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The Relevance of Al-Farabi’s Classification of Knowledge in the Modern Higher Educational Institution: The Case of Malaysia

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ABSTRACT

Al-Farabi is a great Muslim scholar who had contributed to the development of knowledge. This can be seen from his work on 'Enumeration of Sciences', where he classified knowledge into several divisions. This study employed an analytical approach in analyzing his writing of the 'Enumeration of the Sciences' as well as to compare, contrast and to conclude its relevance and implication towards the selected current higher educational institution in Malaysia. It is found that first, al-Farabi classified knowledge based on philosophical approach. Second, his classification suits the need of the higher educational institution. Third, the idea of classification is similar to the current practice in selected higher educational institution in Malaysia.

Keywords: Al-Farabi, classification of knowledge, higher educational institution and sciences of knowledge.

INTRODUCTION

Abu Nasr al-Farabi is known as a systematic philosopher in Islam. By referring to several sources, his full name is Muhammad ibn Muhammad ibn Uzlagh ibn Tarkhan (Fakhry, 2002 & Farhān, 1989). He was born in Wasiq, a province of Farab in Turkestan in 872 AD (259 AH) to a noble family. His father, a Persian origin, was an army commander at the Turkish Court Tarkhan (Fakhry, 2002).

Al-Talbi (2000) and Mahmood (2012) write al-Farabi’s biography and divide it into three main parts. The first part is his childhood period where he lives in Farab. During this time, he learnt the holy Quran and the sciences of interpretations, Persian, Arabic and also Turkish. The second part is the period of his life in Baghdad where he studied grammar, logic, philosophy, music, mathematics and sciences. He undertook meticulous study of ancient philosophy parts of Plato and Aristotle, absorbing the components of platonism and neo-platonic philosophy which he integrated into his own Islamic and Arabic culture, and his understanding of the Quran and various sciences derived from it. The third and final part of his life is where he went to Damascus. Al-Farabi died in Damascus 950AD (the month of Rajab 339 AH).

PURPOSE OF THE STUDY

This study intends to identify al-Farabi’s ideas on classification of knowledge. It also aims to investigate the relevance of al-Farabi’s ideas on his classification of knowledge in current higher education institution in Malaysia and at the same time, to explore any similarities and differences of al-Farabi’s ideas on classification of knowledge with the current practice in today’s modern educational system in higher institution of Malaysia.

In response to the above purpose, this study seeks to answer the following questions:

i. What is al-Farabi’s ideas on the classification of knowledge?

ii. To what extent does Al-Farabi’s ideas on classification of knowledge influence the classification of knowledge in today’s modern educational system, in particular, higher institution in Malaysia?

iii. Are there any similarities and differences of al-Farabi’s idea on the classification of knowledge with the current practice in selected modern higher educational higher institution in Malaysia?
METHODOLOGY

For this study, the researchers employ content analysis method to analyse the text of al-Farabi’s ‘Enumeration of the Sciences’. Fraenkel and Wallen (2009) define content analysis method as:

"A technique that enables researchers to study human behaviour in an indirect way, through an analysis of their communication" (p.472).

LITERATURE REVIEW

Al-Farabi in Brief

Ibrahim (1963) writes an account on al-Farabi’s life, works and philosophy. It is important to highlight that al-Farabi is a great man during his time. His writings were philosophical and attractive. This can be seen from his writings whereby he avoids repetition and redundancy and prefers brevity and conciseness. The reason behind his unique style of writing was that he was in favor of esoteric teaching and believe that philosophy should not be made available to the uninitiated among the masses and that philosophers should develop their ideas garbed.

On top of that, Ibrahim (1963) also found that al-Farabi’s method of writing and style were identical, whereby he collects information and generalizes; he arranges and harmonizes; he analyzes in order to write; he divides and subdivides in order to concentrate and classify. His the Enumeration of the Sciences (Ihsa’ al-Ulum) was one of his writings that he had applied the method mentioned above.

Another writer, Osman Bakar (1998) in his book ‘Classification of Knowledge in Islam’ highlighted that Al-Farabi’s classification of knowledge is best presented in his book Ihsa’ Al-Ulum (Enumeration of the Sciences) where he classified all fields of knowledge into the following categories: the linguistic, the logical, the mathematical, the physical, the metaphysical, and the political (which included political science, jurisprudence, and dialectical theology). Al-Farabi’s classification was the first influential classification in Islam, for which he was honoured with the title ‘The Second Teacher’ (Al-Mu’allim Al-Thani). That classification became the model for all later authors. This is due to the fact that al-Farabi tried to harmonize Greek philosophical ideas with Islamic beliefs and thoughts.

