

## IMPLEMENTING SCIENCE, SOCIAL INTEGRATION IN ISLAMIC EDUCATION LEARNING

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### ABSTRACT

Theoretically, religion and social science have an integrative relationship because they originate from God developed by human. However, practically, the relationship occurs in a dichotomy so that it has implications in learning activities at Islamic educational institutions, especially in the classroom context. The gap between those theories and practice generates the idea of integrating religious science and social science in Islamic universities. Therefore, this article describes the implementation of social science in Islamic religious education learning at the Department of Islamic Education State Islamic University of Sunan Gunung Djati Bandung. Based on the theory of scientific integration, this study applied observation, interviews, and documentation techniques. The result shows that social science can be integrated into Islamic education learning related to learning (philosophical) competencies, learning materials, learning strategy; and the learning evaluation.

Keywords: Learning Design, Scientific Integration, Science-Social

### ABSTRAK

*Agama dan sains-sosial secara teoretis memiliki hubungan integratif, karena keduanya bersumber dari Tuhan yang dikembangkan oleh manusia. Namun, secara praksis, hubungan antara agama dan sains-sosial terjadi dikotomi sehingga berimplikasi pada aktivitas pembelajaran di lembaga pendidikan Islam, terutama di ruang kelas. Kesenjangan teori dan praksis antara agama dengan sains-sosial inilah yang kemudian melabirkan gagasan integrasi keilmuan agama dan sains-sosial di perguruan tinggi Islam. Artikel ini bertujuan mendeskripsikan implementasi sains-sosial dalam pembelajaran pendidikan agama Islam di Jurusan Pendidikan Agama Islam UIN Sunan Gunung Djati Bandung. Berdasarkan teori integrasi keilmuan dan metode deskriptif melalui teknik observasi, wawancara, dan dokumentasi dapat disimpulkan bahwa sains-sosial dapat diintegrasikan dalam pembelajaran pendidikan agama Islam melalui empat level. Level pertama, integrasi sains-sosial dalam pembelajaran PAI berkaitan dengan kompetensi (filosofis) pembelajaran, level kedua, integrasi dalam level materi pembelajaran, ketiga integrasi sains-sosial dalam level strategi pembelajaran, dan level keempat integrasi dalam level evaluasi pembelajaran.*

*Kata Kunci: Desain Pembelajaran, Integrasi Keilmuan, Sains-Sosial*

## INTRODUCTION

Marked by advances in science and technology especially information technology (Hittelman, 2002), globalization has built academics spirit in Islamic universities to design a scientific vision of the future that can respond to the challenges of global society. The development of science and information technology has inspired the idea to build the relationship between Islamic sciences developed by UIN (Universitas Islam Negeri)/State Islamic University Institutions in Indonesia and the development of modern science developed by Western world (Minhaji in Abdullah, et al., 2004). The relationship between Islamic knowledge and Western science in scientific discourse in Islamic universities is called the integration of science.

The discourse to integrate social science into religion science is currently strengthening because of the longstanding scientific dichotomy problem. This scientific dichotomy has generated difficulties for Islamic universities in providing nomenclature of integration. For example, Islamic scholars like al-Faruqi (1986) and al-Attas (1984) who initiated the integration of science in the Islamic world, they offered the term "Islamization of knowledge". In Indonesia, the problem of scientific dichotomy in UIN institutions has been going on for more than half of a century (Minhaji in Abdullah, et al., 2004). These problems can be seen, among others, from the science itself which is developed on normative-classical science. Islamic science in UIN institutions has no contact at all with the social sciences and humanities as it has developed in modern universities in the Western world. Given this situation, there is a reason to promote the efforts to integrate Islamic science and social science which many parties considered it difficult, especially in the integration process (Assegaf, 2014). This is the reason that has caused each UIN took a different implementation for scientific integration at the practical level, especially in learning activities.

Related to the integration of science in UIN institutions in Indonesia, a number of researchers conducted studies on the realization and implementation of scientific integration in Islamic higher education institutions. UIN Sunan Kalijaga, for example, has been considered as a pioneer among other state Islamic universities in Indonesia that offers scientific integration with the label "integration-interconnection. Given this type of integration, learning activities should adapt the face of "integration-interconnection" (Abdullah, 2006). A number of studies related to the implementation of "integration-interconnection" have been conducted. The issues include science integration in UIN Sunan Kalijaga had been carried out in various perspectives (Sujadi, et al., 2016); Islamic religious education learning (Hidayat, 2014), Arabic teaching materials development (Rodli, 2017); the implementation of scientific "integration" at UIN Malik Ibrahim (Arifin, 2014); scientific integration at UIN Ar-Raniry (Jakfar et al, 2019).

