

Integration of Tawhidic Science through Lesson Study Approach in teaching and learning Science or Islamic Study

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ABSTRACT

Lesson Study is a study or research during teaching process in a classroom. Lesson study is done collaboratively between teachers through several steps beginning with communal studying formation, followed by determining aim of teaching, planning the teaching process, observing during teaching and learning process in the class and finally doing reflection of the process. The focus of attention for the classroom observation is to look at the development of students' studying process, students' understanding, and activities done through interaction between the teacher, material and students. The step in lesson study is to provide opportunity to the teachers to focus in whatever aim and purpose that needed to be given attention to. Tawhidic science is a concept of integrating science and revelation knowledge. It can be integrated either by studying science or Islamic education. The aim of integrating revealed knowledge can be given attention by lesson study approach in teaching science or Islamic education. Thus, this writing aims to discuss tawhidic science integration through lesson study approach in teaching science or Islamic education. This study propose to a qualified teaching process through collaboration between teachers in producing teaching and learning that integrates revealed knowledge in teaching science or Islamic education.

Keywords: *Integration; Tawhidic Science; Lesson Study; Islamic Study*

INTRODUCTION

National Education Policy has outlined the necessity towards students' universal potential development based on the belief in God. The general aim of education is to produce a balanced human from the perspectives of physical, emotion, spiritual and intellect. The following is the National Education Policy:

“Education in Malaysia is a continuous effort towards enhancing potentials of individuals in a holistic and integrated manner in order to create individuals who are well-equipped intellectually, spiritually and emotionally. This effort aims to produce knowledgeable, ethical and responsible Malaysian citizens who are can contribute towards the harmony and prosperity of the community and nation.” (FPN)

Based on the integration of the four elements in the National Education Policy, spiritual intelligence provides possibility to produce students who can build strong relationship with the Creator (Allah), while intellect, emotional and physical intelligence brings human to build relationship with other human and the nature. Thus, spiritual intelligence needs to be nurtured in order to build human who always do good deed for Allah in what ever situation which is the aim of human life in this world. On the other hand, the effect of secular education will bring to an imbalanced society. For teenagers with lack of strong-hold beliefs, this will encourage them to be involved in unwanted social issues.

In life, al-Quran is the most reliable source to be taken as life guide as it comes from the Creator Himself. Allah is the Creator. He creates everything, and human is His best creation. All other beings are created in order to do good to human. Definitely, Allah with His divine attributes of Most Loving and Compassionate prepares a complete user guide for human. Al-Quran is the only book without any defects. Nonetheless, the question is, how to utilize al-Quran in life? To what extent does teacher as the executor of NEP really understands the integrative principles of the philosophy?

The aim of science education is among other to develop students so to have scientific traits which are to have scientific processing skills and of high values. Nonetheless, it seems that scientific culture and work tradition of scientists are yet to be adopted as work tradition and daily life practice of the society nowadays (Khalijah Mohd Salleh, 2011). As a matter of fact, all efforts in scientific studies through observing, searching, exploring, concluding and finally generalizing. As the utmost source of knowledge is Allah, thus searching for knowledge in science will produce essence of thankfulness, greatness of the Creator and boost tawhid (oneness) to Allah. Consecutively, this will be realized through action in real life. This shows that science and al-Quran will never conflict between one another as both come from the same source and both also mention the existence of Allah. Thus, the exploration of science with the base of revealed knowledge will produce scientists whom will worship Allah and contribute to the society harmoniously. This concept is in line with the tawhid paradigm that combines the relation between Allah, human and the nature.

It is also the same with the build of Islamic education curriculum, there needs to be paradigm shifts towards the concept and knowledge philosophy that matches the needs of religion and belief towards God (Tajul Ariffin 1994). Having this in consideration, the National Education Philosophy (1996) aims to mould balanced and harmonious human from the aspect of characteristic and knowledge that one possesses. The NEP has tendency towards achieving the vision of producing good human and citizens by proposing characteristics to be practiced which are believe and abide to God's rule, secondly to be knowledgeable, thirdly to have noble characteristics, fourthly to be responsible to self, society, religion and the country and lastly to do good and contribute to society, religion, the nation and the country (Ahmad Mohd Salleh 1997).

