A REVIEW ON KAED'S PERFORMANCE IN THE IMPLEMENTATION OF THE ISLAMICISATION OF ACQUIRED HUMAN KNOWLEDGE (I0HK) IN ARCHITECTURE AND THE BUILT ENVIRONMENT

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ABSTRACT

This paper reports on a study reviewing the performance of the Kulliyyah of Architecture and Environmental Design (KAED) International Islamic University Malaysia (IIUM) in the implementation of Islamicisation of Acquired Human Knowledge (IoHK) in architecture and the built environment in programmes it conducts. Using quantitative data on outputs in the key areas of teaching and learning and in research and publication outputs of its academic staff and students over a period of 17 years since its establishment in 1996 KAED's performance, in terms of effort in implementing IoHK, has been obvious but the level of achievement is considered mediocre. Acknowledging that more effort is required the paper concludes with recommendations on the best way forward for KAED. The paper also provides recommendations on how best to bring the IoHK effort to the global scene so as to benefit other universities keen to implement IoHK in architecture and the built environment and calls upon the Muslim *Ummah* to preserve Islamic architectural and cultural heritage for the benefit of future generations.

Keywords: Architecture, Built Environment, Heritage, Islam, Knowledge, Procurement

CONTEXT AND DEFINITION

The International Islamic University Malaysia (IIUM) has come a long way, since its establishment in 1983; from a relatively nondescript University, IIUM is now a Premier Global Islamic University pioneering and championing the Islamicisation of human knowledge (IoHK) in all fields of studies². In line with the progress made by IIUM, the Kulliyyah of Architecture and Environmental Design (KAED), established in 1996 as an organ within IIUM, has also come a long way in pioneering studies on IoHK in architecture and the built environment.

For the purpose of this paper, a somewhat simpler definition of the concept of IoHK is used. Thus, IoHK refers to the study of acquired human knowledge (in all the fields) and to ground and integrate their understanding with Islam^{3,4} The underlying principle of the IoHK is that it is the acquired human knowledge, not Allah's or revealed knowledge, that is imperfect and therefore, understanding acquired human knowledge is the one that requires Islamicisation thus enabling it to be in line with the *Qur'an* and the *Sunnah*, the ultimate aim being to seek the pleasure of Allah SWT.

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² IIUM is declared a Premier Global Islamic University on 23rd August 2013 by the Prime Minister of Malaysia. The declaration was made during at the opening of the First World Congress on Integration and Islamicisation of Acquired Human Knowledge.

³ According to Turner (2013) the *Nusian* approach to Islamicisation concerns not on knowledge itself but on how knowledge is to be understood. The early thoughts on Islamization (instead of Islamicisation) concerned effort to make human knowledge conforms with Islam (see for example Kasule, 2000).

⁴ See also the explanation offered by Azila Ahmad Sarkawi and Khairuddin Abdul Rashid, 2012a.

Architecture is a common term, especially to academics and practitioners of architecture. However, an attempt to define the term in the simplest possible manner became quite a task when several literatures that were reviewed imply a variety of meanings and definitions. Consider for example, architecture;

- "...the art or practice of designing and constructing buildings." (https://www.google.com/)
- "...is both the process and product of planning, designing, and construction, usually of buildings and other physical structures." (en.wikipedia.org/wiki/Architecture).
- "...is a passion, a vocation, a calling as well as a science and a business... a social art and also an artful science... Architecture provides a sense of place and support of all types of human activity. Architecture helps the man-made fit in harmony with the environment...that reflects and symbolizes culture and traditions." (Architecture Canada).
- "...the roles that architecture takes in our lives is...as a functional enclosure...as a symbolic enclosure (e.g. cultural, corporate, etc.)...as a financial investment...as a commodity (a marketable product)." (PAM, 2009, p13).

Consequently it was decided that the term architecture, for the purpose of this paper, to refer simply to works performed by an architect in designing and constructing buildings⁵.

Built environment, in its simplest form, may be referred to those lands and spaces originally belonging to the natural environment that through human intervention has turned such lands and spaces into areas of economic activities with buildings, infrastructures and the likes erected therein or thereon.

However, when Islamic architecture and the built environment are discussed, many will be confronted with a set of complex phrases: architecture, built environment, Islam. In addition, many have asked is there such a thing as Islamic architecture and the built environment? In the context of Islamic architecture Spahic Omer (2013) proposes that such concept and sensory reality do exist. He pointed out that practicing Islam would entail creation of a comprehensive culture and civilization that carries the imprints of Islamic values, teachings and principles. The creation of culture and civilization relate to the practice of architecture. When such architectural practices are imbued with Islam therefore such activities may be referred to as Islamic architecture.

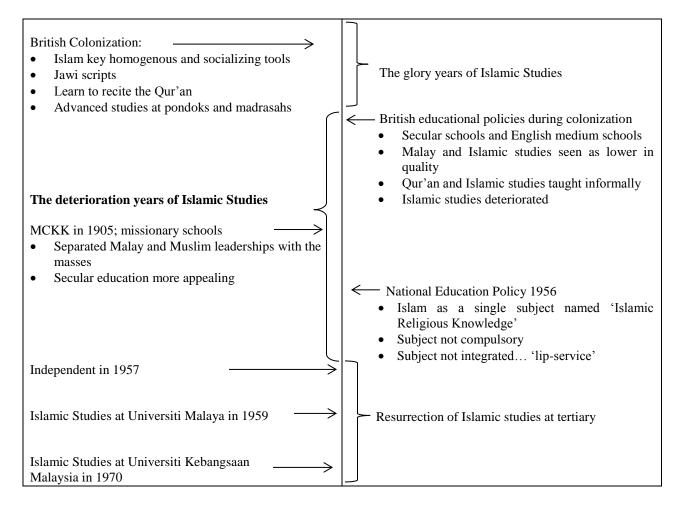
According to Bambang (2012) when one claims that there is an Islamic label on something it therefore implies there is the opposite label i.e. non-Islamic. But he pointed out that such concepts are not a simply dichotomy for there would always be the middle or in-betweens. In making reference to the Al Qur'an (Al Rahman, 26-27) – All that is on earth will perish. But will abide (forever) the face of thy Lord. Full of majesty, bounty and honour – Bambang concluded

⁵ The author does not intend to enter into a debate on the meaning of the term architecture. Such debate is best left to those specializing in architecture. The meaning used in this paper is simply to facilitate the ensuing discussions.

that "everything is included. It completes the scale bar, which started from there is no Islamic built environment and ended with every built environment is Islamic" thus implying that the concept Islamic architecture and the built environment does exist.

