

ISLAMIC EDUCATION AND REINTEGRATION OF SCIENCES: Improving Islamic Higher Education

Azyumardi Azra

Post Graduate School

UIN Syarif Hidayatullah Jakarta

azyumardiazra1@gmail.com

"In the early centuries of Islamic civilization the broadest possible learning was widely supported by orthodox Muslim precepts. However, in time, an opposing doctrinal trend gained strength. Not only the limitation but also the "dangers" of knowledge were increasingly described by religious authorities...Limits to the scope of permissible learning eventually came to be defined by religious scholars, and philosophical and scientific investigation came under increasing attack" (Turner 1995:18).

The Noble Prize Winner for Physics, Mohammed Abdus Salam, rightly maintains that there is almost no question that among all civilizations in the present time on this planet, science is weakest in the lands of Islam. In his opinion, the danger of this weakness cannot be underestimated since social development and even the survival of a society depends directly on its strength in science and technology in the condition of the present age. Therefore, Muslim societies have a little chance to survive in the very competitive age of globalization unless they seriously address this grave problem.

The weaknesses of science in the Muslim world as whole can be seen in a number of rough indicators that are available since the 1980s when many Muslim countries began to modernize their economy. By and large, up until today, Muslim countries are classified as 'third world countries'; only few of them can be included among developing countries, let alone 'developed' and 'advanced' countries. As a result, there is a lot of retardation of social development in the Muslim world.

Most of Muslim countries are producers of raw materials such as oil, natural gas, rubber, palm oil, food grain, cotton, and sugar cane. The nature of the economy in most Muslim countries is, therefore, basically extractive or agricultural. Manufacturing that can produce a great deal of added values is only a minor part of the total economy of most Muslim countries.

There is little doubt that advanced scientific methods are badly needed for oil and natural gas extraction, mining and agriculture; and these do create a lot of demand for learning and developing innovation and new techniques. But up until today, the technology for extraction and further processing are continuously imported from non-Muslim countries. The case is also the same with agriculture; Muslim countries are lagged in research and development of agriculture and agribusiness compared to such country as Thailand, for instance. In short, the overall importance of science to increase production and added values in the Muslim world is peripheral, and incentives for indigenous growth are small and insignificant.

The fact that scientific research and development are very weak in most of Muslim countries related to another sorry reality; that is, the science as an institution has not existed in an encouraging manner in most of the Islamic world. While in the West and other countries, institutions of science continue to flourish in response to the era of globalization, in most Muslim countries their growth is much slower. In most of the Muslim countries, compared with the rest of the world, the number

of research institutions in science is very much lower; the budget spend in scientific programs is almost insignificant; the size of the scientific community and the productivity of the scientists are also considerably lower.

Some of these weaknesses have a lot to do with the state of education in the Muslim world. Scientific research and development and, therefore the growth and decay of science as an institution in society, are inescapably connected with education. In general, education in most Muslim countries is dominated by social sciences and humanities; the number of faculties, departments and programs in science is relatively limited. Worse still, in the teaching processes, rote learning tends to dominate not only in social sciences and humanities, but also in science teaching. It is clear that to a significant degree, the survival of rote learning in educational institutions of contemporary Muslim world shows that many Muslims still believe that knowledge is something to be acquired rather than discovered and developed; therefore, the attitude of mind is passive and receptive rather than creative and inquisitive. Furthermore, all knowledge comes to be viewed as unchangeable and all books tend to be memorized or even venerated.

Past Legacy and Muslim Responses

The fact that Muslim countries in general are very much behind in the fields of science is indeed an historical irony. There is no need to dwell on the great and significant contribution of Muslim scientists to human civilization in the medieval period. One can draw an inexhaustible list of Muslim scientists who were hailed not only from the Arab region, but also from Bukhara, Khurasan, Andalusia and many other regions; they wrote their works not only in religious sciences (*al-`ulum al-diniyyah*), but also on various branches of rational and empirical sciences.