By having National Education Philosophy (1996) and Islamic Education Philosophy (IEP), the ambition and essence of al-Quran generation that wishes to be formed through the integrative education will be able to be achieved successfully if Islamic education system and the process of knowledge integration are clearly understood amongst the Islamic education teachers. The phrase of balanced and harmonious human in NEP refers to the role of human as leaders whom are balanced between the life in the world and the hereafter. The emphasis in NEP (1996) is to produce universal and whole-rounded human with good characteristic and belief based on the belief and confidence to Allah s.w.t. This is further emphasized by Islamic Education Philosophy (1988) which focuses on the aspect of whole-rounded individual development. Both these education philosophies become the beginning factor to a paradigm shift in the education in the country in order to carry out integrative education that has God as its foundation (Ghazali Basri, 2000). The concept of integration on paper means the assimilation of knowledge which is integrating scientific knowledge during studying Islamic education. This assimilation is hoped to produce students that possess knowledge that is always linked to Godness concept especially scientific knowledge in the al-Quran and finally will be able to form students who always think about the Creator in any circumstances.

Spiritual intelligence needs to be integrated in all subjects. Even though the assimilation has been voiced in various types of integration such as cross-curricular, integration in forming students' becoming, unfortunately it is far from being realized. This vision will not be realized if the executors from various fields are still reluctant to carry it out. Nonetheless, if the assimilation has been executed, most probably only a few of them has the consciousness to carry it out and felt that it is their responsibility. This is further developed by being done sincerely with the effort of looking for input to be integrated in the teaching process.

Studies found that even though teachers are prone to integrate revealed knowledge in their subject, the issues faced by the teachers are lack of confidence, hindrance of knowledge, lack of reference materials, unsure of the suitable strategy to be carried out and worry towards students' respond in the integration. In this matter, lesson study will be able to provide the chance to collaborate between teachers and outsiders that may be able to solve these issues. Lesson study is commenced with discussion on how to integrate revealed knowledge in teaching plan, followed by verification by fellow teachers regarding the assimilation during teaching and learning process in the classroom and finally giving input or reflection about how far can the integration been done along with the students' respond towards the integration. Thus, this paperwork will discuss how the integration of revealed knowledge can be assimilated in science and Islamic education using lesson study approach.

SCIENCE TAWHIDIC CONCEPT

Science is a knowledge regarding the nature created by God. The word science or 'ilm in Arabic is repeated 811 times in al-Quran in various forms and usage variations (Abd. Baqi', 1998). Tawhidic is a concept of Godness in Islam that believes God is Almighty which is there is no other god except Him (Khalijah, 2011). Thus, the matter that base tawhidic science is the belief regarding the existence of God as the creator of the world (Khalijah, 2011).

Tawhid paradigm combines the relation between human and nature horizontally; meanwhile the relation with Allah is vertical. The position of Allah is always on top, but the Zat of His power can be seen through His ayaat. The nature is like an 'open book' and al-Quran is a 'written book'. Both of these are assimilated and cannot be separated. Nature should be studied together with al-Quran as the fundamental of tawhid. Al-Quran urges man to think through the process of research regarding the occurrence in the nature and regarding the creating of man himself. It is proven that current scientific facts findings show the truth of al-Quran contents.

Al-Quran is a book which has elements so that human study the absolute truth of knowledge (science) academically. Apart from that, science that is explained in the al-Quran strengthens and explains a scientific fact. This is in line and not contradicting the facts in prophets' hadith, Islamic thinkers' knowledge and Islamic and non-Islamic scientists. An opinion can be accepted if it is not contradicting al-Quran and hadiths (truthful knowledge). On the other hand, an opinion cannot be accepted if it is contradicting al-Quran and hadiths (erroneous knowledge).

The phrase 'No God except Allah' is oneness concept that becomes the basic reference in every knowledge field. Through al-Quran, Allah taught human the rules to ensure ideal life. Human are bequeathed with senses and mind that has thinking ability that can understand things which are out of human senses (Yahya Jusoh & Azhar Muhammad 2010).

