UIN SUSKA RIAU
Faculty	3 public faculties (Islamic Studies) and 19 faculties for non-Islamic Studies	4 faculties for Islamic Studies and 4 faculties for non-Islamic Studies
Program	15 Islamic programs from the total of 100 programs.	17 Islamic programs from 40 programs
Curriculum	Students are required to study during 4 semester for Islamic courses <i>Ats-Tsaqafah Al-Islamiyah, Al-Quran, and Sirah Nabawiyah.</i>	Students are required to study Islamic courses like Introduction to Islamic Studies, Methodology in Islamic Studies Pengantar Qur'anic Studies, Hadist, <i>Tauhid</i> , Islamic behaves, Fiqh, Islamic Civilization, Islamic Studies in Southeast Region, Islam and Malay Civilization.

## Conclusion

From data analyses and explanations above, there will be drawn the conclusion on this study. Then, the research resulted three findings and recommendation to related parties in terms of knowledge integration at higher education. First conclusion is that the Ummul Qura University has specialization to prepare the Islamic scholars and specialist. In contrast, UIN Suska Riau was more on developing the integration of knowledge and Islam. Second, Ummul Qurra University built mosque and Islamic centers for developing students' Islamic programs. Meanwhile, at Universitas Islam Negeri Sultan Syarif Kasim Riau, the development for the students' Islamic knowledge was accompanied with research programs and learnings. Third, knowledge developments were constructed by Ummul Qurra

University through three faculties for Islamic studies with fifteen programs and eighteen faculties for general studies with seventy eight programs. This university obligated to students who were at public programs to learn Islamic studies during four semesters, for examples, *Ats-Tsaqafah Al-Islamiyah*, *Al-Quran*, and *Sirah Nabawiyah*. On the other side, UIN Suska Riau had four faculties for Islamic studies with seventeen programs and forty programs under the four public faculties. Then, students who studied at public faculties were required to study the Islamic studies for instance *Introduction to Islamic Studies*, *Research Methodology for Islamic studies*, *al-Qur'an*, *al-Hadis*, *Aqidah*, *Akhlaq Tasawuf*, *Fiqh*, *Islamic Civilization*, *Islamic History for South East Regions*, *Islam and Malay Civilization*.

This research is also recommended to Muslim scholars that integration of knowledge to Islamic teachings should be in line with the current developments of sciences and done by conducting scientific works or academic research. This will allow another researcher to do the similar study to the above issue in different setting and perspectives.

## References

- Abdurrahman Ibn Khaldun. *The Muqaddimah : An Introduction to History*. terjemah Franz Rosenthal. Princcteton: Princiton University Press Bollingen series. 1981.
- Abuddin Nata. dkk. *Integrasi Ilmu Agama & Ilmu Umum*. Jakarta: Rajawali Press. 2005.
- Alparslan Acikgenc. *Holisitic Approach to Scientific Traditions. Islam & Science: Journal of Islamic Perspective on Science*. Volume 1. Juni 2003. Number 1.
- Badan Penerbitan Filsafat UGM. *Integrasi Ilmu Agama Perspektif Filsafat Mulla Sadra*. Yogyakarta. Lima. 2010.
- Basuni Imamuddin. *Kerja Sama Pendidikan RI-Arab Saudi*. Koran Harian Republika. 14 Juni 2012.

- Darmiyanti Zuchdi. Penelitian Analisis Isi. Yogyakarta: Lembaga Penelitian IKIP Negeri. 1998
- Departemen Keuangan Republik Indonesia. Data Pokok APBN Tahun Anggaran 2006. Jakarta: Depkeu RI.2006.
- Isma'il Razi al-Faruqi. Al-Tauhid: Its Implications for Thought and Life. The International Institute of Islamic Thought. Virginia-USA. 1992.
- Mulyadhi Kartanegara. Menyibak Teori Kejahilan: Pengantar Epistemologi Islam. Bandung: Mizan. 2003
- Noeng Muhadjir. Filsafat Ilmu; Positivisme. Post Positivisme dan Post Modernisme. Yogyakarta; Rakesarasin. 2001.
- Osman Bakar. Reformulating a Comprehensive Relationship Between Religion and Science: An Islamic Perspective. *Islam & Science: Journal of Islamic Perspective on Science*. Volume 1. Juni 2003. Number 1.
- Piet A. Sahertian, Konsep Dasar dan Teknik Supervisi Pendidikan dalam Rangka Pengembangan Sumber Daya Manusia, Jakarta: Rineka Cipta, 2000.