Broadly studies on Islam in modern Malaysia may be traced to the times when the then Malaya was colonized by the British. Islam was already the religion of the Malays and that Islam served as the key homogenous and socializing tools of the then Malay society (Shamsul A.B. and Azmi Aziz, 2011). Studies on Islam then were more concentrated on learning to recite the *Qur'an* either at home under the tutorship of parents or at *suraus* under the tutorship of *ustazs and ustazahs* drawn from within the local community. Advanced studies on Islam were conducted at *pondoks* and *madrasahs* wherein subjects including *fiqh*, *kalam*, *usul-addin*, *tafsir* and *hadith* were taught (Shamsul A.B. and Azmi Aziz, 2011).

The coming of the British colonial administration saw the decline of studies on Islam. The rate of decline was accelerated during the time when the British introduced secular-oriented educational policies that unfortunately negated the importance of Islamic education vis-à-vis English education. The decline was only brought to check when Malaysia gained independence in 1957 and subsequently, the 1990s saw its resurrection when tertiary educational establishments began to take interest and offered Islamic studies as among their curricula. Figure 1 illustrates the evolution of Islamic studies in modern Malaysia.



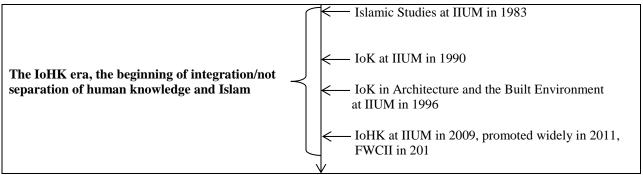


Figure 1 Evolution of Islamic Studies in Modern Malaysia (Source: Constructed with data from Shamsul A.B. & Azmi Aziz, 2011; Muhammad Nur Manuty, 2011; Khairuddin Abdul Rashid, 2003)

Referring to Figure 1 the first tertiary educational establishment that introduced Islamic Studies programmes was the University of Malaya in 1959. This was followed by Universiti Kebangsaan Malaysia in 1970 and later on by the International Islamic University Malaysia (IIUM) in 1983. Notwithstanding these significant developments in Islamic Studies in Malaysia and indeed the world over, Islamic studies then were mainly focused on the studies of Islam as a religion and civilization, the core subjects studied included Qur'an, Hadith, Sirah, shari'ah and akhlaq (Muhammad Nur Manuty, 2011, p138).

A new and significant development in Islamic Studies in Malaysia began in 1990 when IIUM introduced its new model of Islamic studies otherwise known as Islamization of Knowledge (IoK). Under the IoK model, revealed knowledge subjects such as the *Qur'an*, the *Sunnah* and *Sirah* become the guiding principle in the studies of human science subjects (Muhammad Nur Manuty, 2011, p139). According to Kasule (2000) IoK concerns reforming, correcting and re-orientating human knowledge so as to conform it to the basic tenets of *aqidat al-tauhid*. It is not about total reinvention of human knowledge but a reformative transformation of human knowledge so as to make it in line with Islam (Zehadul Karim, 2013),

The concept of IoK and its implementation at IIUM was further improved by the renowned scholar Professor M. Kamal Hassan of IIUM leading to the concept and effort relabeled as Islamicisation of Human Knowledge or IoHK⁶. The summit of its promotion was when IIUM organized the First World Congress on Integration and Islamicisation of Acquired Human Knowledge, 23rd to 25th August 2013 (FWCII 2013) in Kuala Lumpur.

However, the development of Islamic studies up to the mid-1990s were concentrated on the studies on religion, civilization and with attempts made to integrate Islam with the human science subjects. Little progress was observed in the studies concerning integrating Islam with the other subjects such as in technology⁷, medicine⁸ and architecture and the built environment.

⁶ For the definition of IoHK see page 1 of this paper. See also M. Kamal Hasan (2009).

⁷ On example of works on IoHK in technology see Aznan Shield Saidin et al. (2013).

⁸ On example of work on IoK in medicine see Kasule (2000).

In the context of architecture and the built environment, the almost total separation of Islam in the studies of these subjects was the norm until 1996 when IIUM established the Kulliyyah of Architecture and Environmental Design (KAED). The initial appreciation and integration of Islam in the studies of architecture and the built environment was started by KAED through its style of integrating Islamic world-view into teaching and learning and its incorporation of the *tawhidic* approach in its curricula (Khairuddin Abdul Rashid, 2003, p65).

The foregoing paragraphs provided context to the main thrust of this paper i.e. to report on a review on KAED's performance in the implementation of IoHK in architecture and the built environment. This paper is presented in five sections. Section 1, this section, provides context and definitions of the main terms used in the paper and Section 2 presents an overview on IoHK at KAED, the processes involved and strategies employed in the implementation of IoHK, the related issues and challenges. Section 3 reports a study on the performance by KAED in the implementation of IoHK in architecture and the built environment. Section 4 presents discussions of the findings from the study and ideas considered appropriate in effort to bring forward to the next level the implementation of IoHK at KAED. In addition, Section 4 also discusses some of the broader issues on Islamic architecture and the built environment. Finally Section 5 provides a conclusion to the paper and suggestions on what more are thought to be needed in terms of moving forward the implementation of IoHK in architecture and the built environment at KAED, to the rest of the Muslim World and beyond.

OVERVIEW OF IOHK AT KAED

Background of IIUM and KAED

IIUM was established in 1983 by the Government of Malaysia and co-sponsored by the Organization of the Islamic Conference (OIC) and other countries of the Muslim World. The University was established under the Malaysian Company Act and uses English and Arabic as the medium of instructions.