UIN Sunan Gunung Djati (since its status has transformed from institute level to university level) has carried out a scientific transformation with the integration spirit using the "wheel" metaphor. In addition, the university has implemented a curriculum that refers to Indonesian National Qualifications Framework (INQF). Having adjusted to the two foundations, the university has confirmed the development of science integration is necessary to implement. This scientific integration development can be translated into learning activities in several studi programs including Islamic Religious Education (IRE) department. Although the studies are general in nature, some researchers have investigated the scientific integration development at UIN Sunan Gunung Djati. Suharto and Khuriyah (2014), for example, studied the concept of scientific development with the paradigm "Quran revelation guides science" and compared it with scientific development implemented in UIN Sunan Kalijaga. Iskandar (2016) and Sarmedi (2019) conducted a study that focused on the study of the Quran and

Sociology at the faculty of Ushuluddin. To date, studies investigating scientific development and its implementation in IRE department is under studied.

Conceptually speaking, integration (integralism) puts the scientific hierarchy in a larger hierarchy by including the afterlife and God's creation as the end of the material level (Mahzar, 2004). Responding to this scientific integration, Abdullah (2016) used the term interconnected entities to refer to this development and Azra's (2005) applied the terms reconstructionist. In its technical level, integration can start from revamping the curriculum to the learning process in the classroom by lecturers. This effort demands a curriculum redesign with Islamic Religious Education (IRE) learning. In IRE learning, the demands are not only normative but also scientific. Integrative IRE learning is expected to lead students to total (holistic) learning circumstance, and make IRE subject as a part of the real life needed by them (Assegaf, 2014). In contrast, IRE which is taught in isolation (separately) from other sciences may give the impression that religion only deals with divinity and the hereafter. It has nothing to do with the modern sciences which are related to humans and life in the world. This circumstance where there is the separation of knowledge can be avoided through an integrative IRE learning process.

In modern era, social sciences are equally important as the natural sciences both in theory and practice. The product of science is the result of human conscious efforts to uncover the secrets of nature, which was originally value neutral. If the products of science are not guided by human and cultural values, they can be misused and damaging for the society and environment. On the other hand, religion is loaded with theological knowledge which tends to be deductive in nature and comes from axioms of revelation (Assegaf, 2014). In this perspective, religion is believed to be true and its teachings ought to be practiced by its followers.

Speaking of natural science, it is inductive and comes from empirical experience. Natural sciences require research, test, and measurement to examine how much action-reaction it causes. On the other hand, religion is not entirely physical-empirical, but it has metaphysical and abstract (unseen) areas such as matters of heaven, hell, angels, the grave, the barzakh realm, the afterlife, and others. They are invisible, not sensory, cannot be tested or experimented and measured materially.

Religious studies focusing on Islam have their focus not to prove their doctrines and teachings, whether they are right or wrong. It addresses the objectives that enable people to understand the messages Islam delivers. This is because the religious science approach applies a doctrinal approach which is different from natural sciences that apply a scientific approach. Islamic scholar, Mukti Ali, sees the need for a scientific cum doctrinaire approach in combining Islamic studies and social science as has been done by classical scholars in Ushul Fiqh and Ulum Quran (Assegaf, 2014). Given these circumstances, there are some questions that can be posed. What is the position of natural and social-science in IRE department at faculty of Tarbiyah and teacher training, UIN Sunan Gunung Djati? What are the processes of integrating natural and social-science in IRE department at the university? This article discusses an integrative approach in IRE learning with natural-social science at IRE department.

## METHOD

This is qualitative research which the field observations on the phenomenon in a natural circumstance will find valid and comprehensive data (Moleong, 2008). The researchers acted as key instruments. They served as a human instrument that functioned to determine the focus of research, selected informants as data sources, collected data, assessed their quality, analyzed them, interpreted them, and concluded the findings (Sugiyono, 2010). After the focus of the

research was clear, a simple research instrument was developed to collect the data and compare the data with those obtained through observation, interviews, and documentation. This type of qualitative research aimed to describe the scientific development of social science integration-interconnection with IRE at the department.

This research was conducted at IRE department, UIN Sunan Gunung Djati. There were two reasons for choosing the department: (1) it has a vision and mission that is oriented towards natural and social science integration with IRE learning under the paradigm of “Quran revelation guides science” and (2) has utilized lecturers in natural and social sciences from other departments within the faculty of Tarbiyah and teacher training.

This study used a descriptive method by explaining all the data completely and naturally. It collected the data using: (1) observations. They were applied to gain data concerning learning activities in IRE department through the integration of social science. According to Margono (2003), observations are not only limited to direct observations by researchers, but are carried out indirectly; (2) interviews. They were deployed to collect the data from the head of the IRE department, lecturers and students. The purpose of the interviews was to obtain data on the vision and mission of the department as a realization from the faculty and the university’s vision and mission, the concept of scientific development, and the implementation of scientific development at the practical level. There were several respondents involved: vice dean for academics and vice dean for student affairs, head and secretary of IRE department, and quality assurance division for IRE department; (3) documentations. They were conducted to gain information related to strategic plan document, the curriculum developed by IRE department and data on the results of the science development of social science integration in IRE learning.

The data were analyzed and interpreted with reference to (1) philosophical analysis of the development of integration-interconnection natural and social science in IRE department (2) learning method (3) learning material (4) learning strategies (5) learning evaluation at IRE department within the framework of natural and social science integration-interconnection.