Commenting on the achievement of Muslim scientists, George Sarton in his famous work, *Introduction to the History of Science*, says that it will suffice to evoke a few glorious names without contemporary equivalents in the West: Jabr ibn Hayyan, al-Kindi, al-Khawarizmi, al-Farghani, al-Razi, Thabit ibn al-Qurra, al-Battani, al-Farabi, al-Mas`udi, al-Biruni, Ibn Sina, Ibn al-Haytham and many others; a magnificent array of names, which it would not be difficult to extend. Sarton concludes, "if any one tells you that the Middle Ages were scientifically sterile, just quote these men to him, all of whom flourished within relatively short period, between 750 to 1100".

With regards to the achievements of these Muslim scientists, the irony of the backwardness of the Muslim world today is even bitter. In the midst of rapid progress of modern and contemporary science, many Muslims maintain their suspicion towards science. In many quarters of the Islamic world, science still seems to be regarded as an intellectual and empirical exercises alien to and incompatible with Islam. This unfortunate perception and attitude have of course been inherited by the Muslim world since the 12th century at least, during which period the opposition against science grew rapidly among the *fuqaha'* (jurists) and *mutakallimun* (theologians) who were generally regarded as the true representatives of Islamic orthodoxy.

There are many instances of suspicions among many orthodox scholars towards rational and empirical sciences. Ibrahim Musa (d. 1398), a leading Andalusian scholar, for instance, came to the conclusion that the average orthodox theologian regarded that only those sciences as worthwhile that were necessary to, or useful for, religious practice (*`ibadah*). All other sciences were without value and would only lead Muslims away from the straight path. A more prominent scholar, Ibn Taymiyyah, believed that *`ilm* refers only to knowledge that derives from the Prophet; he regards everything else either as useless or no science at all, even though it might be called by name.

The opposition of the Muslim orthodoxy to rational and empirical sciences, in the end created a seemingly unbridgeable gap between the so-called "religious sciences" derived from the "signs" of the Qur'an ("*al-ayat Alquraniyyah*") on the one hand, and "non-religious sciences" derived from the "signs of being" (*al-ayat al-kawniyyah*) on the other. This kind of division and dichotomy can be observed in educational institutions in many parts of the Muslim world today. This dichotomy of sciences is undoubtedly also responsible for the backwardness of science and technology in the Muslim world.

There has been continuing debates among Muslim scholars and leaders on these issues and on how to respond to the ever increasing progress of sciences among other nations and countries. Faced with a fundamental crisis and only too manifest continued decline of the Muslim world, three distinct responses have emerged from within Islamic civilization in the colonial and post-colonial periods. To borrow the characterizations of Eqbal Ahmad, elaborated further by Pervez Hoodbhoy, they are: restorationist, reconstructionist, and pragmatist responses. The latest two groups are, I would argue, basically have similar position. These categories can provide a useful analytical framework within which one can examine the problems and possibilities of developing a science-oriented society in the Muslim world.

The restorationist response seeks to idealized version of the past, and locates all failures, defeats and backwardness of Muslims to their deviation from the true path, that is genuine and pristine Islam in the period of the Prophet and his companions (*sahabah*, or the *salafs*). This group of Muslims basically opposes the foundations and appearance of modern, secular, scientific thought and methods. One of the most articulate spokespersons on matters of science and modernity is Maryam Jameelah, a Jewish convert to Islam. In her opinion all pursuits of science and modernism are identical with idolatry; modern science is guided by no moral value, but naked materialism and arrogance. The whole branch of knowledge and its application is contaminated by the same evil. Science and technology are totally dependent upon the set of ideals and values cherished by its members, in the case of modern sciences is the West. She concludes that "if the roots of the tree are rotten, the tree is rotten; therefore all its fruits are rotten".

Another prominent leader of this group and even much more influential is Abu al-A'la al-Mawdudi, the leader of Jama'at-i-Islami of Pakistan. He bitterly criticizes modern sciences that have been produced by the West. He maintains that geography, physics, chemistry, biology, zoology, geology, and economics are taught in modern education system without reference to God and the Prophet Muhammad. Therefore they become a source of Muslims' straying from the truth. He argues that reflection on the nature of modern education immediately reveals some contradiction with the nature of Islamic education. He concludes that "you teach them science which is devoid of reason and slave of the senses".

The second group, the reconstructionist as well as the pragmatist stand in the opposite side of the restorationist. Their position is essentially to reinterpret certain teachings of Islam in order to reconcile the demands of modern civilization with Islam. This group argues that Islam in the period of the Prophet and his companions was revolutionary, progressive and rational. Muslims' backwardness in later period of Muslim history was a direct result of superstitious beliefs and rejection of reason in favor of blind obedience to old and archaic tradition.