The first cohort of 153 students graduated from IIUM in 1987. To date IIUM has produced more than 60,785 graduates and postgraduates who are currently serving Malaysia, other countries of the Muslim World and beyond. As of 2013 IIUM's student population comprised some 18,825 undergraduate and postgraduate students coming from more than 125 countries. IIUM currently has 33 Kulliyyahs, Centers and Institutes offering undergraduate and graduate programmes in various fields of studies.

KAED was established in May 1996. Currently it comprises five departments and offers undergraduate and graduate programmes related to architecture and the built environment: Architecture, Urban and Regional Planning, Landscape Architecture, Quantity Surveying, Applied Arts and Design and Building Services Engineering. All programmes are accredited by the Malaysian Qualifying Agency (MQA), Ministry of Education, Public Services Department and by the respective professional boards and institutions. Tables 1, 2 and 3 provide brief information on the programmes, a summary on graduation requirements for undergraduate programmes and brief statistics on staff and student populations respectively.

KAED aspires to be a center of excellence for the built environment that promotes integration and IoHK for the benefit of the Ummah. This aspiration is stated in the Vision and Mission statements of the Kulliyyah (Table 4). In line with the said aspiration, the philosophy of the programmes at KAED is to produce graduates that are aware of the higher objectives in life, i.e. as Allah's Khalifah on Earth. The programmes at KAED focus on personal and professional skills development in the context of an Islamic approach.

Departments	Programmes & Duration (years)(R=research mode)			
Architecture	B.Sc. (Hons) in Architectural Studies (3)			
	B. (Hons) in Architecture (2)			
	M.Sc. in Building Services & Engineering (2)			
	Master in Built Environment $(2)(R)$			
	PhD in Built Environment $(3)(R)$			
Urban & Regional Planning	B. (Hons) in Urban & Regional Planning (4)			
	Master in Urban & Regional Planning (2)			
	Master in Urban Management (2)			
	Master in Built Environment (2) (R)			
	PhD in Built Environment (3) (R)			
Landscape Architecture	B. (Hons) in Landscape Architecture (4)			
	Master in Built Environment $(2)(R)$			
	PhD in Built Environment (3) (R)			
Quantity Surveying	B. (Hons) in Quantity Surveying (4)			
	Master in Business Administration Construction Business (2 ½)			
	Master in Asset & Facilities Management (2) (R)			
	Master in Built Environment (2) (R)			
	PhD in Built Environment (3) (R)			
Applied Arts & Design	B. (Hons) in Applied Arts & Design (4)			
	Master in Built Environment (2)			
	PhD in Built Environment (3) (R)			

Table 1 Departments and academic programmes at KAED, 2013

Programme	No of courses	Credit hour	Contact hour	Accreditation body
B.Sc. (Hons) Architectural	43	120	187	MQA, JPT, JPA, LAM
Studies				Part II
B. (Hons) Architecture	17	56	74	MQA, JPT, JPA, LAM
				Part II
B. (Hons) Urban & Regional	46	141	189	MQA, JPT, JPA, LPBM
Planning				
B. (Hons) Landscape	52	143	204	MQA, JPT, JPA, ILAM
Architecture				
B. (Hons) Quantity Surveying	55	140	185	MQA, JPT, JPA, LJUBM,
				RISM, RICS (UK)
B. (Hons) Applied Arts &	67	144	206	MQA, JPT, JPA
Design ⁹				

Table 2 No of courses, credit, contact hours and accreditation bodies for undergraduate programmes at KAED, 2013

⁹ The actual no of courses, credit hours and contact hours depend on majoring either in Interior Design, Industrial Design or Conservation.

Academic staff							
Position	Architecture	Urban & Regional Planning	Landscape Architecture	Quantity Surveying	Applied Arts & Design	Total	Non- Malaysia
Professor	1	3	1	1	1	7	1
Assoc. Professor	5	2	0	1	2	10	6
Asst. Professor	12	8	10	4	3	36	0
Fellow	0	0	0	2	2	4	0
Lecturer	4	5	4	8	8	29	0
Total	22	18	15	16	16	87	7
Students							
U/g	392	168	157	357	202	1276	42
P/g PhD = 42; Masters = 128 170					35		

Table 3 KAED academic staff and students' population, 2013

The Vision and Mission of KAED IIUM

Vision

To be a Centre of excellence for the built environment that promotes integration and Islamization of Knowledge for the benefit of the *Ummah*.

Mission

KAED is committed to serve the *Ummah* by producing ethical, competent and versatile graduates by applying the *Tawhidic* approach. This is to be achieved through the provision of breakthrough leadership, conducive working, learning and research environment by utilising the state of the art technology.

Table 4 Vision and Mission statements of KAED, IIUM

Some of the key features of the programmes at KAED are (Khairuddin Abdul Rashid, 2003);

- IIUM is a unique Islamic tertiary institution. Its curricula combine tradition with modernity, Islam with science and technology
- The curriculum for each programme requires that students learn the subjects related to the field of study and Islam together, i.e. Islam is being integrated into the teaching and
- learning of the subjects. This style differs from other tertiary institutions that offer programmes in architecture and the built environment since they typically adopted the traditional style of isolating Islamic studies away from other subjects.

On the basis of the above features therefore, the programmes in architecture and the built environment at KAED are considered unique. In fact, it would not be an over-statement to contend that KAED is the pioneer and the only tertiary institution in Malaysia and perhaps the world over that has been bold enough to attempt to formally integrate acquired human knowledge in architecture and the built environment and Islam via their IoHK approach. The next section of this paper discusses on the implementation of IoHK in KAED since its establishment in 1996.

IMPLEMENTATION OF IoHK AT KAED

Admittedly, the early years of integrating the subjects of architecture and the built environment and Islam were not easy. In addition, the effort was constrained by a variety of factors. It is a known fact that during the early days of the Kulliyyah the concept of IoHK was implemented by adopting a kind of *laissez-faire* approach i.e. leaving it to the lecturer concerned to do it in a style he or she deemed most appropriate. It is not uncommon, for example, for a lecturer to start a class with the recitation of the *al-fatihah* and/or a simple *du'a*, some briefly recite *ayahs* from the *Qur'an* and/or read the *Hadith* they considered appropriate while others might include discussions on *adab* in Islam and tried to the *ayahs* and *hadiths* gelled-in with the topics being discussed. Such activities were then considered implementing the IoHK.