## **RESULTS AND DISCUSSION**

This study aimed to investigate the implementation of social science integration with IRE learning at IRE department. Based on the data collected, there are five findings to describe in order to meet the objectives of the study. The first finding concerns philosophical analysis of the development of integration-interconnection social science in IRE department. The following four findings deal with learning method, learning material, learning strategies and learning evaluation at IRE department within the framework of natural and social science integration-interconnection.

### **Foundation to Develop Natural and Social-Science Integration with IRE Learning**

In an educational institution, learning is an applicative dimension of education that is carried out according to the program especially in the classroom. Other definitions of learning may imply broader information. In this context, IRE learning is interpreted as a teaching and learning process. This activity is carried out by lecturers in their interactions with students to study Islamic religious material formally in the classroom. IRE department in the university should be compatible with the INQF (Indonesian National Qualification Framework) and HENS (Higher Education National Standard). The implementation of INQF and HENS in the curriculum for IRE department is given in order to achieve the learning objectives that has been formulated. The achievements of IRE learning are oriented towards graduates of the IRE department who can meet the demands of the job market and the needs of stakeholders, as well as be able to take part in social life and international relations (Burhanudin, 2016). In IRE department, learning outcomes have indeed been formulated with reference to four

elements set forward by INQF namely: attitude, abilities, knowledge, and responsibilities/ rights/ indicators authorities. Meanwhile, learning outcomes according to HENS include attitudes, general skills, special skills, and knowledge. In addition, IRE department refers to the characteristics of the university providing a reference on knowledge in the framework of “Quran revelation guides science” and attitudes and skills with the framework of *akhlâq karîmah* (Zein, 2016). Referring to the document that this study collected, learning achievement in the IRE department, can be described in Table 1.

Tabel 1. Learning Achievement for IRE Department (Undergraduate Program)

In terms of attitude, there are ten to achieve in IRE departments. A more detailed description is described as follows:

- |                 |   |
|-----------------|---|
| <b>Attitude</b> | <ol style="list-style-type: none"> <li>1. To fear God Almighty by showing a religious attitude as a Muslim, believer, and <i>muh̄sin</i></li> <li>2. To be tolerant, moderate, and upholds human values in carrying out duties based on religion, morals, and ethics</li> <li>3. To contribute to improve the quality of life in society, as a nation, as a state, and the progress of civilization based on Pancasila.</li> <li>4. To act as citizens who are proud and love their homeland, have nationalism and a sense of responsibility to the country and nation</li> <li>5. To Appreciate the diversity of cultures, views, religions, and beliefs, as well as the opinions or original findings of others.</li> <li>6. To cooperate and have social sensitivity and concern for society and the environment.</li> <li>7. To obey the law and discipline in social and state life.</li> <li>8. To internalize academic values, norms, and ethics</li> <li>9. To demonstrate a responsible attitude towards work in the field of expertise independently</li> <li>10. To internalize the spirit of independence, struggle, and entrepreneurship.</li> </ol> |
|-----------------|---|

In terms of knowledge, there are four indicators to achieve in IRE departments. A more detailed description is described as follows:

- |                  |   |
|------------------|---|
| <b>Knowledge</b> | <ol style="list-style-type: none"> <li>1. To master the concept of IRE based on the Pillars of Islamic religion (<i>îmân, islâm</i> and <i>ihsân</i>) in accordance with the Quran and Hadith.</li> <li>2. To master the basic concepts of education including student development, learning theories, the nature of IRE and scientific thinking in IRE.</li> <li>3. To master learning theories related to the Quran and Hadith.</li> <li>4. To master the principles of developing science-based IRE learning media, contextual technology, especially ICT (Information and Communication Technology), and the surrounding environment based on interpretation and <i>tarbawî hadith</i> on the ethics of educative communication.</li> </ol> |
|------------------|---|

When it comes to specific skill, The IRE department outlines the specific skill to master by its graduates as follows:

- |                       |   |
|-----------------------|---|
| <b>Specific Skill</b> | <p>To be able to plan, implement, manage and evaluate IRE learning based on learning activities to develop students’ religious attitudes and behaviors and learning citizens, and scientific attitudes according to their characteristics in curricular, co-curricular, and extra-curricular learning by utilizing various learning resources based on science, contextual technology and the surrounding environment with a moral character framework.</p> |
|-----------------------|---|

Unlike specific skill, general skills contain five indicators to acquire by the graduates of IRE department. The graduates are expected to acquire the ability to:

1. Apply logical, critical, systematic, and innovative thinking in the context of the development or implementation of science and technology that pays attention to and applies humanities values in accordance with their field of expertise

