
STUDENTS PERCEPTIONS ON INFUSION OF ISLAMIC PERSPECTIVES IN THE TEACHING OF ENGINEERING SUBJECTS: IIUM CASE STUDY

Zuraida Ahmad
Kulliyah of Engineering,
International Islamic university Malaysia,
Jalan Gombak, 53400 Kuala Lumpur
Email: zuridaa@iium.edu.my

Saidi Zain
Kulliyah of Engineering,
International Islamic university Malaysia,
Jalan Gombak, 53400 Kuala Lumpur

Ahmad Faris Ismail
Kulliyah of Engineering,
International Islamic university Malaysia,
Jalan Gombak, 53400 Kuala Lumpur

Mohd Noor Salleh
Kulliyah of Engineering,
International Islamic university Malaysia,
Jalan Gombak, 53400 Kuala Lumpur

Salah Machouche
Kulliyah of Islamic Study and Islamic Revealed Knowledge
International Islamic university Malaysia,
Jalan Gombak, 53400 Kuala Lumpur

ABSTRACT

Issues pertaining to the Islamisation of education (IoE) are presently being highlighted in higher learning institutions (HLI) in Malaysia and being discussed in certain education conferences. The scholars in the area are emphasizing the advantages of having IoE, and some of the HLI are taking certain steps to implement it with little concern given to student opinion or perceptions on this matter. This paper is written with the intention to report the analyses from the survey executed in the Kulliyah of Engineering (KOE), International Islamic University Malaysia (IIUM) on students' perceptions regarding Infusing of Islamic perspectives in the teaching of engineering subjects. The survey questions were given to four different cohorts in semester I 2012/2013, semester II 2012/2013, semester I 2013/2014 as well as semester II 2013/2014, and analyses were conducted based on their answers. Open response questions were given to them to allow for further analysis of their chosen answer. More than half of the respondents expressed a positive perception infusing Islamic perspective into the Engineering subjects and also claimed that at the end of the semester their Islamic knowledge had increased due to this integration of knowledge. There are however several respondents who disagreed with this idea with the justification either being that it might affect coverage of the engineering subject contents and/or uncertainty regarding the ability of the educators to cater to the two subject matters of both Engineering and Islamic knowledge.

Keywords: Islamisation, engineering educations and Islamic perspective

Introduction

The Islamic integration of knowledge is one of the fundamental concepts required for a revival comprising the substance and essence of learning, while also entailing the substantial shaping and development of both human and scientific knowledge. The contemporary need for integration is inevitable, in light of the pernicious effects secularism and secularization have had on not merely the understanding and learning of science, but on human life as a whole. The physical sciences, as they stand today, not only shape human life but further condition the manners according to which humans think, act, and consume. When the learning of those sciences is not approached according to a unique configuration entailing the very worldview, beliefs, and value systems of Islam, Muslims will fall prey—as they often have—to dichotomies, contradictions and improper perspectives of their own existence, and that of the universe. Secular textbooks of science today express the ontology-reference language of the author and exhibit much of the author's context and milieu in terms of worldview, culture, emotion, meaning of life, socio-historical experience, imaginations, and limitations to methods of inquiry. The secular perspective of learning and instruction of science insists on spurning the metaphysical; precisely, the might and wisdom of the Creator, the divine meaning of human life, the balanced value system set for a life of sustainability, the limitations of human cognitive potential, the reality of the unseen worlds, and so forth.

The First World Conference on Muslim Education was organized by King Abdul Aziz University and the Government of the Kingdom of Saudi Arabia, in Makkah from 31 March to 8 April 1977. The main objective was to gratify problems of education in the Muslim world stemming from the dual education system inherited from the colonial masters, i.e., the national type system and the religious system [1]. The conference's theme was entitled, "Basis for an Islamic Education System," where one of the main outcomes of this inspirational conference was the demand for educational reform in the Muslim world, asserting that modern disciplines taught in universities in the Muslim world were mostly adopted from the western/secular syllabus which over emphasizes the role of materialism, empiricism, reason, relativism and host of other modern -isms.

The conference proposed an essential assessment, calling for the amelioration and integration between modern knowledge and the Islamic legacy. Hence, recommendations were made to improve the teaching, learning and research of Islamic heritage by establishing Islamic universities; i.e., universities with an integrated curriculum where both modern disciplines and Islamic heritage were taught to provide students in Muslim countries with a better education, utilizing epistemological sources in Islam [2].