Some of the key constraining factors identified in the process of implementing IoHK in KAED are;

- Staff themselves were not conversant with the concept of IoHK,
- A small number of staff including those hired on part-time basis are non-Muslims. While they might not be able to deal with the core issues in IoHK but having them around would enrich understanding the concept as seen from their religious backgrounds.
- Some staff are having difficulties to understanding the wider and deeper knowledge of Islam thus limiting their ability to integrate architecture and the built environment subjects and Islam,
- Some staff feels that the subjects in architecture and the built environment are universal and are already Islamic in nature and therefore there is no need for IoHK to be done.
- Among the reasons for the lack of expertise in IoHK among the staff include that most of the staff if not all, although highly trained in their respective professional fields, were not from the Islamic Studies background¹⁰ and some only became aware of the concept of IoHK at the point of recruitment,
- The absence of key literature discussing IoHK in general and IoHK in architecture and the built environment.
- The absence of a reliable framework on how IoHK is to be designed, implemented and its performance assessed. It appears that most of the strategies employed thus far were ad-hoc in nature¹¹, and
- Most of the students that were admitted into the *Kulliyyah*, although highly talented, were not from the Islamic religious school background and they have only the very basic knowledge on Islam, grossly insufficient to enable them to appreciate the concept of IoHK

 $^{^{\}rm 10}\,\mathrm{A}$ few of the staff (full-time and part-time) are non-Muslims.

¹¹ This statement is directed at KAED. Other kulliyyahs for example Medicine had, in 2000, initiated a 5 year programme of Islamic input into their medical curriculum (Kasule, 2000).

Acknowledging the presence of the constraints and their causes led the University and KAED to design and implement various strategies aimed at improving the implementation of IoHK at KAED. Some of the key strategies that were implemented by KAED since 1996 are;

- An academic staff is required to complete a one year Diploma in Islamic Revealed Knowledge (DiRK), the course being conducted on a part-time basis by the university's Kulliyyah of Islamic Revealed Knowledge and Human Sciences (KIRKHS). In the course, participants were exposed, among others, to the concept of IoHK, on Islam, Islamic ethics and Islamic Worldview.
- During the induction of new academic staff (*ta'aruf*), participants are briefed on the vision and mission of IIUM including understanding the concept of IoHK.
- IoHK forms part of the curriculum on the University's teaching methodology course for new lecturers.
- Experts on Islamic studies were seconded on a full-time basis to KAED to serve as a resource person for both staff and students and to assist in the implementing of IoHK at KAED¹².
- A coordinator on IoHK is appointed by the University to assist the Kulliyyah in planning and implementing IoHK programmes at KAED, such programmes include *usrah* sessions, recitation of the *Qur'an*, lectures and seminars by invited speakers, etc.
- Staff is also required to attend the University's annual Islamic Evaluation and Enhancement Programme (IEEP)¹³ whereby IoHK as well as other aspects about Islam and architecture and the built environment form part of the curriculum.
- Academic departments offering programmes of studies were required, initially, to incorporate IoHK in teaching and learning, and later on new courses with clear IoHK components were required to be designed, developed and offered to students.
- Writing and publishing textbooks on IoHK in architecture and the built environment¹⁴
- In effort to enhance understanding of IoHK among students, the University made several courses on Islam and its application in architecture and the built environment mandatory as requirement for graduation. In addition, students were required to conduct group discussions and to attend *ibadah* camps organized by their respective halls of residence. Table 5 provides a list of the said courses. Figure 2 illustrates the key strategies adopted by KAED, since 1996, in enhancing the implementation of IoHK.
- Organizing of talks, seminars and international conferences on Islamic architecture and the built environment¹⁵ and the publication of the Journal of Architecture and the Built Environment (JAPCM) having IoHK as among its core area of interest¹⁶.

¹⁴ This represents the latest on the effort to enhance IoHK at KAED. The initiative at the Kulliyyah level was started in 2011 and at the University level in 2013.

¹² This initiative led to the secondment of Assoc. Prof. Dr. Spahic Omer of KIRKHS to KAED.

 $^{^{\}rm 13}$ In 2013 IEEP has been remodeled and re-named as Ibadah Camp

¹⁵ Such conferences include the organizing of the 1st International Conference on Islamic Built Environment, KAED and UNISBA, Bandung, 28th-29th March 2012 and the current ICABE 2013, Kuala Lumpur, 7th-8th November 2013.

 $^{^{16}}$ JAPCM is published by KAED, IIUM. The bi-annual journal started its publication in 2011.

Course	Credit hours	Contact hours
Tilawah Ai-Qur'an 1	0	1
Tilawah Al-Qur'an 2	0	1
Qur'anic language and Communication skills	0	16
Islamic Aqidah	3	3
Islamic Ethics	3	3
Survey of Islamic History and Civilization or Creative thinking and problem solving	3	3
Islamic Worldview	3	3

Table 5 University courses related to Islam as requirement for graduation

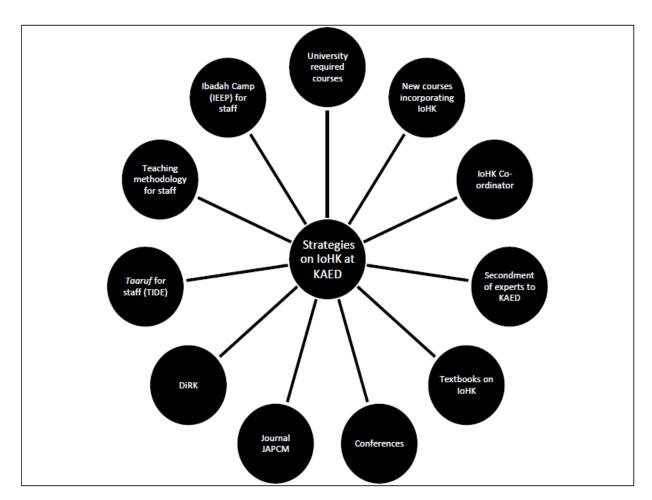


Figure 2 The 11 strategies on IoHK at KAED

Despite of the constraints identified hereinbefore, the almost 17 years of consistent and persistent efforts to enrich the staff and students with a wider and deeper understanding of Islam via the IoHK approach, the effort began to show signs of success. Indicators of success in the Kulliyyah were observed to be present in teaching and learning, in research and in publications by both staff

and students. The next section of the paper discusses KAED's performance in the implementation of IoHK in architecture and the built environment.