It is only right that knowledge learnt be able to bring one closer to God (Abu Ahmad 2011). Science in revealed knowledge shows the signs of Allah's Greatness and Might. Thus, only those who study science and be able to refer to revealed knowledge will be able to see and understand things beyond the surrounding until able to uplift his belief in God. Allah said in Surah Al 'Imran which means:

Indeed, in the creation of the heavens and the earth and the alternation of the night and the day are signs for those of understanding. Who remember Allah while standing or sitting or [lying] on their sides and give thought to the creation of the heavens and the earth, [saying], "Our Lord, You did not create this aimlessly; exalted are You [above such a thing]; then protect us from the punishment of the Fire'.

(al 'Imran 3: 190-191)

Al-Quran as the source of all knowledge has introduced methodologies of scientific research 1426 years ago in order to prove the truth of al-Quran. There are many hypotheses presented by al-Quran in the form of challenges and one of the hypotheses that is seen as the greatest is as such:

'We will show them Our signs in the horizons and within themselves until it becomes clear to them that it is the truth. But is it not sufficient concerning your Lord that He is, over all things, a Witness?'

(Fussilat 41: 53)

This verse asks human to conduct research from all aspects of knowledge and fields, be it from the aspects of science or social science fields. All findings in the scientific fields will not contradict al-Quran statement and this includes hadiths saheeh (Sulaiman 1995). Until this day, there is not a scientific finding that is verified to be true that opposes al-Quran and hadiths saheeh. From about 1,000 verses in al-Quran that mentions science, amongst them are regarding the creation of human and the nature. This knowledge is definitely being taught since in school. Thus, educators should take the opportunity to integrate it in the teaching and learning process. This practice is the translation and application process from the philosophies as mentioned in the National Education Philosophy that aims to produce holistic students.

A number of 86 Makkiyah surahs and 28 Madaniyyah surahs in the al-Quran bestowed upon Prophet Muhammad s.a.w can be divided into Godness science, social science and habitual science. Godness science which is integrated with the two sciences will become the foundation and aim to the development of social science and habitual knowledge. Many Quranic verses explain on social and habitual phenomenon in the context of Allah s.w.t's power and might. Conclusively, educators need to open their mind and make a shift of mind to move to a more holistic teaching strategy. In this matter, educators need to make an effort to study, understand and spread the concept of tawhidic science by applying it in teaching process.

Integrating Revealed Knowledge in Education

Science philosophy and al-Quran education is a research on knowledge pertaining to embracing intelligence or the truth of al-Quran and be applied according to the development of science and technology. This education is divided into three which are godness science or tawhidic knowledge, social science and natural science or habitual science. Knowledge according to al-Quran science philosophy as explained earlier is divided into three which are knowledge of godness (divine science), social science and habitual science (natural science). The division of knowledge can be fundamentalized on the contents of al-Quran which can also be divided into these three categories of knowledge. A translation that can expose the definition of al-Quran

principle as well as showing the application in a positive manner with the issues in daily life according to the current time will enliven al-Quran knowledge as guidance in life in order to achieve peace in the world and the hereafter. The usage and application that is accurate to the questions of life will produce innovations in creations and science and technological findings that will eventually lead to an achievement (Mohd Zaidi Ismail 2012; Yahaya Jusoh & Azhar Muhammad 2010).

The assimilation can be put to practice in three aspects which are integration of curriculum aspect, integration of content and integration from the aspect of teaching strategy. The knowledge integration is hoped to strengthen students' confidence towards the teachings of Islam and consecutively strengthen their beliefs. Integration from the aspect of curriculum is the most important matter in the KBSM teaching strategy in gaining wisdom from facts and knowledge gained. An important foundation in building curriculum is integration of aqli knowledge and revealed knowledge. These can be shown in Aims and Objectives of Islamic Education Curriculum, syllabus and textbook.