The International Islamic University Malaysia (IIUM) is one such attempt to implement the integrated curriculum model as described above. Established in July 1983 by the Government of Malaysia, it is one of the direct outcomes of the First World Conference on Muslim Education. The university's ultimate aim was to produce holistic professionals infused with Islamic values and ethics who would develop the Muslim community and achieve progress in harmony with Islamic ideals.

The IIUM is, thus, seen as "an Islamic university and not a university merely about Islam," unlike the many existing universities in the Muslim world that tended to perpetuate the educational dichotomy between the religious and the modern [3]. The IIUM's objectives have now been restated in its vision statement, which is to become "a leading international centre of educational excellence which seeks to restore the dynamic and progressive role of the Muslim *Ummah* in all branches of knowledge" and its mission of Integration, Islamization, Internationalization, and Comprehensive Excellence (IIICE).

After almost 32 years of its establishment, it is important to examine whether the integrated curriculum as proposed by the First World Conference on Muslim Education has been able to achieve the University's noble objectives that would serve the needs of the *Ummah*. In realizing this objective, some of the Kulliyahs in IIUM [3-7] have taken certain steps in the implementation of if not an integrated curriculum, then certain subjects to say the least. Most of the reports given focus on the approach educators have taken, the outcomes or results from the implementation of these integrated courses and more often than not little concern is given to students' opinion and their perceptions on this matters. Hence, this study is executed to investigate engineering students' response to the aspiration of International Islamic University Malaysia on Islamicisation of Human Knowledge (IoHK) through infusion of the Islamic perspective into engineering subject matter.

Methodology

This paper focused on obtaining information from students, and their response to aspirations of the International Islamic University Malaysia (IIUM) on Islamisation of Education (IoE) or Islamicisation of Human Knowledge (IoHK) (*to avoid confusion, between IoE and IoHK which were used interchangeably in the previous text, the authors decided on the abbreviation of "IoE" to be used in the upcoming text*). The data collection was executed by means of semi-structured questions answered by the students as respondents in the Semester I Session 12/13, Semester II Session 12/13, Semester I Session 13/14 and Semester II Session 13/14.

These semi-structured interview questions were answered by a total number of 208 students only, from an aggregate number of almost 3000 students in the Kulliyah of Engineering representing 10% of the sample population. The students who took part in answering the questionnaires come from two levels of study; namely Level 1 and Level 3, dividing accordingly as 85% Malaysian with 15% as non-Malaysian students. The authors would like to highlight that about 95% of Malaysian students are going through IIUM matriculation studies in the Center for Matriculation study (CFS), Petaling Jaya, with the remainder having already completed their Diploma studies from either Higher Learning Institute (IPTA) or Polytechnics.

The number of respondents for Semester I Session 2012/2013, Semester II session 2012/2013, Semester I Session 2013/2014 and Semester II session 2013/2014 are 24, 54, 82 and 48; representing 11.5%, 26%, 39.5% and 23% from the total number of sampling, respectively. The questions are designed to acquire an idea into their background, their interest in Islamic knowledge, their view on integrating the Islamic perspective into their engineering subjects, the internalization of Islamic values at the end of the class/semester and the possibility that less engineering content and subject-matter was taught to them due to the added infusion of Islamic perspectives into the engineering subject. The questionnaires were also designed for them in such a manner that they were provided with choices and an open response to support choice questions.