KAED'S PERFORMANCE IN THE IMPLEMENTATION OF IOHK

Thus far there has been no record found on attempt made by KAED and IIUM at conducting formal empirical studies to assess the performance of IoHK in KAED except for a survey carried out by Azila Ahmad Sarkawi and Khairuddin (2012a, 2012b) in 2011. The survey, conducted among KAED academic staff, aimed to gauge the extent and types of Islamic inputs i.e. intellectual effort or academic works brought into courses offered by KAED during the academic year of 2010/2011. As for the former aim, the researchers found out that some Islamic inputs in courses at KAED were detected; the extent of the inputs per course detected varies from a minimum of 13% to a maximum of 71%. As for the latter aim, they identified the top five intellectual effort or academic works performed by academic staff towards the realization of IoHK in KAED are 'accepting, acknowledging, affirming, and adopting whatever is regarded as excellent, good and wise from the Islamic perspectives'; 'inviting to, promoting and supporting all that which is good from Islamic worldview found in contemporary knowledge'; 'enjoining or leading to all that is considered ma'aruf and useful in contemporary human knowledge by showing their Islamicity'; 'refuting, rejecting, prohibiting, discouraging, objecting, repelling all that which is munkar, haram, false, untrue and evil'; and 'synthesizing the positive and acceptable aspects of non-Islamic sources of knowledge or science with the Islamic perspectives'. However, the findings could not be defended by the researchers due to insufficiency of data i.e. only data for 27 courses, out of 165 courses offered by KAED for the academic year 2010/11, was obtained by the researchers; the 16% rate of response is considered very low for this kind of study).

Consequently, and in effort to further assess the performance i.e. in terms of extent and types of inputs into IoHK at KAED a study was carried out in August 2013 by the author of this paper. The study focuses on the identification and quantification of IoHK efforts in KAED in the key areas of courses offered, works by students, research and publications by academic staff since the establishment of KAED in 1996. The study began with the design of a methodology that would facilitate collections and analysis of data. Thus, a simplified form that requires all Heads of Department (HoDs) in KAED to provide quantitative data relating to undergraduate programmes and staff outputs of their respective departments was developed and distributed. The data required to be provided by the HoDs include: number of courses incorporating full IoHK offered to students, students' project paper addressing IoHK at final year, paper by staff addressing IoHK, book and books' chapters written by staff addressing IoHK; number and amount of research grants in IoHK secured by staff since their department was established and number of staff with masters and/or PhDs in IoHK in architecture and the built environment. All five Heads of department in KAED provided data for the study. The data obtained was filtered and areas of concerns were verified with available records. Subsequently, the cleaned data, as presented in Table 6, was analyzed and the outcome is presented in Table 7.

Admittedly, there were several shortcomings in the study. The shortcomings include that the study excluded assessing quality of the IoHK effort made (only quantities), the focus is on undergraduate programmes and academic staff achievements, the HoDs are the principal data providers for the

study and they were given about a month to furnish the required data The overall results suggest that since its establishment in 1996 KAED has been making effort to implement IoHK in teaching and learning and in research and publication in architecture and the built environment programmes it conducts. The results also suggest that progress has been made (Table 6 and 7). A summary of the results are as follow:

- 6.71% of total courses incorporate in full the concept of IoHK;
- 1.65% of all final year project papers incorporated or used IoHK as their main theme or topic for the research;
- 1.5 papers on IoHK/per staff over the period between 1996-2013;
- 0.9 books on IoHK/per staff was published, ditto;
- RM344/per staff was achieved in terms of research grants on IoHK, ditto; and
- 10 academic staff (11.50%) has acquired their masters and PhD focusing on IoHK in architecture and the built environment.

Programme	Architecture	Urban &	Landscape	Quantity	Applied Arts	Total (up to
(u/g)/Dept.		Regional Planning	Architecture	Surveying	& Design ¹⁷	2013)
Year started	1996	1996	1996	2000	2004	
Course incorporating IoHK (No/year) ¹⁸	1/ 2003 to-date	1/1998 2/2002,03 3/2004 to-date	1/1999 to- date	3/2000 7/2001,02 10/2003 to-date	4/2004 to- date	
Total	1	3	1	10	4	19
Students' project paper addressing IoHK at final year (No/year) ¹⁹	0	1/2003 1/2005,06 6/2007 2/2008 3/2011 2/2012	1/2001 2/2002 1/2006 1/2007	2/2011 4/2012 6/2013	5/2012	4/2013
Total	0	16	5	12	9	42
Paper by staff addressing IoHK (No/year published) ²⁰	2/2007 3/2009 1/2011	1/2000,01, 02,03 2/2004,05, 06,07 4/2008 3/2009 4/2010 3/2011 5/2012 3/2013	2/1996 1/1997 1/2003,04 2/2005 1/2008 4/2009 1/2010 8/2011 1/2012	1/2005 3/2007 4/2004 6/2009 2/2010 1/2013	1/1998 5/2001 2/2002 5/2005 4/2004 7/2005 1/2006 5/2007 1/2008 4/2009 8/2010 7/2011 4/2012 2/2013	
Total	6	34	22	17	57	136

¹⁷ Works done in earlier years by staff that was then attached to other departments.

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¹⁸ Examples: History of Islamic Arts, Qur'an, Sunnah and the Built Environment, Principles of Islam in Construction Procurement, Islamic Garden, Islamic Planning Principles.

¹⁹ Examples: Shar'iah Compliant Bond (Kafalah) in Construction, Islamic 'Adab' in space planning.

²⁰ Papers include publication in journals & conferences.