Meanwhile, integration within teaching content should connect with the aspects of tawhid, fiqh, Islamic civilization and akhlaq values preserved in it. As an example, in the subject of Islamic education which is the topic of Allah s.w.t's creation, it can be linked to science knowledge such as the phenomenon of day and night when earth moves around the sun. The surface that faces sun will have daylight and the surface that is blocked from the sun will have night time. The phenomenon of day and night has actually been explained in the al-Quran in Surah Yassin verse 37 to 40 which means (Abdullah Basmeih 2001):

"...and a sign for them is the night: We withdraw there from the day, and behold they are plunged in darkness; and the sun runs his course for a period determined for Him: that is the decree of (Him), the Exalted in Might, the All-Knowing. and the moon,- We have measured for her mansions (to traverse) till she returns like the old (and withered) lower part of a date-stalk. It is not permitted to the sun to catch up the moon, nor can the night outstrip the day: Each (just) swims along in (its own) orbit (according to Law)."

As for integration in the aspect of teaching strategy, it is explaining that scientific method such as thinking, experimenting and empirical method that can be integrated in Islamic education by linking and strengthening revealed knowledge (Abdullah Basmeih 2001). For example, the phenomenon of rainfall. According to science, rainfall happens due to the process of evaporation and when the evaporation has reached a certain level, then it will fall as rain. This rainfall phenomenon has already been explained in verse 22 of surah al-Hijr which means:

"And We send the fecundating winds, then cause the rain to descend from the sky, therewith providing you with water (in abundance), though ye are not the guardians of its stores".

Integrating Tawhidic Science in Science Education

Al-Quran is not a science book, but it exceeds science book. Putting al-Quran verses at a higher place is more prominent followed by science and not vice versa. This matter should be made as the foundation in order to ensure the aim is met which is to make science as a tool to make al-Quran noble, and not making al-Quran as a tool to prove science is right and accurate. This is because science natural law happens with the decree of Allah. Without His consent, science law can not happen. All the laws are sunnah of Allah. There are times when certain occurrences and scientific concepts do not abide by the law of nature or science theory. That is when Allah show His Might that overpowers everything. These, amongst other are the occurrences that happen to prophet as Gift (mukjizat) and to human as karomah. For example, fire is hot in nature.

That is sunnah of Allah or in science as natural law or science concept. Nonetheless, with the permission of Allah, the natural law do not happen as so in which it can be cold with Allah's decree as felt by Prophet Ibrahim when being put in burning flame by King Namrud. This is mentioned and explained in Surah al-Anbiyaa, verse 69.

In science curriculum, students will learn human creation and phenomenon of the nature either on earth or in the universe. Topic related to human creation is studied in subjects such as Biology and Science. This topic explains the fertilization of man's semen and woman's ovum in the woman's womb which will develop fetus that has several stages of formation until it is born in the form of perfect human when the time comes. Apart from revealing the content that is readily available, the content can be widened by explaining from the aspects of al-Quran and science.

According to al-Quran and Hadith, mankind is created by Allah s.w.t with two elements which are spiritual and physical. Physical element can be seen and proven by looking at the following Quranic verses (Abdullah Basmeih 2001). Among the explanations or statements that can be conveyed to students regarding this topic are:

- i) Translation of surah al-Rahman, 55:14:
He created man from sounding clay like unto pottery (solsol kal fakkhar)
- ii) Translation of surah al-Hijr, 15: 28:
Behold! Thy Lord said to the angels: "I am about to create man, from sounding clay from mud moulded into shape (solsol min hamain masnun).
- iii) Translation of surah al-Sajadah, 32: 7:
Who perfected everything which He created and began the creation of man from clay. (tin)
- iv) Translation of surah al-Soffat , 37: 11:
He Who has made everything which He has created most good: He began the creation of man with (nothing more than) clay, (tin al- laazib)
- v) Translation of surah Ali-Imran, 3:59:
The similitude of Jesus before Allah is as that of Adam; He created him from dust (turab), then said to him: "Be". And he was.
- vi) Spiritual element can be seen in this verse; Translation of surah al-Hijr, 15: 29:
"When I have fashioned him (in due proportion) and breathed into him of My spirit, fall ye down in obeisance unto him.