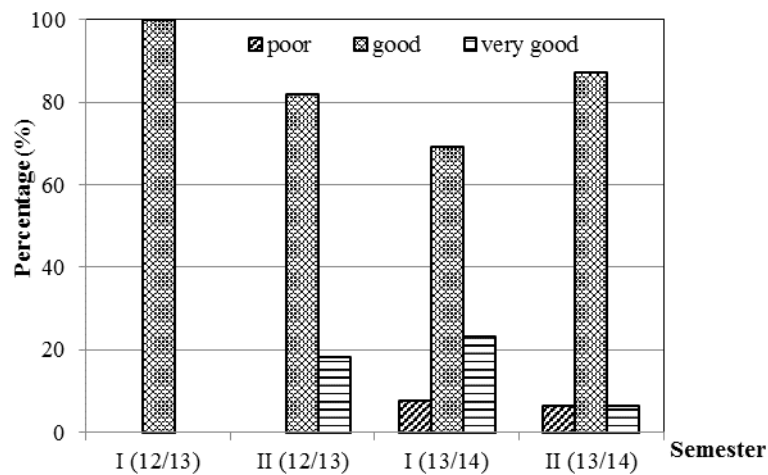
Results

General findings on the background of the students

It is interesting to note from the analysed and plotted data in Figure 1, that 100% of students made the claim or self-assessment that they are a good *Muslim* in semester I session 2013/2014, which reduced following that to 82% in the Semester II in the same session and 70% and 88% in Semester I and II in the session 2013/2014 respectively. Surprisingly, about 8% and 7% of the students in Semester I and II in 2013/2014 session claimed that they had a poor or weak Islamic background, while some students claimed that they are good Muslims. Further analyses on the backgrounds of self-identifying 'Good Muslims' shows

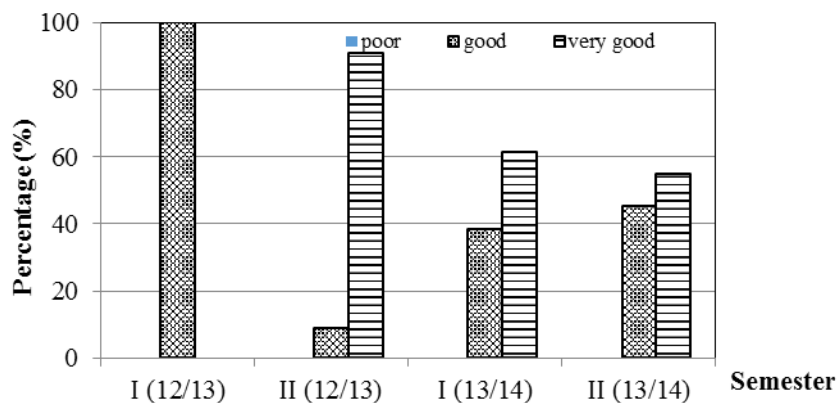
that these students often received secondary schooling in the religious schools, while students claiming poor Islamic background completed their secondary schooling in either boarding school, ordinary secondary school or *Sekolah Menengah Kebangsaan*.

Figure 1: Students' background in the Islamic knowledge



Responding to the question on their interest in Islamic knowledge, Figure 2 reveals that most respondents in the Semester I session of 2013/2014 claimed that they have good interest in Islamic knowledge. The decline of "very good" interests were observed from the Semester II session of 2012/2013 to the Semester II session of 2013/2014. The open response and comments provided (*the open response questions were only given to respondents in semester I and II of Session 2013/2014, after which the survey questions were revised*) given in Table 1, on this matter, expressed their answers for not having a "very good interest" among others such as not having enough time to study Islamic knowledge and having learned it during the childhood, or that it was a matter of implementation.

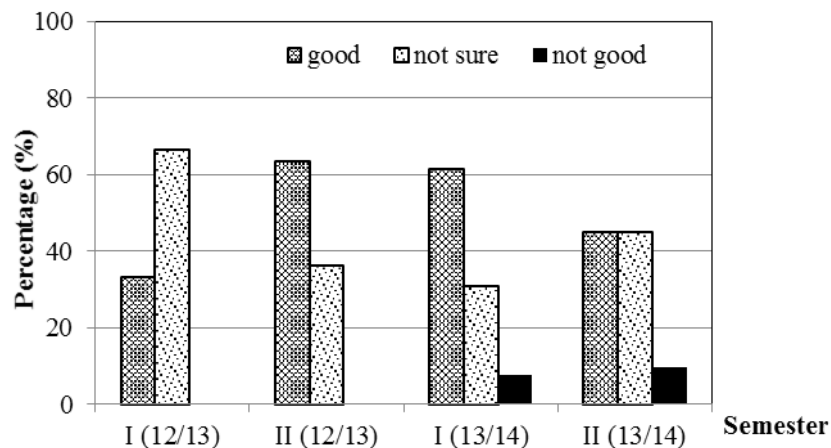
Figure 2: Students interest in Islamic knowledge



In view of the students' opinion on the integration of the Islamic perspective in the engineering core subjects, unsureness of the students can be observed in Figure 3. It is hard to construe the unsureness of the students in this matter. In analysing the answer to this survey question, the authors realized that this question was in need of being elaborated further to come to terms with what makes the student choose the self-identity of a 'good Muslim' or unsureness regarding the integrating of an Islamic perspective into engineering core subjects.