Book by staff	1/2004	13/2009	3/2007	1/2009	1/2002	
addressing	1/2006	6/2011	5/2011	5/2011	3/2005	
IoHK (No/year	13/2011	11/2012	1/2012	2/2012	1/2007	
published) ²¹					3/2009	
					2/2010	
					8/2011	
					1/2012	
Total	15	30	9	8	19	81
Research grant	0	1/2004/	0	1/2007	0	
by staff on		RM15,000		RM10,000		
IoHK		1/2010/		1/2009/ n.a		
(No/year/RM)		RM5,000				
Total	0	2/RM20,000	0	2/RM10,000	0	4/RM30,000
Staff with		2/2011		1/2010		
Masters & PhD		3/2012				
in IoHK		4/2013				
Total	0	9	0	1	0	10

Table 6 Achievement in the implementation of IoHK in teaching and learning, publication and research at KAED, 1996-2013

Programme (U/g)/Dept.	Total outputs (up to 2013) ²² in No	Total no of courses/ students/ staff in KAED	Achievement 1996-2013
Course in IoHK	19	28023 ²³	6.71%
Students' project paper addressing IoHK at final year	42	2,54424 ²⁴	1.65%
Paper by staff addressing IoHK	136	87	1.5/staff
Book by staff addressing IoHK	81	87	0.9/staff
Research grant by staff on IoHK	4/RM30,000	87	RM344/staff
Staff with masters and PhD in IoHK in architecture and the built environment	10	87	11.50%

Table 7 IoHK Achievement in teaching and learning, publication and research at KAED 1996-2013

DISCUSSIONS

KAED was established to produce trained professionals in architecture and the built environment. One most important feature of all programmes at KAED is the incorporation of IoHK in all of its courses principally via the $tawhidic^{25}$ approach in teaching and learning and in research and publication. The basis for the tawhidic approach is;

²¹ Books include books and book chapters..

²² Figures taken from Table 6.

²³ Total no of undergraduate courses at KAED

²⁴ Total no of graduates (assuming 212 graduated/year for the last 12 years).

²⁵ Tawhid - asserting the oneness of God, Allah s.w.t.

I have only created jinns and men, that they may serve Me (Al Dhariyat, 56, Abdullah Yusuf Ali, 1996).

Informal feedbacks from employers and others having the experiences in working or associating themselves with KAED alumni, both in Malaysia and elsewhere, acknowledged that graduates from KAED possess the characters, knowledge and skills expected of them (within the context of IIUM) and these plus the imbued Islamic ethics and values systems place themselves well above their peers.

Referring to the results from the current study, overall the results show that KAED has been making effort to implement IoHK in teaching and learning and in research and publication in architecture and the built environment programmes and courses it conducts. The results also suggest that progress, up to a certain level, has been made. The findings are consistent with the findings from the studies conducted by Azila Ahmad Sarkawi and Khairuddin (2012a, 2012b).

Further analysis of the results, in terms of the start date of the IoHK initiatives at KAED, suggest that although the kulliyyah was established in 1996 the first course incorporating IoHK was only offered in 1998 by the Department of Urban and Regional Planning, i.e. some 3 years later while academic staff started publishing works incorporating IoHK as early as 1996 itself, the effort was pioneered by a staff in the Department of Landscape Architecture²⁶. Staff began securing grants for research in IoHK in architecture and the built environment in 2004 but the level of achievement, with only 4 grants and at a total of RM30,000 for the duration between 1996 and 2013, is considered a dismal²⁷. As of October 2013 a total of 10 academics have received their masters and/or PhDs qualification in IoHK related to architecture and the built environment, an overwhelming majority (9 out of 10) are from the department of urban and regional planning. In terms of students' works the earliest works incorporating IoHK were those project papers completed in 2001 i.e. when the earliest cohorts of students graduated²⁸.

In terms of departmental achievements (Table 6, Figures 3-7), the department of quantity surveying seems to be leading the kulliyyyah in developing and delivering courses that incorporate IoHK in its programme in quantity surveying. In addition, the departments of urban and regional planning and quantity surveying are making impact among their students whereby their undergraduates seemed to be leading the other departments in writing their final year project papers on topics related to IoHK. Furthermore, staff from the department of applied arts and design seemed to be most active in terms of publishing works related to IoHK while the department of urban and regional planning has the most number of academic staff trained in IoHK related to their areas of specialization. Unfortunately, the department of architecture, the pillar of the kulliyyah with the most number of students and academic staff, appears to be lagging behind the other departments in all the indicators as discussed above.

The task to establish KAED was given to Professor Dr Ismawi Haji Zen. He is also a lecturer in the Department of Landscape Architecture.

²⁷ Such an achievement is considered a dismal because in comparison for example between January and September 2013 KAED staff secured a total of RM1.57million in international and national funded research grants and awards or about RM18,000/per staff..

²⁸ The subject matter here is those undergraduate final year project paper and design theses. It excludes those heritage studio projects conducted by B.Sc. Architectural Studies. The heritage studio projects generally focuses on Islamic heritage buildings both in Malaysia and elsewhere.

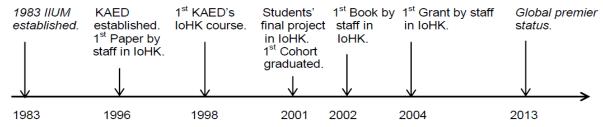
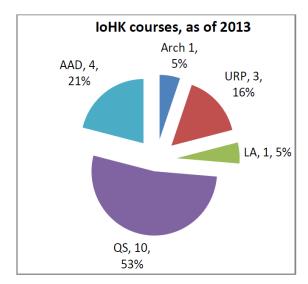