**General  
Skill**

2. Apply logical, critical, systematic, and innovative thinking in the context of the development or implementation of Islam that pays attention to and applies humanities values in accordance with their field of expertise
  3. Demonstrate independent, quality, and measurable performance
  4. Study the implications of the development or implementation of science and technology that pays attention to and applies humanities values according to their expertise based on scientific principles, procedures and ethics in order to produce solutions, ideas, designs or art criticism, compose a scientific description of the results of the study in the form of a thesis or report final project, and upload it on the college website
  5. Conduct scientific studies based on scientific procedures and revelations and their implications for the benefit of the people.
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In Table 1, there are several learning achievements to achieve which are relevant to the vision and mission of the IRE department. The department tries to realize the vision and mission of the faculty and the university. The vision of the the department as stated in the Draft Book of IRE Curriculum which refers to the INQF and HENS "To become a superior, leading and competitive IRE department in the field of IRE at the regional, national and international level". This vision is translated into the mission of the department including: (1) to prepare prospective IRE educators and education personnel who are outstanding, creative, superior, professional, and globally competitive; (2) to develop research in the field of IRE which is innovative and up-to-date as the basis for the education process and community service (3) to organize education and teaching to produce graduates who master the basics of expertise and skills as IRE teacher in order to respond to the needs of the community (4) to organize education and teaching to produce graduates who master the basics of expertise and skills as IRE teacher in order to respond to the needs of the community (5) to empower all available resources by utilizing information and communication technology (ICT) engineering (Team of Curriculum Development, 2016)

The IRE learning achievements listed in Table 1 are relevant to the vision and mission of the IRE department realizing the vision and mission of the faculty and the university. The vision of the department as stated in the Draft Book of IRE Curriculum which refers to INQF and HENS "To become a superior, leading and competitive IRE study program in the field of IRE at the regional, national and international level". The vision is translated into the mission of IRE department which includes: (1) preparing prospective educators and IRE education personnel who are outstanding, creative, superior, professional, and globally competitive; (2) developing innovative and up-to-date research in the IRE field as the basis for the education process and community service; (3) organizing education and teaching to produce graduates who master the basics of expertise and skills as IRE in order to respond to the needs of the community; (4) organizing the internationalization of IRE through strengthening networks and partnerships at the national, regional and international levels and (5) empowering all available resources by utilizing information and communication technology (ICT) engineering (IRE Curriculum Development Team, 2016).

Based on these foundations, the implementation of IRE learning integrated with social science is urgently carried out as a manifestation of the curriculum that refers to INQF. Advances in information technology (ICT) which is the characteristics of globalization must be responded by carrying out creativity and educational innovations. One of the efforts is to integrate natural and social science into IRE which has been considered by many as something impossible or difficult to achieve (Burhanudin, 2016). Islam normatively teaches everything that is needed by humans, including social science, for human welfare, in addition to teaching the principal teachings like creed and worship. However, in reality, UIN institutions focus on the hereafter (eschatological) (Burhanudin, 2016). The curriculum which refers to INQF can

be called a momentum for the IRE department in implementing IRE learning that is integrated with social-science. The inspiration for this integration refers to the spirit of scientific development in the golden age of Islam during the Umayyad and Abbasid Islamic Empires. In these two Islamic kingdoms, Islamic knowledge abounds without recognizing the dichotomy that prevails in the Islamic world today. It was considered natural that in the two Islamic kingdoms, scientists and thinkers who were experts in interdisciplinary science were born (Supiana, 2016). The reality of this integrative scientific development has been massively pursued in all UIN institutions in Indonesia, such as UIN Sunan Kalijaga Yogyakarta, UIN Maulana Malik Ibrahim Malang, UIN Syarif Hidayatullah Jakarta, UIN Alauddin Makassar, UIN Walisongo Semarang, UIN Sunan Ampel Surabaya, and others. UIN Sunan Gunung Djati Bandung as one of the UIN institutions is trying to implement the integration of social science into IRE education using the framework of "Quran Revelation Guides Science" strengthens itself in the discourse of scientific integration that began in IRE department (Ruswendi, 2016).

### **Philosophical Foundation to Develop Social-Science Integration with IRE Learning**

The philosophical foundation to develop IRE learning is inseparable from the philosophy of scientific development at UIN Sunan Gunung Djati. The scientific development in the university refers to a scientific theory called the "Wheel" Metaphor which can be mapped into ontology, epistemology and axiology. The wheel is a symbol of the world of science that rotates on its axis and runs through the recesses of the earth's surface. It goes without saying that the wheel is an essential part of a meaning of strength that functions to support the load of a vehicle that moves dynamically (Natsir, 2006). The wheel is equivalent to the function of the university that is to become a medium in integrating science in the constellation of cultural developments, traditions, culture, technology. The power of the scientific wheel can spur creativity to see the Quran as a source of knowledge that is dynamically relevant to the field of life. This is to say that science and religion can go hand in hand in an effort to advance cultural output, preservation of tradition, mastery of technology, and nation-building (Natsir, 2006). Tafsir (2016) explains, the metaphor of the wheel as a vital component of a vehicle symbolizing the holistic integration of parallel elements that reinforce each other. A wheel, physically part of the axle (axle) and spokes and the outer tire (rubber tire). These three parts work simultaneously in a harmonious unity (wheel work). The wheel functions to support the load and it has a unique way of working in parallel to reinforce and harmonize each other. When it rotates, the components attached to it also work according to their function. This wheel metaphor in the context of scientific development at UIN Sunan Gunung Djati, natural and social science and religion indicates various approaches and methods. They correct, complement and enrich each other (Natsir, 2006).