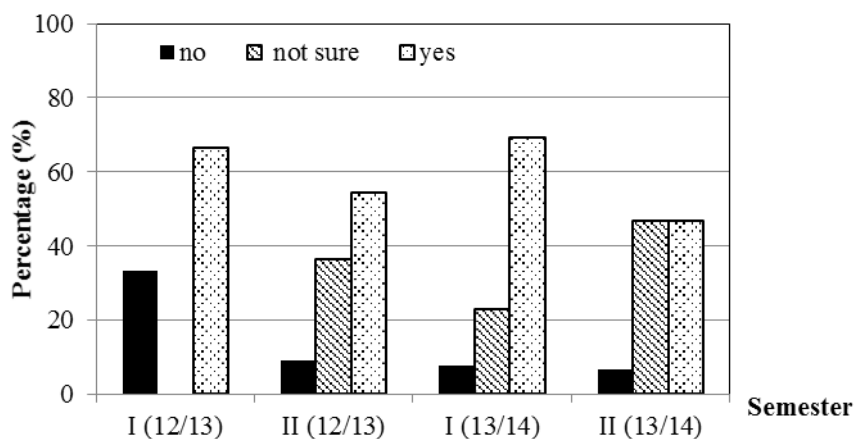
The open response questions however, questioned students on what made them select "not good" to have this integration, with the answers summarized in Table 2. The students' showcase their concerns regarding the manner in which educators conduct integration classes, as they believe that different educators have different methods of handling the class with the prime uncertainty of students revolving around whether or not the objectives will be achieved at the end of class. Some are also concerned that the content of the subject will be reduced due to integration of this core subject and Islamic knowledge, with many other responses asserting that it is a mere waste of time.

Figure 3: Students' views on the integrating of the Islamic knowledge in the subject



For the reason that the study had already been conducted for four (4) consecutive semesters, the authors also took the opportunity to enquire of the students as to whether or not their Islamic knowledge had increased after completing the course. Surprisingly, it shows that not all students claimed that their Islamic knowledge increased once the subject was completed and a percentage of students claimed increments in Islamic knowledge obtained fluctuated from Semester I 2013/2014 to Semester II session 2013/2014. This fluctuation of percentage however, is challenging to analyse and interpret due to a certain reason of: a) the samples of students do not represent the whole b) students are from different cohorts and have different backgrounds.

Figure 4: Islamic Knowledge increases after finishing this course



In different questions, with regards to the question of whether they receive the impression that their engineering subject coverage will be reduced with the integration of Islamic knowledge into it, the answers are "none" in the earlier semester of Semester I Session 2012/2013, found to be highest in the next following semester and reduced following that from 64% in Semester II session 2012/2013 to 32% in the Semester II session 2013/2014 as shown in Figure 5.

The impression of "not sure" however is high with a percentage of 58% in the Semester II session 2013/2014 which was possibly due to a) Lacking information on the subject matter and its content, b) bias perception of students on the issues of integration and c) misconception that the learning process only takes place in the classroom. These justifications were taken and analysed from different questionnaires given to students, where this was the main objective of these questionnaires; to effectively study the preparation and commitments of students in certain engineering subjects.

Figure 5: Not much knowledge in the subject is obtained due to integration of the subject with Islamic science