One representative of this group was Sayyid Ahmad Khan (1817-1898) who proposes that since the Qur'an was the word of God and since scientific truths were manifestly correct, then any contradiction between religion and science could only be apparent and not real. Criticizing

Muslims' tendency to read old religious books while ignoring scientific ones, Ahmad Khan suggests that Muslims should adopt modern sciences in order for them to resolve their problems.

Another prominent thinker of the constructionist and pragmatist groups was Jamal al-Din al-Afghani (1838-1897). He was of course a bitter enemy of Western colonialism, but there is no doubt that he was also enchanted with the power of modern science that he regarded as the secret of the strength of the Western world. In a lecture in Calcutta in 1882, al-Afghani says that if someone looks into the question of Muslims' inability to confront the West, then he will see that science rules the world. There was, is, and will be no ruler in the world but science; the benefits of science are immeasurable. Al-Afghani furthermore believes that Islam brought with it a spirit of scientific inquiry. He argues that the first Muslims had no science, but thanks to Islam, a philosophic spirit arose among them. This was why they acquired in a short time all the sciences with particular subjects that they translated from the Syriac, Persian, and Greek into the Arabic language.

Reintegration of Sciences

This paper basically argues that in order for Muslims to be able to compete in the age of globalization, there should be an adoption of new paradigm of Islamic education. In that context, it is good to quote Nasr who persuasively argued that sciences in Islam are based on the idea of transcendent unity, which is the heart of Islamic revelation. In fact, the aim of all the Islamic sciences is to show the unity and interrelatedness of all that exists. So that, in contemplating the unity of the cosmos, human being may be led to the unity of the Divine Principle. That is why Muslim scientists believe that rational and empirical knowledge will lead naturally to the affirmation of the Divine Unity.

With regards to that argument, the unifying perspective of Islam has never allowed various forms of knowledge to be cultivated independently each other. There is, however, hierarchy of knowledge in which every form of knowledge from that of material substances to the highest metaphysics is organically interrelated. The rise of sciences in Islamic civilization and their later development is inconceivable without the ever present spirit of the Islamic revelation; and the manner this revelation has moulded the minds, actions, and surroundings of Muslims scientists and civilizations responsible for the creation and cultivation of the sciences.

Again, sciences came into being among Muslim scientists from a wedding between the spirit that originated from the Qur'anic revelation and the existing sciences of various civilizations which the Muslims inherited. This is particularly true in regard to the *kauniyyah* (nature) sciences from the Greek, Chaldean, Persian, Indian and Chinese. However, in the process of transmission of the sciences, Muslim scientists transmuted them through spiritual power of Islam into a new substance, at once different from and continuous with what had existed before. The international and cosmopolitan nature of the Islamic civilization, derived from the universal character of the Islamic revelation, enabled it to create the first science of a truly international nature in human history. Muslim scientists united these sciences into a new corpus of sciences, which was to grow over the centuries and became part and parcel of Islamic civilization.

As far as sciences are concerned, the present challenges of Islamic education are two-folds. Firstly, sciences that have been separated from spiritual and ethical values and, therefore, to some extent are harmful even for the future of human being and the universe. Through various levels of Islamic education, this kind of sciences should be reconciled with religious and spiritual values, so that they can bring the utmost benefit for human being and all universe (*rahmah li al-'alamin*). Secondly, the marginality of (general) sciences vis-à-vis the so-called "religious sciences". The challenge of Islamic education here is to bring general sciences into mainstream of Islamic perspective of *'ilm* as a whole.

The reconciliation and reintegration between the two groups of sciences—the sciences that derived from the *ayat Alquraniyyah* and those derived from the *ayat kauniyyah*—means the return to the transcendent unity of all knowledge.

The cultivation of integrated sciences in the Muslim world is clearly dependent on an educational system which allows the transmission and implantation of knowledge in all its forms in an integrated and holistic manner. Islamic educational system should emphasize all of the religious sciences, but at the same time it also includes all other forms of knowledge and sciences.