Based on the views offered by Tafsir and Natsir --- the originators of the concept of "Quran Revelation Guides Science" at UIN Sunan Gunung Djati --- the basis to develop science in the university should serve as an effort to: (1) integrate and organically interconnect all disciplines in an Islamic foundation, (2) connect all disciplines of science, (3) connect and interconnect all disciplines to achieve national goals, (4) link the virtues of knowledge conveyed based on "*qawliyah* verses" and "*kanmiah* verses" as the basis for the view life that unites in one breath of science and Islam, (5) integrates the unity of knowledge that is processed and to deliver method in a scientific-academic manner, (6) to integrate Islamic insight and modernity and Indonesianness in specialization and scientific disciplines becomes the basis for all academic discipline development. This integration effort is dedicated to the human beings welfare, to strengthen three main components faith, knowledge and good deeds. The implementation of this integration in learning activities can produce undergraduate

qualifications that have noble character, spiritual wisdom, breadth of knowledge, and professional maturity as can be seen in Figure 1.

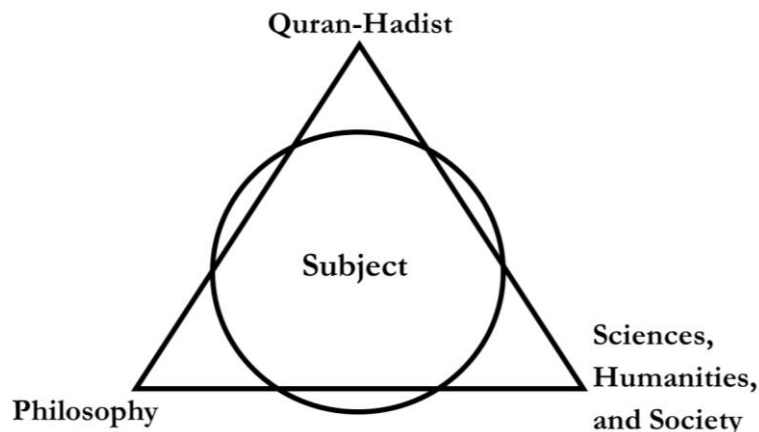


Figure 1. The Implementation of Science Integration in UIN Sunan Gunung Djati

Based on the philosophical foundation to develop science integration at UIN Sunan Gunung Djati, IRE learning in the IRE department refers to the great ideals of the university to integrate natural and social-science in IRE learning. This integration aims to restore the glory of Islam in the past with the presence of figures such as Ibn Sina, Ibn Khaldun, Ibn Rushd, and others.

The integration of social-science in IRE learning shows that the IRE department has carried out a great mission in equipping students with holistic-comprehensive knowledge between intellectual knowledge and religious knowledge in developing an Islamic personality. Science and religion in Islam have a balanced relationship. Their relationship shows a sacred aspect to pursue scientific knowledge by Muslims. This is based on the belief that nature is a mirror of God. One of the media available to prove the oneness and power of God in the modern era is through the use of existing technology.

The scientific development at UIN Sunan Gunung Djati is conducted through natural and social-science learning in IRE department. This integration takes place as a serious and reliable efforts at the university to reach its goal in restoring the glory of Islam. The scientific development movement is in accordance with the views of Nata et al., (2005) where Muslims need a natural and social-science system to meet their material and spiritual needs. The current scientific system is seen as unable to meet these needs since modern science promotes Western values that are contrary to Islamic values. On the other hand, Islam geographically lives in a different area and has a different culture from the West.

### **Integrating Natural and Social-Science into IRE Learning**

IRE learning in this study is interpreted as a learning process carried out on campus, especially in classrooms, involving IRE lecturers and students. The principles and values respect science when they are related to scientific activities, so that learning activities have an honorable place in Islam. Natural and Social-science integration in IRE learning is essentially an embodiment of Islamic teachings on the concept of building individual piety, vertical relationships (*habl min Allâb*) and social piety, horizontal relationships (*habl min an-nâs*). The academic community of the IRE department with full dedication and loyalty seeks to improve the activities and quality of education for students to have religious competence and social-scientific competence (Burhanuddin, 2016).

There are supports from faculty members for the implementation of social-science in IRE learning. According to Haq (2016), the integration of natural and social-science in IRE



learning is based on the coherence between religion and natural and social-science. Religious teachings are holistic, not separated, so that the implementation of natural and social-science integration in IRE learning is appropriate.

Integrating natural-social science in IRE learning for learning design in general can be seen in the following figure 2.

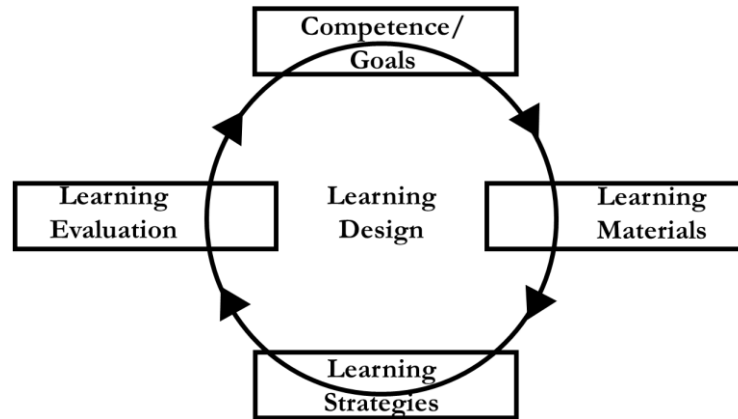


Figure 2. Learning Design for IRE Learning

Based on Figure 2, the integration in IRE learning has several levels including the philosophical, learning competence (objectives), learning material learning strategy (method), and learning evaluation level.