Physical elements in the creation of human which were mentioned in the Quranic verses can also be compared to the scientific as used in the syllabus. The terms in al-Quran and scientific terms are as follow:

- i) Dry soil such as charcoal/ burner such as pottery/ soil burnt by oxygen (solsol) carbon (fakhaar)
- ii) Dry soil such as black mud of color-changing nitrogen (solsol) (hamain masnun)
- iii) Water based soil such as (tin) hydrogen
- iv) Iron clay such as (tin al-lazib) ferum, iodium, calium, silicium
- v) Inorganic soil such as (turab) salt, magnesium et cetera.

Human creation process that occurred in a woman's womb can also be presented with Quranic verses and Hadith which explain these occurrences as contained in the syllabus:

- i) Translation of surah al-Taariq, 86:6:
He is created from a drop emitted
- ii) Translation of surah al-Mukminun, 12-14 :
Man We did create from a quintessence (of clay); Then We placed him as (a drop of) sperm in a place of rest, firmly fixed; Then We made the sperm into a clot of congealed blood; then of that clot We made a (foetus) lump; then we made out of that lump bones and clothed the bones with flesh; then we developed out of it another creature. So blessed be Allah, the best to create.
- iii) Translation of surah al-Hajj, 22: 5:
O mankind! if ye have a doubt about the Resurrection, (consider) that We created you out of dust, then out of sperm, then out of a leech-like clot, then out of a morsel of flesh, partly formed and partly unformed, in order that We may manifest (our power) to you; and We cause whom We will to rest in the wombs for an appointed term, then do We bring you out as babies, then (foster you) that ye may reach your age of full strength; and some of you are called to die, and some are sent back to the feeblest old age, so that they know nothing after having known (much), and (further), thou seest the earth barren and lifeless, but when We pour down rain on it, it is stirred (to life), it swells, and it puts forth every kind of beautiful growth (in pairs).

Conclusion from Hadith is that: semen/nutfah (40 days) + blood/'alaqah (40 days) + flesh/mudghah (40 days) = then formed a human form equipped with senses and alive is a fetus (120 days/4 months) + (150 days/5 months) more = babies born (270 days/ 9 months). Learning contents such as this should be made a part of the syllabus in order to ensure the order of lesson in the classroom. Even though it is not inserted in a written manner or being inserted in the syllabus, teachers need to inculcate Islamic values anyway in the teaching process. There are many examples of al-Quran verses that mention science as listed by Salleh Ismail (2010) among others:

- i. 11 verses regarding chemistry.
- ii. 24 verses regarding food science.
- iii. 25 verses regarding beginning of human and beings.
- iv. 27 verses regarding social science.
- v. 41 verses regarding engineering.
- vi. 60 verses regarding earth.
- vii. 69 verses regarding urges to make research.
- viii. 73 verses regarding Mathematic.
- ix. 90 verses regarding farming.
- x. 113 verses regarding astronomy.
- xi. 140 verses regarding geography.
- xii. 144 verses regarding physics.
- xiii. 271 verses regarding medicine.
- xiv. 283 verses regarding biology.

Researchers also lists several examples of Quranic verses which are related to natural science that are related to disciplines of biological sciences, astronomy, medicine, geology, earth knowledge, sea knowledge, knowledge of the universe and many more. The verses are such as in surah Fussilat: verse 53 to 54, surah Az-Zariyat : 20-21, surah Al-Tariq: 5 to 7, surah Ar-

Rahman: 1-13, surah Al-Insan: 1-3, surah al-An'am : 97-98, surah An-Nur : 43-44, surah An-Nahl: 4-14, surah Al-Ghasiah:17-26, surah Al-Baqarah: 164, surah Ar-Rum: 20-27, surah al-Hajj: 18 and many more. On the other hand, example of al-Quran verses related to communal science that touches on the aspects of sociology, anthropology, psychology, economy, political science, geography, history and many more are as such: surah Yusuf : 109 -111, surah al-Hajj : 45-46, surah Ar-Rum : 7-11, 50, surah Fussilat: 54, surah Al-Mulk: 2, surah al-A'raf: 96, surah Ibrahim: 7, surah An-Nur: 55, surah al-Kahfi: 32-42 and many more.