Although al-Farabi has written on most of the subjects above, it was in the field of logic that al-Farabi put much of his effort, and for which he has become most prominent. He wrote commentaries on the entire Organon of Aristotle, enlightening the system of logic in terms which could be readily grasped and understood by the Arabs and the Muslims at that point of time. This was an extremely significant step for the tenets of the faith could be more rigorously defended by logical means against the arguments posed by non-Muslims, and also the process by which faith and reason to be in a complementary relationship was greatly enhanced. Al-Farabi’s work on politics were also considered one of major significance that he is considered the very founder of political philosophy in Islam. In his elaboration of the principles of government he achieved a unique synthesis between the views of the Greek sages - in particular, Plato - whom he is was heavily influenced and Islamic concepts derived from the Qur’an and Sunnah, and drawing from features of the Medinan state. In the realm of music, al-Farabi stands as an undisputed authority; his work Kitab Al-Musiqa Al-Kabir was considered a significant advance on the music theory of the Greeks, and was hailed as the greatest work on musicology in the Middle Ages.

An analysis of al-Farabi’s classification of knowledge done by the researchers has shown that his classification is similar to the current practices in higher education institution. This could be justified from his classification such as science of language, logic, the mathematical or propaedic sciences (arithmetic, geometry, optics, astronomy, music, science of weights, engineering or science of ingenious devices), physics or natural science and metaphysics and lastly political science (jurisprudence, and dialectical theology) (Al-Farabi, 1996: 15). If we are to look at the current practice of the education institution today, most of these subjects are offered at higher level of the education system as compared to the secondary and elementary levels.
To justify al-Farabi's classification of knowledge in current higher education, two selected higher education institution will be the subject of the study, namely; International Islamic University Malaysia (IIUM) and National University of Malaysia (UKM). The reason for this selection is due to the fact that IIUM represents an institution which implements Islamization of knowledge in its curriculum whereas UKM is an institution which promotes the national language (Bahasa Malaysia) as its medium of instruction in teaching and learning.

**International Islamic University Malaysia (IIUM)**

International Islamic University Malaysia (IIUM) is a well-known international university committed to be an international centre of educational excellence which integrates Islamic revealed knowledge and values in all disciplines and which aspires to the restoration of the Ummah's leading role in all branches of knowledge that leads towards the improvement of qualities of human life and civilization (International Islamic University Malaysia, 2013). The idea behind the establishment of IIUM was initiated by the fourth Prime minister of Malaysia, Mahathir Mohammad during a meeting between Organization of Islamic Conference (OIC) leaders in 1982. The idea was supported by the OIC and other several Muslim countries and was established in 1983 (History of International Islamic University Malaysia, 2009) around the concept of the "Garden of Knowledge and Virtue".

The uniqueness of IIUM lies in its Islamization of Knowledge and with that, it distinguishes IIUM from other universities in Malaysia and in other parts of the world. Its mission, Integration, Islamization, Internalization and Comprehensive Excellence is what put IIUM as a unique university (The IIUM Mission & Vision, 2013). Also, with its philosophy that was inspired from the verses of Surah Al-A'laq signifies that "knowledge shall be propagated in the spirit of Tawhid, leading towards the recognition of Allah as the Absolute Creator and Master of mankind" (Philosophy, 2013). Likewise, IIUM was the first university to use English as the medium of instruction in teaching and learning process.

To date, IIUM has 14 faculties or "kolijehad" which offer more than 70 degree and postgraduate programmes.

**National University of Malaysia (UKM)**

National University of Malaysia (Universiti Kebangsaan Malaysia-UKM) was first mooted at the 1903 Ruler's Conference. The idea was to build an institution of higher learning for the Malays. In 1970, UKM was established after an overwhelming request and support from the citizen of Malaysia who would like to see the establishment of a national university with the Malay Language as the medium of instruction (Abdul Samad Hadi et al., 2002).

By the formation of UKM, it reflects the official language that being used in Malaysia which is Malay language or Bahasa Melayu as well as its philosophy that is "UKM affirms the integration of faith in Allah and constructive knowledge, along with the amalgamation of theory and practice as the core fundamentals in the advancement of knowledge, the building of an educated society and the development of the university" (Philosophy, Vision, Mission, 2009).