Reintegration of Sciences: Indonesian Case

In the context of the whole discussion above, it is relevant to cite the model developed by Syarif Hidayatullah State Islamic University of Jakarta which devotes itself to integration of sciences mentioned above. This integration is based on faith, knowledge and good deeds. The paradigm of scientific integration is the basis for the development of the university, so that it can contribute significantly to the progress of social development of the nation.

The creation of UIN is an end product of a long struggle among IAIN dan MORA's circles. One of the most important hurdles is legal constraint. According to various regulations concerning higher education and particularly Indonesian law of education of 1989, '*institut*' (institute) such as IAIN has a limited mandate compare to '*universitas*' (university). The law states that '*institut*' is a higher educational institution that is allowed to teach only in a certain field of knowledge; while '*universitas*' can provide education in virtually all branches of knowledge. Therefore, the mandate of IAIN as an Islamic higher education since the time of its foundation is limited to the so-called 'Islamic religious sciences'; therefore, it is against law if IAIN offers academic programs outside of the boundaries of the so-called Islamic religious sciences.

But it is important to make it clear that even though IAIN is an institute of Islamic religious sciences, it is not a 'seminary'; it is basically a liberal institute that prepares Muslim youth to work as teachers of not only Islamic instruction at *madrasahs*, *pesantrens* and public schools, but also teachers of English, for instance. Many IAIN graduates also work as social and NGO activists, journalists, political activists, leaders of socio-religious organizations, and *kiyai* at *pesantren*. With the liberalization of Indonesian politics following the fall of President Soeharto an ever increasing number of IAIN graduates become leaders of political parties and of members of legislature bodies at national and local levels.

In this respect, there is little doubt only that IAIN has played a crucial role in the modernization of Indonesian Muslim society. First of all, IAIN has made possible for children of *santri* (practicing Muslims) families to get 'modern' Islamic higher education that allows them to achieve not only educational mobility, but also social and economic mobility; IAIN, no doubt, has contributed significantly to the so-called 'intellectual boom' that has been taking place in Indonesia since the late 1970s. Furthermore, one cannot ignore the role of IAIN graduates in the modernization of Islamic educational institutions such as *madrasahs*, *pesantrens*, and *sekolah Islam* (Islamic schools) as well as in the development of other Islamic institutions such as Islamic courts, Islamic banking and others.

Despite its important role, there is a lot of dissatisfaction among IAIN circles of the limited academic mandate to deal only with the so-called Islamic religious sciences. There is a number of important reasons behind the efforts to convert IAIN to UIN. *First*, more and more Muslims realized that the long standing dichotomy between the Islamic religious sciences and 'secular', or better, 'general' sciences, cannot be maintained any longer, since essentially there is no separation in

Islam between the sacred and the profane. The dichotomy—if not separation—had created negative consequences for the life of Muslims as a whole.

Second, the development program that was launched from the early 1970s onward in Indonesia has produced an increasing need of a greater role of Muslims in almost all walks of life. In the popular discourse since the 1970s, Muslims should not become the ‘objects’ of development; they should become the ‘subject’ of national development. But it is clear that they cannot fulfill that role satisfactorily unless they are better prepared in all branches of knowledge.

Third, the transformation of most of *madrasahs* into ‘public schools’ with Islamic characters as stated by the national education law of 1989 has far-reaching consequences for IAIN and STAIN. Now, if the graduates of secondary *madrasah* (Madrasah Aliyah/MA), particularly of divisions of natural sciences and of social science, wish to continue their studies to IAIN, then the IAIN itself must provide similar academic programs. But this is of course beyond the traditional mandate of IAIN. As a result, since 1997 the number of prospective students and, therefore, students admitted, at IAIN and STAIN has been decreasing continuously.

At a more philosophical level, at least in UIN Jakarta, the conversion of IAIN to UIN is based on the idea of reintegration of the so-called Islamic religious sciences and ‘secular’ sciences. There is no need here to discuss again the origins of this dichotomy in the history of knowledge in Islam. What is important is from the UIN Jakarta perspective is that all sciences epistemologically come from God, the All-Knowledgeable, through the ‘*ayat Qur’aniyyah*’ (Qur’anic verses) and the ‘*ayat kawuniyyah*’, the signs of God that are spread all over the universe. Muslims need to learn the ‘*ayat Qur’aniyyah*’ and the ‘*ayat kawuniyyah*’ at the same time, since through the study of the two *ayats*, Muslims will be able to acquire various kind of knowledge and sciences that are necessary for their lives.