In conclusion, the verses instruct human to observe, reflect and think of all occurrences in the universe so as to realize that Allah s.w.t is the Creator and Almighty. The success of Muslim scientists once was due to the motivation from al-Quran verses which encourages towards exploration and empowering science. Islamic education teachers should also take some lessons from this and explore science that is consists in the verses of al-Quran so that it can be integrated in the teaching of Islamic education.

Integrating Tawhidic Science in Islamic Education

Building Islamic education curriculum should conduct paradigm shift towards concept and knowledge philosophy which equivalence to the need of religion and belief to God (Tajul Ariffin 1994). With this ambition, National Education Philosophy (1996) which consists of the ambition to shape balanced and harmonious human from the aspects of characteristics and knowledge possessed. NEP is keen to achieve vision that characterized good human and citizen by proposing traits to be practiced which are believe in God, secondly to be knowledgeable, thirdly to have good and noble characters, fourthly to be responsible to oneself, the society, religion and country, and lastly to do good and contribute to the society, religion, nation and country (Ahmad Mohd Salleh 1997).

With the existence of National Education Philosophy (1996) and Islamic Education Philosophy (IEP), the ambition and essence of al-Quran generation that wishes to be formed through the integrative education will be able to be achieved successfully if Islamic education system and the process of knowledge integration are clearly understood amongst the Islamic education teachers. The phrase of balanced and harmonious human in NEP refers to the role of human as leaders whom are balanced between the life in the world and the hereafter. The emphasis in NEP (1996) is to produce universal and whole-rounded human with good characteristic and belief based on the believe and confidence to Allah s.w.t. This is further emphasized by Islamic Education Philosophy (1988) which focuses on the aspect of whole-rounded individual development. Both these education philosophies become the beginning factor to a paradigm shift in education in the country in order to carry out integrative education that has God as its foundation (Ghazali Bastri, 2000). The concept of integration on paper means the assimilation of knowledge which is integrating scientific knowledge during studying Islamic education. This assimilation is hoped to produce students that possess knowledge that is always linked to Godness concept especially scientific knowledge in the al-Quran and finally will be able to form students who always think about the Creator in any circumstances.

Educators have gone through science education process at school level. Furthermore, education system these days has opened a wide opportunity to students to memorize al-Quran such as in Maahad Tahfiz Sains, Ulul albab, integrated school and suchlike. This system allows students to study al-Quran and Science simultaeneously. Since the students are taking both fields of religious and science knowledge, thus they are allowed to pursue their study in

whichever field they are keen and more prone to. This system becomes the basis to educators of Islamic education related to science concept. Furthermore, knowledge related to science can be gained from informal systems from various sources.

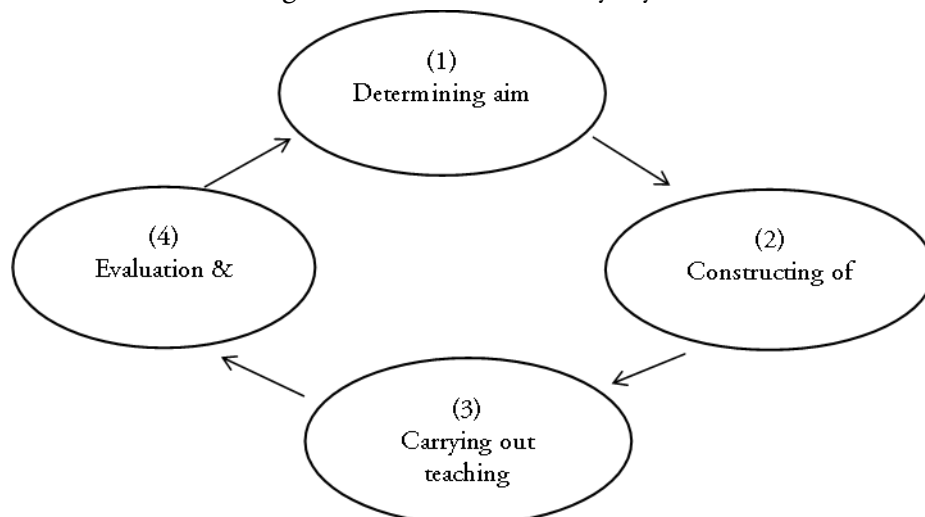
In teaching Islamic education, educators that has the aim to integrate tawhidic science in his teaching will try his very best to do so. As an example, the history of Prophet Muhammad s.a.w's Isra' Mikraj is among the topics in Islamic education syllabus. Prophet Muhammad was having Isra' (Night Journey) by Allah from Mecca to Masjidil Aqsa and being Mikraj (Ascension) until the seventh sky on a steed Buraq. The prophet's travel took a very short time but it went to an unthinkable distance to the human being. In the discussion of this history, educators can integrate scientific knowledge related to the concept of speed of light that occurred in physic and al-Quran verse that relates to the matter. This concept that is brought will make the teaching of Islamic education to become more interesting and opens up students' mind. The students can also feel the subject-matter that is learnt in science is related to Islamic education. In this matter, the concept of cross-discipline knowledge will be applied and meaningful lesson can be realized.