### Integration at Philosophical Level/Learning Competence

At the philosophical level (competence), it emphasize every study of IRE to receive a fundamental value in relation to other scientific disciplines and in relation to humanistic values. Fiqh learning, for example, is fundamentally a philosophy of building a "three-partied" relationship between humans, nature, and God in Islamic teachings. This philosophy of fiqh in learning activities for students can be instilled that the existence of fiqh is not solely self-sufficient fiqh, but it develops together with other scientific disciplines such as philosophy, sociology, psychology, health, and others. This type of learning model can be done the other way around. When teaching sociology, sociology lecturers invite students to review social interaction theories that already exist in cultural and religious traditions.

Burhanuddin (2016) asserts that IRE learning is currently oriented towards strengthening learning with multidisciplinary and interdisciplinary methods. Theology or *Kalam* Course, for example, requires scientific tools such as history, sociology, anthropology, and so on. Jurisprudence courses can have a dialogue with philosophy, sociology, psychology, and health courses. In the same vein, Supiana (2016) explains that integration can be done in IRE learning with natural and social-science, among others, through the search for basic and equivalent concepts, theories of social-science courses taken from the Quran and the prophet's hadith, and the views of scholars. Social-science concepts and theories are adjusted with Islamic values and provided their equivalent concepts.

The integration at the philosophical level demands that the curriculum taught is a complete union between the values of Quran revelation and natural and social-science. This education system also demands that the scholars of UIN Sunan Gunung Djati especially the scholars of IRE department, are able to describe the principles of natural and social-science and religion in the form of an integrated and holistic way of thinking and behaving (*akhlâq*) in society. This principle creates a prosperous society which is stated in the vision and mission of UIN Sunan Gunung Djati Bandung (Natsir, 2012).

The integration has shown the manifestation of the university to the teachings of monotheism which are the fundamental teachings of Islam. Quran and Hadith as sources of Islamic teachings always encourage people to seek and gain knowledge and give a high level of appreciation to scientists. The first verse of Quran "*iqra*" which can be translated as "reflective reading" is the basis for research, study, and observation, as a feature and characteristic of science.

The progress of Islam in the golden period of Islamic civilization, especially during the Umayyad dynasty and the Abbasid dynasty took place because Muslims (scientists) held the spirit and had a concern for epistemology (theory of science). They realized the importance of science identification, explanation, classification and actualization into various disciplines.

### **Learning Material Integration Level**

The process involves integrating universal truth values with Islamic studies into natural and social sciences such as physics, chemistry, biology, medicine, philosophy, anthropology, sociology, law, politics, psychology, economics, education, and so on. This learning model can also be applied vice versa. The natural and social sciences are brought together into Islamic studies, by integrating them through the dimensions of epistemology and axiology. The implication of the integration is that the issues that are built are oriented towards scientific epistemology and ethical development. In this level, the actualization of integration introduces epistemology, for example with regard to the epistemological status of applied science and engineering, its conceptual relationship with the principles of monotheism (i.e., knowledge of metaphysics and cosmology). This governs the physical (natural) world, with scientific methodologies and creative thinking (including inspiration), mathematics and with epistemological implications. The aspects of human creativity deal with contemporary applied science and engineering, particularly in genetic engineering. The epistemology is a provision for student research (personal communication, October 2016). The integration is the starting point for students to be able to conduct research in Islamic sciences. Students, through research in the fields of science, can find common ground or intersections of areas of science with objective reality in religious areas.

With regard to socio-religious matters, the integration aims to motivate students to think holistically in living up social, beliefs and religion plurality. It can be done for example by asking students to make regular visits to places of worship of different religions. With integrative learning, students are given an understanding that there is one thing that unites all religions in a bond called "divine experience". Each religion has a different interpretation according to the perspective of the adherents' scriptures. In addition, it is taught that peace in the world can be achieved by the experience of divinity by each individual. The integration starts from the reference basis (personal communication, November 2016). The holy book is positioned as the main source or basic foundation for the achievement of natural and social science. It is obtained from the results of observations, experiments, and logical reasoning whose position is as a source of support. In order to increase belief in God through the main source, the Quran, the previous stages should be upheld. The next step is to expand the boundaries of Islamic studies material and avoid the dichotomy of science, because Islamic teachings are universal.

The link between the Quran and the development of science can be seen in the biology course which contains a discussion of ecology (personal communication, October 2016). In an ecological perspective, the environment includes everything around humans, consisting of biotic and abiotic factors as well as human culture. The abiotic environment includes everything that is not living in the form of inanimate objects that are indirectly related to the existence of living things, such as water, soil, light, air humidity, soil conditions, where living

things are located. Water is the main component that is needed by living things. It serves as a source for the life of living things as it is explained in Qs. al-Jâsiyah/45:5.