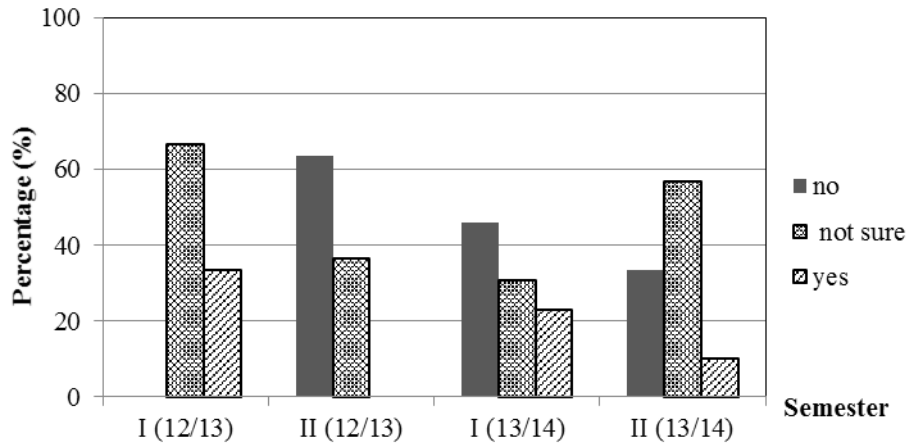
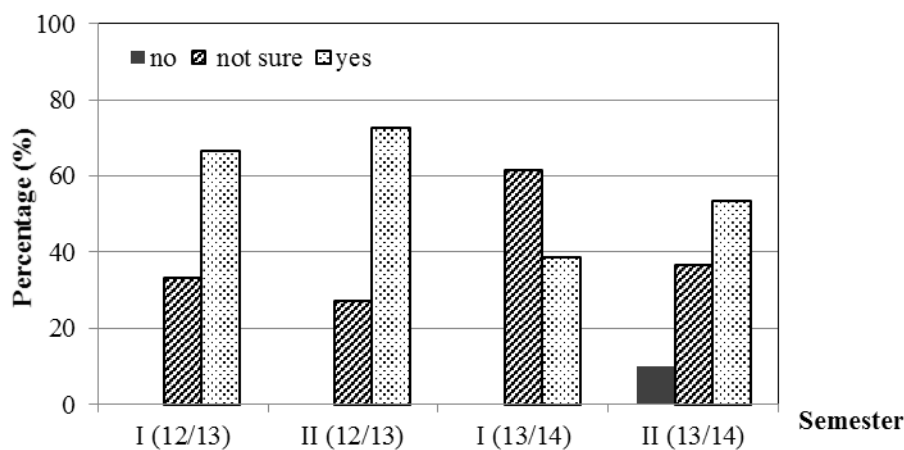


Figure 6 shows the impression of students on internalization of Islamic values taught and recapped to them once the course was completed. In most of the semester of the study conducted, the impression ranged either from “not sure” to “yes”, except for the Semester II session 2013/2014, where impressions also emerged that students were not internalizing Islamic values that had been taught and integrated for them. Assuming that they have provided sincere answer and with no open response questions given to them for further elaboration, it is hard for the authors to justify the reason. Whatever the reasons, the authors concluded that this impression should be meticulously examined at, so that the Islamisation of education is not merely implemented without executing proper study to look at the correct approach in implementing it.

Figure 6. Internalization of Islamic values/knowledge taught?



Selected open questions respond

In this section the authors would like to share some of the comments from the open questions for on “Students’ interest in Islamic Knowledge” in Table 1 and “Students’ Perception on Integration of Islamic knowledge in Engineering Education” in Table 2. Table 1, shows that students have a basic interest in studying Islamic knowledge, however due to time constraints, their interest is diminished. On the other hand, in Table 2, most respondents provide good feedback regarding having integrated subjects and some show uncertainty as discussed before.

The approach employed in the collection of data for this study provides quite a rich narrative from students on what they perceive for integration of Islamic knowledge in the engineering subject. Even though the sample used is small, authors believed that it was enough to provide quite an accurate and compelling image of students’ perception on matters studied.

Table 1: Students’ interest in Islamic knowledge

Selecting Answer	The Justification
SEM I 2013/2014	
Good	We already have some basic knowledge. Learning is good, But <i>istiqamah</i> in what we had learned is better.
Very good	Islamic Knowledge needs to be studied until the grave.