The concept of reintegration of sciences at the UIN Jakarta is conducted at three levels at least: first, at philosophical and epistemological levels, mentioned above; second, at the level of curriculum; third, at the level of faculty and academic programs.

It should be clear, therefore, that the conversion is not based on the idea of the ‘Islamization of knowledge’ that has been a subject of discussion and debate among certain Muslim scholars since the early 1980s. Again, from the UIN Jakarta perspective, the idea of ‘Islamization of knowledge’ is to a large extent questionable, since all knowledge and sciences are already Islamic. Natural sciences are of course already based on universal principles; while if certain theories in social sciences and humanities are mostly Western-based, then the need is not to ‘Islamize’ them, but to develop theories that are based on Muslim social and cultural realities.

Based on all of the above-mentioned reasons, the idea of conversion of IAIN to UIN has its strong basis. Maintaining the existing form or mandate of IAIN will make it very difficult for it to survive. Therefore, the mandate of IAIN needs to be expanded; if the direct conversion to UIN is not possible, then the IAIN should be given a wider mandate, meaning to maintain the institute status, but at the same time is officially allowed by Ministry of National Education (MONE) to open ‘non-religious’ academic programs. The wider mandate concept was in fact adopted by MORA and MONE as ‘bridging’ stages in the transformation of IAIN Jakarta, IAIN Yogyakarta, STAIN Malang, IAIN Pekanbaru, IAIN Bandung, and IAIN Makasar to UIN; a number of IAINs—including al-Raniri here—will soon hopefully follow the suit in 2013 and beyond.

The result of the transformation is clear. To take UIN Syarif Hidayatullah Jakarta that was the earliest to have been converted in May 20th, 2002 as an example, now the UIN Jakarta consists of not

only religious faculties, but also 'non religious', or better natural and social sciences and humanities faculties. More than that, even the tradition religious faculties are combination of religious and non religious departments or programs.

The complete faculties of UIN Jakarta as the following: Faculty of Tarbiyah and Teaching Sciences; Faculty of Syariah and Law; Faculty of Ushuluddin and Philosophy; Faculty of Adab and Humanities; Faculty of Dakwah and Communication; Faculty of Islamic Studies (Dirasat Islamiyyah); Faculty of Psychology; Faculty of Economics and Social Sciences; Faculty of Science and Technology; Faculty of Medicine and Health Sciences; and Graduate School.

With the new status, UIN Jakarta since 2003 has participated in the national entrance examination (SPMB/Seleksi Penerimaan Mahasiswa Baru) which is carried out by the Indonesian association of state universities, in addition to local entrance examination conducted internally at UIN Campus. This participation allows UIN Jakarta to recruit students more widely, or more precisely, nationally and internationally. And according to statistics released by the national committee of SPMB, based on score achieved by its prospective students, UIN Jakarta in 2003 SPMB was ranked 14th in natural sciences and 16th in social sciences out of 48 participating university. In 2004, UIN Jakarta was the 5th most competitive university among 49 state universities participated in SPMB in such programs as Information and Communication Technology (ICT), Management, Accountancy, Psychology, Medical and Health Sciences.

Again, a number of consequences of this transformation is also clear; the most important among them is that these UIN have included the opening of new academic programs that are beyond the religious sciences that are traditionally taught at IAINs and STAINs. These new programs are, for instance, mathematics, biology, computer sciences, medical and health sciences, and other natural and basic sciences.

The decision of Indonesian government in that crucial transformation in one way or another reflects the long standing aspiration within government circles and Muslim society to have modern Islamic universities that will in turn contribute even greater to the creation of a modern and democratic Indonesia. Greater opportunities for Islamic higher education institutions, no doubt, will be possible only if the mandate of these institutions is not confined to religious sciences only, but to include also other sciences that are necessary for Indonesians to improve their lives.