### **Learning Strategy Integration Level**

In this level, learning is carried out using various learning models. The learning model can be broken down into a number of varied methods and techniques. The selection of integrative learning models and strategies is adjusted to the material characteristics of each course. Some IRE lecturers use cooperative learning models, some of them apply contextual learning models, and other implement problem-based learning.

Each course is different when it comes to the learning model application and strategies (personal communication, October 2016). Some lecturers use the cooperative learning model and the strategies they choose are Jigsaw learning, Student Team-Achievement Division (STAD), Team Accelerated Instruction (TAI), and so on. The integrative learning requires the use of active learning models with derivatives of various methods, techniques, and learning tactics (personal communication, December 2016). The learning models and strategies are selected and practiced by the lecturers in their teaching and learning process. If lecturers experience limitations and weaknesses in implementing learning models and strategies, they should be supported by team teaching. The team teaching comprises lecturers across scientific fields so that they may implement integrative learning.

To teach the substance of Islamic law around the law of usury (interest), it can be done by presenting cases of banking or credit practices that commonly become business transactions (personal communication, December 2016). The application of the casuistic strategy requires lecturers' mastery of banking economic issues that they have learned through various economic theories. Lecturers with this strategy develop a non-usury sharia economy which is an alternative to banking in the current era. Lecturers of Islamic economics or general lecturers who have this field can be used as collaborators in carrying out learning. It is very strongly recommended to promote collaboration to achieve successful teaching and learning activities in IRE learning.

In the level of learning strategies, Supiana (2016) explains that its implementation requires various approaches and methods to be implemented in IRE learning activities. The clues used refer to the constructivist theory promoting students as the subject of educators, in addition to the object of education. The learning paradigm used is active learning which is conditioned in the form of team teaching. The teaching team of lecturers can complement and support each other in delivering and accomplishing teaching and learning tasks in IRE.

### **Learning Evaluation Integration Level**

An evaluation in learning is carried out at the end of learning activities. It is designed to measure students' achievement on learning activities and their follow-up. The evaluation of social-science integration on IRE learning was carried out through the application of authentic assessments. This assessment is carried out with respect to all learning activities which include learning processes and products so that all student efforts will be awarded.

Authentic assessment in natural and social-science integration with IRE learning continued from the application of learning strategies based on a scientific approach (personal communication, December 2016). The scientific approach promotes student center. Authentic assessment is closely related to the application of learning strategies with a scientific approach as a manifestation of inquiry learning (personal communication, December 2016).

Evaluation of authentic learning is a tool that can be used in the form of tests and non-tests. It can be conducted in an integrated and complementary way. In form of test, the evaluation is carried out in written form at the end of semester examination. The form of the

questions used is generally an essay test in which each item is scored. In a non-test, evaluation can be used in the form of a portfolio of interview results and questionnaires. These two types of evaluation were implemented in IRE department. When it comes to learning evaluation at IRE department, Supiana (2016) states that the evaluation combines learning processes and outcomes. This authentic assessment is part of an integrative assessment because it combines process and results. A good assessment is not only conducted at the end of the lesson, but also implemented in the learning process. Natural and social-science integrative learning in IRE learning also uses various assessments; in the form of tests and non-tests.

Based on the findings of this study, there are two important things that can be seen about the implementation of natural and social science integration in IRE learning. First, in terms of science development. It accentuates natural and social-science integration in IRE learning which emphasizes the ideals of the university in responding to challenges and social dynamics in this globalization era. This advance has become the driving force to enlighten the nation. Any name and paradigm can be chosen to carry out the mission as long as it has the spirit of integrative scientific development and it has a positive impact on the development of Islamic educational institutions, especially the IRE department.

The integration serves as the embodiment of the integrative paradigm in the scientific context between transmitted knowledge and acquired knowledge. The integrative paradigm that refers to the university's vision and philosophy creates a holistic academic culture and nuance. The academic culture and nuances, using Chanifudin and Nuriyanti (2020) term, try to eliminate barriers in certain scientific fields with myopic-narcissistic perspectives. Integrative scientific culture also does not limit the recognition of finality which is immanent, but is transcendent. The nuances of integrative knowledge learning aim to go beyond something pragmatic as something in its theological sense (Arifudin, 2016).

When developed in learning activities, the integrative science can form a very broad relationship between religious studies and science. IRE is not merely pragmatic-technical in nature so that it ignores the substantive and essential dimensions of Islamic education. IRE to borrow Hittelman's term, is more oriented to theoretical insight about Islam. It does not look for ways to make students better. Given this situation, there is a need to build and promote and develop integrative science at the philosophical level because every science has fundamental values and can have a dialogue with each other (Abdullah, 2010; 2007; 2004; Assegaf, 2012)

Recently, in the last half century, the world of IRE has had difficulty in dealing with advances in information technology which at some point has a negative moral hazard to the formation of Muslim personalities. At the same time, learning materials about faith are not able to equip students to have faith immunity and be able to protect themselves from the negative impacts of advances in information technology. That is the reason, the phenomenon of moral degradation that occurs in the world of Western education is included in the world of Islamic education. This description is the background of theological anxiety that developed into academic anxiety in the Islamic world and then gave rise to the paradigm of scientific integration.