Figure 3 Timeline on the evolution of IoHK in KAED, 1996 – 2013



Students' final projects with IoHK

Arch
0%

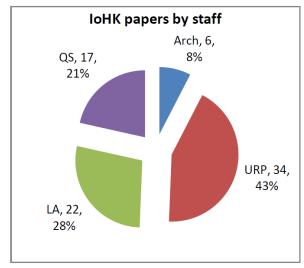
AAD, 9,
21%

URP, 16,
38%

URP, 16,
38%

Figure 4 – IoHK courses at KAED, 2013

Figure 5 – Students final projects, 1996-2013



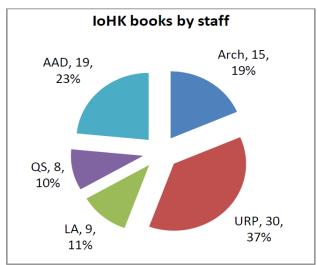


Figure 6 – IoHK papers by staff, 1996-2013

Figure 7 – IoHK books by staff 1996-2013

In examining data on the achievements of academic staff since IoHK was implemented at KAED it is considered apt to mention the works of several personalities that have been instrumental and making impacts at national and international levels in so far as IoHK in architecture and the built

environments is concerned²⁹. Some of the more prominent personalities and their works include Ismawi Haji Zen and his studies on the tawhidic approach in architecture and the built environment³⁰, Spahic Omer on Islamic architecture and the built environment³¹ and Khairuddin Abdul Rashid that pioneered the concept and application of shari'ah compliant in construction procurement³². It is through the works of these personalities and others that has fueled interests among colleagues and students at KAED and elsewhere to study architecture and the built environment and Islam in greater details, with emphasis on Islam as seen, understood and practiced by the Muslims themselves as opposed to those earlier works by the yet to be Muslims or Western authors and commentators.

Bringing the subject of Islamic architecture and the built environment beyond KAED one would have noticed the serious deficiency in published works and the misinterpretation of the concept Islamic architecture and built environment both in terms of the theories and practices including those proposed by Muslim scholars themselves. In addition, it is often the case that when authors and commentators talk about Islamic architecture and the built environment they would tend to focus more on forms and shapes and on middle-eastern and Islamic Europe in heritage and historical contexts. They however appear to focus less or some even ignore the importance of purposes, roles and functions, local geographical and historical contexts, use of the buildings and infrastructures and future prospects and challenges facing Islamic architecture and the built environment and the Muslim *Ummah* (Khairuddin, 2013) as a whole. Such negative understanding and practices would only give Islam a bad name hence the need for IoHK in architecture and the built environment becomes urgent and mandatory. Indeed Allah s.w.t. creates mankind in different genders (males and females), in different nations, races and tribes so that people should get to know, learn and benefit from each other, thus;

O mankind. We created you from a single (pair) of male and female, and made you into nations and tribes, that ye may know each other (not that ye may despise each other). Verily the most honored of you in the sight of Allah is (he who is) the most righteous of you. And Allah has full knowledge and is well-acquainted (with all things) (Al Hujurat, 13; Abdullah Yusuf Ali, 1996).

According to Spahic Omer (2011) Islamic architecture is an architecture that embodies the message of Islam, it should serve to both facilitate the Muslims' realization of the Islamic purpose and its divine principles on earth and promotes a lifestyle generated by such philosophy and principles.

Obsession in focusing on rhetorical aspects as representation of Islamic architecture has led to some authors and commentators committing serious mistakes in labeling 'Islamic' to buildings that were actually 'non-Islamic' in character, style and use and worse still putting Islamic architecture to retreat in antiquity (Md Mizanur Rashid and Asiah Abdul Rahim, 2011). Thus,

²⁹ Their achievements are based on publications and supervision of undergraduate and graduate students in studies related to IoHK in architecture and the built environment.

³⁰ His works include Ismawi Haji Zen (2004). Challenges of Globalization in Managing Sustainable Development: An Islamic Response, in Khairuddin and Abdul Azeez, Editor (2004). Sustainable Built Environment through Management and Technology.

³¹ His works include Spahic Omer (2013). Studies in the Islamic Built Environment.

³² His works include Khairuddin Abdul Rashid (2009). Shari'ah Complaint Contract: A New Paradigm in Multi-national Joint Venture for Construction Works, in Kobayashi, Khairuddin, Ofori and Ogunlana (2009). Joint Ventures in Construction. He initiated studies on the concept of shari'ah compliant contracts, takaful, tahkim, leadership, etc. in the procurement of construction works.

Which then is best? He that layeth his foundation on piety to Allah and His good pleasures? Or he that layeth his foundation on an undermined sand cliff ready to crumble to pieces? And it doth crumble to pieces with him into the fire of hell. And Allah guideth not people that do wrong (Al Tawbah, 109; Abdullah Yusuf Ali, 1996).

However, it has to be acknowledged that Islam does not ignore beauty. Therefore, shapes and forms for a building are not to be ignored but according to Spahic Omer (2011) their presence should be focused towards enhancing and supplementing functions of the building. Thus,

It is Allah who made your habitations. Homes of rest and quiet for you; and made for you, out of the skins of animal, (tents for) dwellings, which ye find so light (and handy) when ye travel and when ye stop (in your travels). And out of wools and their soft fibres (between wool and hair) and their hair, rich stuff and articles of convenience (to serve you) for a time. (Al Nahl, 80, Abdullah Yusuf Ali, 1996).

It is Allah Who has made for you the earth as a resting place, and the sky as a canopy, and has given you shape and made your shapes beautiful, and has provided for you sustenance of things pure and good. Such is Allah your Lord. So Glory to Allah, the Lord of the worlds. (Al Ghafir, 64, Abdullah Yusuf Ali, 1996).

Consequently, there should be concrete effort to revisit current definitions and thereafter define and re-define what Islamic architecture and the built environment is. Such endeavor should start by looking at Islam as *ad-deen* and what the concept of Islamic built environments is all about. 33,34 Thereafter, the study should examine what was done and how was it done/took place during the making of the first Islamic built environment settlement; i.e. the transformation of *Yathrib* from a rudimentary settlement to *Madinah* as the then first and most sophisticatedly planned and developed built environment (Khairuddin, 2012). Moving on the study should then look at the theories, techniques and technologies used in the planning and realization of other settlements and the architecture therein that were developed during Prophet Muhammad s.a.w's time and those during the times of the *khalifahs* and beyond including the great Islamic cities of Baghdad, Cordoba and Granada. In the context of Islamic architecture and the built environment in the Far-East including Malaysia, the study should be extended to cover the great settlements along the route that Islam came to the then Malaya i.e. from the Middle-East to the Malay *archipelago* and beyond.