From the day it was established, UKM has shown a tremendous growth and development of the Malaysian society, and country and being able to provide adequate number of places of learning for the people as well as a quite handful number of research in various disciplines and field of study are and had been conducted. This can be seen from their vision in which "UKM is committed to be ahead of society and time in leading the development of a learned, dynamic and moral society", their mission, "to maintain the sovereignty of the Malay language while globalizing knowledge in the context of local culture in Malaysia" and motto; "Inspiring futures, nurturing possibilities" (Philosophy, Vision, Mission, 2009).

When it first began its operation, UKM only had three faculties namely, Faculty of Arts, Faculty of Science, and Faculty of Islamic Studies, but today it has expanded and now it has 13 faculties, a Graduate School of Business (GSB-UKM), as well as 16 research institutes of excellence in education (Abdul Samad Hadi et al., 2002).
FINDINGS

The researchers found that Al-Farabi has divided his understanding on the classification of knowledge into five divisions. This could be referred to Table 1:

Table 1: Classification of Knowledge According to Al-Farabi

![Diagram of Classification of Knowledge]

By referring to Table 1, it is clearly depicted that Al-Farabi's ideas on the classification of knowledge as discusses in his work the Enumeration of the Sciences (Ihsa' al-‘Ulum) are as follows:

i. Science of language (‘ilm al-fisārī) and its sub-divisions.
ii. Logic (‘ilm al-mantiqī) and its sub-divisions.
iii. The mathematical or propaedeutic sciences (‘ilm al-ta’līm) which consist of the following:
   a. Arithmetic (‘ilm al-‘adlī)
   b. Geometry (‘ilm al-haddāsah)
   c. Optics (‘ilm al-manāzīr)
   d. Astronomy (‘ilm al-mujām al-ta’limī)
   e. Music (‘ilm al-musīqā)
   f. Science of weights (‘ilm al-‘athqāl)
   g. Engineering or science of ingenious devices (‘ilm al-hiyāh)
iv. Physics or natural science (al-‘ilm al-tabī‘ī) and Metaphysics (al-‘ilm al-ilāhī) and their sub-divisions.
v. Political science (al-‘ilm al-‘adlī), jurisprudence (‘ilm al-fiqh), and dialectical theology (‘ilm al-kalam) (Al-Farabi, 1996: p15).

Al-Farabi discusses in his book the Enumeration of the Sciences (Ihsa' al-‘Ulum), detailed subdivisions, with several objectives in mind. First, the classification is intended as a general guide to the different sciences to assist students of knowledge in choosing subjects that are really beneficial to them. Second, the classification is to enable a person to learn about the hierarchy of the sciences. Third, its various divisions and subdivisions provide a useful means of determining the extent to which specialization may be pursued. Fourth, the classification informs the student of what must be studied before one can claim expertise in a particular science (Al-Farabi, 1996:16; Osman Bakar, 1998: 124).
The Science of Language (\textit{Ilm al-Lisan})
In the first chapter of \textit{Ilaha\textasciitilde al-Ulum}, al-Farabi begins his classification of knowledge with the science of language which is divided into seven parts. He makes it clear that the division itself is universal in the sense that it applies to every language of the human race (\textit{Ilm al-lisan \textit{ind kulli ummat}). He distinguishes between two fundamental functions of this science. The first is to preserve significant expressions (al-\textit{alfaz al-dakhali}) which are either simple or composite. The second function of the science of language is to formulate rules and conventions governing significant expressions (Al-Farabi, 1996: 17; Osman Bakar, 1998: p127)

The seven subdivisions of this science are the following sciences:

i. Simple expressions (\textit{alfaz mufrada\textasciitilde})
ii. Composite expressions (\textit{alfaz murakkab\textasciitilde})
iii. The rules (\textit{qawainin}) governing simple expressions
iv. The rules governing composite expressions
v. Correct writing
vi. The rules governing correct reading (\textit{qira\textasciitilde})
vii. The rules of poetry (\textit{shi\textasciitilde})

Logic (\textit{Ilm al-Mantiq})
It is clearly illustrated from the book \textit{Ilaha\textasciitilde al-Ulum} that al-Farabi has put much emphasis on logic whereby it is the most detailed chapter in comparison from the rest of the chapters in the book. Al-Farabi has enlightened explicitly on the topic from defining the term 'Logic', addressing the benefits of this science to the types of logic.

Al-Farabi opines that logic deals with "intelligibles insofar as they are signified by expressions and with expressions insofar as they signify intelligible". Al-Farabi has been seen to describe Logic as "the science of the rules of". He divides Logic into eight parts, heavily influenced and inspired by the eight books of the Aristotelian \textit{Organon}. To understand this division and the ordering of its parts, it is necessary to refer to the aims of logic as conceived by al-Farabi (Al-Farabi, 1996: 30; Osman Bakar, 1998: 129).