Bibliography

Azra, Azyumardi, 2006b & 2004, "From IAIN to UIN: Islamic Studies in Indonesia", paper presented at International Workshop "Voices of Islam in Europe and Southeast Asia", The Regional Studies Program, Institute of Liberal Arts, Wailalak University, Nakhon Sri Thammarat, Thailand, 20-22 January, 2006; and at Conference "The Idea(l) of an Indonesian Islamic University: Contemporary Perspective", MORA of Indonesia and CIDA Canada, Yogyakarta, 9-11 December 2004.

Azra, Azyumardi, 2004, *The Origins of Islamic Reformism in Southeast Asia: Networks of Malay-Indonesian and Middle Eastern 'Ulama' in the Seventeenth and Eighteenth Century*, Crows Nest, Aust; Honolulu; Leiden: Asian Studies Association of Australia (AAAS) & Allen & Unwin; Hawaii University Press; KITLV.

Azra, Azyumardi, 2004b, "International and Domestic Networking of the UIN (State Islamic University) Jakarta", paper presented at "Forum Indonesia-United States Partnership for International Education", The Embassy of the Republic of Indonesia, Washington DC, April 28-30, 2004.

- Azra, Azyumardi, 2003a, "Reintegration of Sciences in Islam", paper presented at International Conference of Islamic Universities League, "Scientific Methods in Islam", Jakarta, 23-25 September, 2003.
- Azra, Azyumardi, 2003b, "Pengembangan Ilmu-ilmu Keislaman", paper presented at National Symposium "Pengembangan Ilmu-Ilmu Keislaman", IAIN Wali Songo, Semarang, 10-11 July, 2003.
- Azra, Azyumardi, 2002, "The Making of Islamic Studies in Indonesia", in Jabali & Jamhari (eds.), *Islam in Indonesia: Islamic Studies and Social Transformation*.
- Azra, Azyumardi, 2002b, *Paradigma Baru Pendidikan Nasional: Rekonstruksi dan Demokratisasi*, Jakarta: Penerbit Kompas.
- Azra, Azyumardi, 2000a, "IAIN di Tengah Paradigma Baru Perguruan Tinggi", in Hidayat & Prasetyo (eds.), *Problem & Prospek IAIN: Antologi Pendidikan Tinggi Islam*, Jakarta: Ditperta, Depag RI.
- Azra, Azyumardi, 2000b. "Pengelompokan Disiplin Ilmu Agama: Perspektif IAIN", in Abdullah et al, 2000, *Antologi Studi Islam: Teori dan Metodologi*, Yogyakarta: IAIN Sunan Kalijaga.
- Azra, Azyumardi, 1999, "Studi-studi Agama di Perguruan Tinggi Agama Islam Negeri", in A. Azra, *Pendidikan Islam: Tradisi dan Modernisasi Menuju Milenium Baru*, Jakarta: Logos.
- Azra, Azyumardi, 1999b, *Esei-esei Pendidikan Islam dan Intelektual Muslim*, Jakarta: Logos.
- Alhabshi, Syed Othman & Nik Mustapha Nik Hassan (eds.), 1998, *Islam: Knowledge and Ethics*, Kuala Lumpur: IKIM.
- Gutas, Dimitri, 1999, *Greek Thought, Arabic Culture: The Graceo-Arabic Translation Movement in Baghdad and Early Abbasid Society*, London: Routledge.
- Hoodbhoy, Pervez, 1991, *Islam and Science: Religious Orthodoxy and the Battle for Rationality*, London: Zed Books Ltd.
- Mirza, Md. R. & Mohd. Iqbal Siddiqui, 1997, *Muslim Contribution to Science*, Noida: New Era Publishers.
- Nakosten, Mehdi, 1996, *Kontribusi Islam atas Dunia Intelektual Barat: Deskripsi Analisis Abad Keemasan Islam*, Surabaya: Risalah Gusti.
- Nasr, Seyyed Hossein, 1987, *Science and Civilization in Islam*, Second Edition, Cambridge, U.K: The Islamic Texts Society.
- Nasr, Seyyed Hossein, 1976, *Islamic Science: An Illustrated Study*, [London]: World of Islam Festival Publishing Co.
- Sarton, George, 1927-48, *Introduction to the History of Science*, 3 vols, Baltimore: The Williams and Wilkins Co.
- Turner, Howard R., 1995, *Science in Medieval Islam*, Austin: University of Texas Press.