The integrative scientific paradigm which was started in 2006 in UIN Sunan Gunung Djati, in Islamic education horizon is not something new, because all dimensions of Islam are bound by the ideological platform of monotheism. Based on the concept of monotheism, the principle of integration is built. Epistemologically speaking, there is no dichotomy between the ratio domain and the empirical domain. The curriculum can be formed in the fundamental areas of epistemology and axiology (ethics). For example, the topics of epistemology of applied sciences and engineering and their conceptual relationship is compatible with the principles of monotheism (knowledge of metaphysics and cosmology). It governs the physical

(natural) world, with scientific methodologies and creative thinking (mathematics). The epistemological implications of certain aspects of human creativity in contemporary can be applied in science and engineering, such as genetic engineering, and others.

The integration can also be seen in the learning process. One of the interesting ideas is to build creative imagination. It serves as an alternative method to the more established methods that is deductive and inductive methods. Creative imagination is needed because the formulation of a theory goes beyond a very logical reasoning process. A number of studies show that certain roles of educators with the power of their creative imagination are able to create certain methods so that students can absorb lecture material quickly and completely (Assegaf, 2012). Other research shows the role of educators in creating applicative learning designs, for example, by changing the layout and adding classroom displays so that they can stimulate students' passion for learning (Assegaf, 2012). All of these things require creativity which will make the learning process more effective. The mantra is creativity.

In socio-religious education, IRE learning with an integrative paradigm may invite students to think holistically in living up the plurality of beliefs and religions. The educational process plays an important role in determining the process of integrating natural and social science and religion. It can appreciate the theoretical results of divine knowledge and practical experience extracted from the experience of each individual. Social-science and Islam are important parts of human history because they bring together the ideas of spirituality (religion) and empirical rational thought.

Efforts to integrate natural and social science with religion need to be carried out using several approaches. At least there are three approaches. First, conflict approaches, social science and religion cannot be brought together because they have different positions. Second, counter approach that explains that religion and social-science respond to different problems. There is no conflict between the two because they are very different and there can be no conflict. The third, the most appropriate view is that religion should not be judged by social-science paradigm. On the other hand, social-science cannot be judged by religious paradigm. In addition, there is a need for dialogue of interaction and adjustment by seeking ways for social-science to influence religious and theological understanding. In the confirmation approach, religion and social-science can reinforce each other. The findings of social-science can enrich and influence the understanding of theology because the position of religion strengthens the impetus that can give rise to science.

The relationship between social science and religion in the Islamic perspective has the same metaphysical basis. Knowledge revealed in the scriptures and pursued through research aims to reveal God's verses. The motivation behind the research for mathematical nature and life experience is an attempt to find out God's verses in the universe. Islam teaches balanced learning. When there is a difference between social-science and religion, there is a need to realized the exploration of the universe as part of a religious experience. Scientific differences traced through research can add and develop knowledge. Their knowledge inspires the social life and brings harmonious life.

The integrative education paradigm as explained by education and science experts can bridge the gap between general science and religious knowledge. UIN institutions like Sunan Gunung Djati currently manage its effort to focus on the civilization to restore Islamic scientific romanticism in the golden age (Umayyad and Abbasid times). For approximately 50 years, UIN institutions in Indonesia have adopted knowledge at Al-Azhar University, so that scientific development has adopted the knowledge developed at Al-Azhar University. This scientific development has an impact on the development of scientific methodologies which are dominated by justifiable-indoctrinal methodologies. The integrative education paradigm as demonstrated by UIN Sunan Gunung Djati can give birth to an inclusive attitude in religion to

develop the nation and state. The inclusive attitude that is built from this inclusive education can respond to every development that appears in non-reactionary ways, even making itself the living ground of radicalism (Azra, 2002; 2005; 2013).

## CONCLUSION

The integration of social science in UIN Sunan Gunung Djati is a positive response to scientific development in the globalization era. In the university, IRE department has implemented scientific development through natural and social-science integration in IRE learning. The integration in IRE learning can be implemented in four levels. Integration at the first level is related to philosophical integration. At this level, it emphasizes that every study of IRE is given a fundamental value in relation to other scientific disciplines and in relation to humanistic values. IRE contains human values both from the scientific and social aspects. The second level deals with learning material. It addresses the process of integrating universal truth values with Islamic studies of Islamic religious education into natural and social-science. The integration is conducted through the dimensions of epistemology and axiology. The third level has something to do with learning strategies. It focuses on IRE learning which is integrated with social-science. Its implementation is using various learning models and their derivations, such as various methods, strategies, and techniques. The department has implemented deployed team teaching to accomplish this level. The fourth is learning evaluation level. This level emphasizes that the integration of natural and social-science in IRE learning can be measured through an authentic assessment. This assessment is carried out through the learning process and at the end of learning activities. The form of assessment can be in form of test and non-test.

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