The general aims of logic according to al-Farabi are: first, to regulate (\textit{inquawwim}) and guide reason toward right thinking with regard to all intelligibles that admit of error. Second, to provide safeguards against error in regard to those intelligibles. Third, to provide means of testing the intelligibles that admit of error (Al-Farabi, 1996: 27). The means by which these aims may be achieved are the 'rules' (\textit{qawainin}). The relation of these logical rules to the intellect and the intelligibles is analogous to the relation of grammatical rules to language and the expressions (Al-Farabi, 1996: 28). Logic, in Al-Farabi's classification, is not part of any philosophical science. It is an instrument or tool of the philosophical sciences (Al-Farabi, 1996: 29; Osman Bakar, 1998: 129).

The Mathematical or Propaedeutic Sciences (\textit{Ulum al-Ta\textasciitilde alim})
Al-Farabi classifies this science into seven parts whereby he subdivides three of them - arithmetic, geometry, and music - into theoretical and practical parts (Al-Farabi, 1996: 50).

The theoretical part considers mathematical forms independent of the materials in which they inhere, whereas the practical part considers the forms insofar as they enter into relations with concrete things.

For the rest of the subdivisions namely, astronomy (\textit{Ihm al-najm}), optics (\textit{Ihm al-malazir}), the science of weights (\textit{Ihm al-ath\textasciitilde gl}) and the science of ingenious devices (\textit{Ihm al-hay\textasciitilde}), Al-Farabi did not explicitly distinguish them as the practical and the theoretical.

Physics or Natural Science (\textit{al-Ihm al-Tabi\textasciitilde}) and Metaphysics (\textit{al-Ihm al-Ilahi})
Al-Farabi introduces his division of natural science with a definition of the discipline. It is that science which 'enquires into natural bodies and the accidents inherent in them" (Al-Farabi, 1996: 67; Osman Bakar, 1998: 139) Al-Farabi divides natural science into eight parts. As in logic, each part of natural science corresponds to a book of Aristotle or some parts of it (Al-Farabi, 1996: 72). Al-Farabi's natural
science is primarily a science of principles of the different species of natural bodies, namely, mineralogy, botany and zoology.

On the other hand, al-Farabi divides metaphysics into three parts. The first part is ontology, that is, the science which deals with "beings (mawjūdat) and their attributes, insofar as they are beings." The second part of metaphysics seeks to classify the different kinds of beings with a view of establishing the subject-matters of the theoretical sciences. This part establishes the principles of demonstration (mabādi’ al-barahīn) in the science of logic, the mathematical sciences, and natural science. The third and last part of metaphysics deals with "beings that are neither bodies nor in bodies (Al-Farabi, 1996: 75-76; Osman Bakar, 1998: 142)

**Political Science (al-'Ilm al-Madani), Jurisprudence (‘Ilm al-Fiqh), and Dialectical Theology (‘Ilm al-Kalam)**

The central theme of al-Farabi's political science is happiness. It explains that true happiness is attainable only through the virtues and the good and noble things. Things such as wealth, honor and sensual pleasures, when these are made the only ends in this life, do not constitute true happiness but are only presumed to be so (Al-Farabi, 1996: 80; Osman Bakar, 1998: 143)

Al-Farabi's account of political science is immediately followed by that of the science of jurisprudence (‘ilm al-fiqh). According to him, jurisprudence is the art that enables man to infer the determination of whatever was not explicitly specified by the Lawgiver, on the basis of things that were explicitly specified and determined by him. A jurist should strive to infer correctly by taking into account the Lawgiver's purpose with the religion he had legislated for the nation to which he gave that religion. Al-Farabi says that every religion (milla) consists of both opinions (arḍ) and actions (af’al), which constitute the two parts of this science (Al-Farabi, 1996: 86; Osman Bakar, 1998: 145)

Finally, Al-Farabi describes the science of dialectical theology ('ilm al-kalam). He says, 'ilm al-kalam is a religious science which arose in a religious tradition at some point in its history out of a need to formulate a systematic defense of the tenets of that religion against attacks from various sources such as from the followers of other religions (see Al-Farabi, 1996: 86; Osman Bakar, 1998: 146)

**DISCUSSION AND IMPLICATION**

As discussed earlier, al-Farabi is one of the earliest and most influential scholars in his time to categorize the sciences of knowledge. In his the *Enumeration of the Sciences*, the researchers found that he is influenced by his master, Aristotle. Therefore, most of the classification of knowledge is constructed with theory and practical, similarly with construction of knowledge by Aristotle. Al-Farabi divides the *Enumeration of the Sciences* into five chapters and each of the chapter explains deeply about the streams of linguistics, logic, the preliminary sciences, physics and metaphysics and science of society.