LESSON STUDY

Lesson Study has become a practice and educator's culture in Japan. In Japanese language, Lesson Study is known as "Jugyokenkyu" which also means "teaching research". Jugyokenkyu is a combination of two words which are jugyo which means lesson and kenkyu which is research. The term Lesson Study was introduced by Yoshida (1999), an expert with vast experience in this field (Wiburg & Brown, 2007). Apart from that, it is also known as Research Lesson by Lewis (1997). In Indonesia, especially in South Sulawesi, Lesson Study is better known as a research of lesson. In conclusion, Lesson Study can be defined as a research or observation during teaching and learning process in the classroom.

Generally, a cycle of Lesson Study consists of several steps that encourage teachers to cooperate in carrying out these steps (Fernandez & Yoshida 2004; 7-9). Figure 1 shows Lesson Study cycle that involves four steps. Nonetheless, an important consideration before carrying out the steps is formation of community group. In this context, it is advisable that the community group consists of educators with science and Islamic education background.

Figure 1: Lesson Study Cycle



The first step is to determine teaching aim which is by studying longer aim for the development of students' learning and curriculum as well as making observation to the syllabus content. In the context of tawhidic science integration, the objective to be met is how revealed knowledge can be integrated during teaching process dan the proper topic for it. This objective will be processed in the following step.

The second step is planning the teaching or lesson plan. This requires the Lesson Study group to choose topic or sub-topic of the subject. Choosing factor may consider important topics, difficult to understand and topics that are non-favorable by students, discussing students' learning problems, and plan steps of students learning up to producing effective lesson plan by taking into account changes that is expected to happen to students during the teaching and learning process.

The third step is carrying out the teaching and observation in which it requires a member of the Lesson Study group to execute the lesson based on lesson plan which was produced together earlier. Other members of Lesson Study play the role as observer. Protocol of observing Lesson Study during teaching and learning will involve observers to conduct observation and note down in the observation form prepared. The main focus is given to students' learning and not teacher teaching. Observers may move in the classroom to check upon students' work and exercises but may not meddle in the teaching and learning process. If video recording is conducted, observers are reminded to not obstruct the video recording when moving about in the classroom. Meanwhile, members of Lesson Study should gather data for reflection and further discussion.

The fourth step is to make teaching reflection in which it should be executed as soon as the teaching and learning process has ended on the same day. The lesson carried out belongs to the members of Lesson Study group ('our' teaching and not 'my' teaching). Educator is given a chance to share teaching experience regarding integrating revealed knowledge in his teaching and what the students' respond are based on his observation.

CONCLUSION

The role played by members in communal group is crucial in contributing input beginning from the early lesson study process in order to integrate tawhidic science in teaching process. Since the major issue of educators in integrating tawhidic science is the lack of understanding of al-Quran knowledge and teaching strategy, thus collaboration from both parties which are Islamic education teachers and science is really needed. Al-Quran is revealed knowledge and referring to members of the knowledge is needed in order to understand it. Nonetheless, this does not mean that it should be abandoned. The book can be read, explored and put to practice by human. The effort to approach al-Quran through many ways is pure and noble at Allah's side.

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