Very good	In order to become a good Muslim, we have to have good interest in Islamic knowledge
SEM II 2013/2014	
Good	Good, but we have time constraints.
Very good	It is very good to always be reminded that we are Muslim and we must always equipp ourselves with Islamic knowledge

Table 2: Integrating Islamic knowledge in the subject

Selecting Answer	The Justification
SEM I 2012/2013	
Yes.	Integrating the subject with Islamic values during lecture time should be the basis of teaching for all subjects. It is because Islamic values are also a way of life that can guide other knowledge in the truth path.
Not sure	It depends on how they teach us.
SEM II 2012/2013	
Yes	I'm sure it is good and I feel good of having this integrating course
Not sure	Two subjects can be taught in one subject? The Islamic knowledge is just like " <i>nasihat</i> " to me
Yes	It is lecturer's job to make students more aware about Islamic knowledge. It is already integrated.
SEM I 2013/2014	
No	Only certain lecturers do it well. Other lecturer's goal is only to finish the class faster and to bring confusing questions in the exam that aren't explained or discussed before.
Yes	Good. We need more Islamic values to be inculcated
Not sure	Why should we? Islamic knowledge subjects are already taught in different courses.
SEM II 2013/2014	
Yes	We must always be reminded that we are Muslim. Integration of Islamic knowledge in Engineering subjects will make us always be reminded.
Yes	Knowledge is part of our religion and the only way to succeed in life
Not sure	Does it make any difference?
Yes	Because the lecturer makes me remember my objective to be here.
Not sure	Not sure it works. Engineering subject is already heavy and we add another topic, Islamic topic.

Recommendation

More researches with bigger and comprehensive samples need to be conducted however, to confirm the approach, and determine whether the perception held by students at IIUM are unique or similar to those held by students in other higher learning institutions some of which are more complicated due to multiracial and multicultural students registered. There is potential for this study to inform research in related areas. The results may be useful to researchers investigating the Islamisation of Education, Perceptions of effective teaching for integrated curriculum, the comparison for ordinary class and engineering integrated classes and University experience in Islamisation of Human knowledge. Hopefully, this study will be the beginning of a more extensive research agenda in the area of Islamisation of Education.

Conclusion

The data provided by students as respondents in this research, even though not too comprehensive leads to the conclusion that students are accepting ideas of Islamisation of Engineering Education providing that the right approached need to be studied so that it will not affect the content of Engineering subjects. It is also concluded that for educators to cater to two different fields of knowledge they need to be trained so that a harmonious synchronized pedagogy of teaching can be implemented on the student.

Acknowledgement

The authors gracefully acknowledge all respondents who committedly responded to questions given to them and also the Dean of Kulliyah of Engineering and their staff as well as the Centre for Foundation Studies who supported this discussions. The indebtedness to the Ministry of Higher Education for the grant under MyRA. May Allah reward duly.

References

- Adebayo, R. I. (2007). The Influence of the World Conferences on Muslim Education on Islamic Education in Nigeria. In *Islamic Studies in Contemporary Nigeria, Problems & Prospects*, edited by L.M. Adetona, 1 – 34.
- Amin, R.M., and M.A. Haneef. (2011). The Quest for Better Economics Graduates: Reviving the Pluralist Approach in the Case of the International Islamic University Malaysia.” *International Journal of Pluralism and Economics Education* 2, no. 1: 96-113.
- Haneef, M.A., and R.M. Amin. (1997). Conceptual and Practical Dimensions of Islamization of Knowledge: A Case Study of the Economics Program at the IIUM.” *American Journal of Islamic Social Sciences* 14, no. 2 Summer (June): 188-207.
- Osman, A. (2013). Integrating Islamic Value In Medical Teaching Curriculum: IIUM Experience, *Bangladesh Journal of Medical Science* Vol. 12 No. 02
- Norwina, M.N., Zaiton, A.R., Zuraini, D., Noor Hanita, A.M., Asiah, A.R., Fazidah, A., Abdul Razak, S., and Sufian, H.(2014). The Journey of Murrabis in Archetecture Pedagogy: the case of studio Teaching as Laboratory of Passion and Duty to Future Khalifas of the built environment, *Word Applied sciences journal* 30 (Innovation Challenge in Multidiciplinary Reseach & practice): 148-166, ISSN 1818-4952
- Zuraida, A.,Ismail, A.F., Shafie, A.A., Ihsan, S.I., Zahurin, H., and Souad, A.M.A. (1433H/2011). Islamisation of Engineering Education in International Islamic University Malaysia (IIUM): Problems and Prospect, *Revelation and Science* Vol. 01, No.03 131-137
- Zuraida,A., Raihan, O., and Ismail, A.F. (2012). Integrating And Infusing Of Islamic Values In The Existing Engineering Course Subject: A Case Study, *Advances in Natural and Applied Sciences*, 6(5): 625-632, ISSN 1995-0772