To answer the question about the relevance of al-Farabi's classification of knowledge in higher education institution today, IJUM and UKM will be the sample of the comparison and analysis. To begin with, the researchers compare al-Farabi's the *Enumeration of the Sciences* with that of faculties at IJUM and UKM. Table 2 explains the detailed information of the said content:

<table>
<thead>
<tr>
<th>Al-Farabi's Classification of Knowledge</th>
<th>Current Practice at IJUM/ Specialization</th>
<th>Current Practice at UKM/ Specialization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Linguistic</td>
<td>Human Science (Language and Literature)</td>
<td>Human Science (Linguistic)</td>
</tr>
<tr>
<td>Logic</td>
<td>Revealed Knowledge (Usul al-Din and Comparative Religion)</td>
<td>Islamic studies (Usul al-Din)</td>
</tr>
</tbody>
</table>
By referring to Table 2, it describes the relevance and connection of al-Farabi's ideas of classification of knowledge with current practices at IIUM and UKM. The discussions and its implications are as follow:

i. Linguistic

Linguistics is known as scientific study of language. It is divided the stream to syntax, grammar, pronunciation, speech and poetry. In UKM, the course Linguistic is offered under Faculty of Social Sciences and Humanities. On the other hand, IIUM offers linguistic namely as Language and Literature under Kuliyyah of Human Science.

ii. Logic

Al-Farabi corresponds this stream to the groups and relying on interpretation of Aristotle. The parts of logic are premises of syllogism, syllogisms and dialectical proofs, errors in reasoning, oratory and poetry (Nasr, 1987). The implementation of this knowledge is offered under Islamic Studies and it is known as Department of Usul al-Din in UKM. While, in IIUM, it is known as ‘Logic for Islamic Studies’ which is offered in Kuliyyah of Revealed Knowledge under the Department of Usuluddin and Comparative Religion as well as under Islamic Education programme, Institute of Education.

iii. The Preliminary Sciences

The third division of Al-Farabi classification is the preliminary sciences. There are seven subdivision and two of them are not offered in the both of the higher education institutions: science of heaven namely astrology and astronomy and science of weights. Nevertheless, the rest of this stream; Arithmetic and geometry are the courses under Faculty of Science at UKM and under Kuliyyah of Science and Technology at IIUM. As for optometry, it is offered in Kuliyyah of Allied Health Sciences under the department of Optometry, while in UKM it is offered in Faculty of Health Sciences under the department of Optometry. For science of toolmaking, it is offered in Engineering program in UKM and IIUM. Then, music is implemented as the co-curriculum subject in the universities such as Giamelan, Nasyid, Dikir Barat, Caklompang, Angklung and so on.

iv. Physics and Metaphysics

Physics and metaphysics is one of the branches knowledge which is emphasized in the great book. Al-Farabi developed the knowledge with the division, created by human being or come naturally. It is
exemplified as sword, bed which is created with the ability of human but naturally is created by God. This stream is implemented in both universities in Kulliyyah of Science and Faculty of Science and Technology in IUM and UKM.

v. Science of Society
In the last chapter, Al-Farabi comes up with the last classification of knowledge. He explains about the science of society, which related to action of human being as to develop good citizen. In UKM it is applied as a course namely Science Development under Faculty of Social Science and Humanities and in IUM, it is combined with anthropology namely Sociology and Anthropology. It is under Kulliyyah of Human Sciences. For subdivision in this stream; Jurisprudence, it is constructed under Islamic Studies in UKM and known as Department of Syariah and in IUM named Department of Fiqh and Usul under Kulliyyah of Islamic Revealed Knowledge. Lastly, both of the universities offer theology as a course under Kulliyyah of Revealed Knowledge in IUM and Faculty of Islamic Studies in UKM.

CONCLUSION
In conclusion, al-Farabi’s ideas on classification of knowledge comprising of several branches of knowledge. Al-Farabi’s writing of ‘Classification of Knowledge’ is still relevant in today’s higher educational institution. In addition, his classification is similar to higher education system today and still relevant as implemented in higher education institution and in particular IUM and UKM.

REFERENCES