In addition, detailed observations should be made on how buildings and infrastructures were initiated, designed, funded, constructed, completed, occupied, used and maintained i.e. not just on the shapes and forms, as often the case when studies on Islamic architecture and the built environment were carried out. The observation should be done in totality, the entire supply chain of the building process of both the Islamic and the non-Islamic built environment.

³³ See Bambang Pranggono (2012) works on "Towards a Broader Meaning of Islamic Built Environment."

³⁴ See the characteristics of Islamic architecture by the BBC (2013).

Furthermore, the study should also consider current and future challenges facing the *Ummah*, such challenges include but not limited to issues on constraints in procurement and funding, on sustainability, the use of modern technology, the changing lifestyles of the Muslim themselves (some Muslim countries are moving upwards from the underdeveloped to developing and developed nation status while others the reverse), the threat arising from scarcity in resources including lands as spaces for buildings, water and fossil fuel, terrorism, Islamic phobia, and a host of other territorial, cultural and geographical threats that might appear in the future.

While we are to study and remember heritage and history, it is the lessons' learned therefrom that should be the focus and to apply such lessons into current and future developments so as to move the Muslim *Ummah* forward. Muslims must resist the temptations of continuing to reminiscence the old times when Islam and the Muslim *Ummah* once ruled almost half of the World, when Islamic architectural and cultural heritage was at its best. Efforts, in this context, through studying and proposing newer theories and hypotheses on Islamic architecture and the built environment should begin in earnest.

In the context of IoHK in KAED, given that the performance thus far appears to be rather mediocre concrete measures are required. Topping the list of the measures should include the kulliyyah having to carry out a detailed study, the key objective being to know why, after some 17 years, the implementation of IoHK at KAED remained mediocre. The study should also include how IoHK could be better implemented and the techniques to be employed and to develop indicators to measure performance and the required roadmap and resources. Among the perceived failures of the current style of implementation is the rather laissez-faire approach in its implementation, the absence of an appropriate roadmap and performance indicators to assess achievement and its impact to staff, students and other stakeholders alike.

On a global scale KAED should consider initiating an organ and to work with partner universities from the Muslim World and beyond to acquire, store and share information, knowledge and skills in IoHK in architecture and the built environment. Such an effort, if supported by the powers that be from within and outside Malaysia should be extended to include but not limited to the following initiatives;

- Establishing a global standard on IoHK in architecture and the built environment for the Muslim World and beyond;
- Establishing a set of guidelines for the Muslim World on initiating, planning, funding, design, procurement, construction, completion, occupation and maintenance of the built environment's buildings, facilities and settlements that meets the requirement of the *Shari'ah*; and
- Establishment of a global standard for the identification, recording, drawing/modeling, cataloging, archiving and publishing materials on buildings and structures having Islamic architectural and cultural heritage in values and characters. This initiative should include establishing a set of guidelines on the restoration and/or refurbishment of such buildings and structures. Perhaps this idea is best realized through the setting up of a Global Center for Islamic Architectural and Cultural Heritage for the Muslim World.³⁵

³⁵ It is noted that no such center currently exists. If formed, the center should become a reference point and the countries of the Muslim World and beyond to deal with matters related to Islamic Architectural and Cultural Heritage and it should also compliment the UNESCO's World Heritage initiatives.

In all of the above initiatives, key institutions representing the Islamic World such as the OIC and the Islamic Development Bank (IDB) should be seen as potential collaborators with the hope that their involvement would enable the initiatives to be better coordinated, recognized and to provide the much needed funds for the works to be carried out.

CONCLUSION

The Kulliyyah of Architecture and Environmental Design IIUM was established in 1996. One of its key objectives is to implement the concept of IoHK into its architecture and the built environment programmes. As of 2013 the performance by KAED, in terms of effort in implementing IoHK has been obvious. It has to be acknowledged that much has been done in the key areas of teaching and learning and in research and publication. However, the level of achievement, vis-à-vis over the 17 year period of its establishment, is considered mediocre. Consequently, more is needed to be done and it is strongly recommended that any effort towards that direction must be guided with facts. Thus, topping the list of efforts to improve the performance of IoHK at KAED include firstly to carry out a detailed study to seek answers as to the whys and the hows and subsequent to that the need to establish appropriate key performance indicators, roadmap and the required resources. In addition, the effort must be supported in full by all and that its impact to staff, students and other stakeholders alike needed to be examined and quantified.

On the global front, and taking advantage of the presence of international delegates attending ICABE 2013, it is considered opportune to bring to the delegates' attention on the absence of formal and properly coordinated IoHK and other initiatives related to Islamic architectural and cultural heritage across the Muslim World and beyond. This obvious gap in knowledge therefore requires urgent attention. The following are the author's recommendations:

- Establishment of a global standard on IoHK in architecture and the built environment for the Muslim World and beyond;
- Establishment of a set of guidelines for the Muslim World on initiating, planning, funding, design, procurement, construction, completion, occupation and maintenance of the built environment's buildings, facilities and settlements that meets the requirement of the *Shari'ah*; and
- Establishment of a global standard for the identification, recording, drawing/modeling, cataloging, archiving and publishing materials on buildings and structures having Islamic architectural and cultural heritage in values and characters. This initiative should include establishing a set of guidelines on the restoration and/or refurbishment of such buildings and structures.
- Perhaps the ideas mentioned herein are best realized through the setting up of a Global Center for Islamic Architectural and Cultural Heritage for the Muslim World³⁶

³⁶ It is noted that no such center currently exists. If formed, the center should become a reference point and the countries of the Muslim World and beyond to deal with matters related to Islamic Architectural and Cultural Heritage and it should also compliment the UNESCO's World Heritage initiatives.

The author feels that in all of the above initiatives, key institutions representing the Islamic World such as the OIC and the Islamic Development Bank (IDB) should be engaged as collaborators. It is believed that their involvement would enable the initiatives to be better coordinated, recognized and above all to provide the much needed funds for the works to be carried out.

The need for the above global initiatives is considered urgent given that of late due to a variety of reasons such as misfortunes besieging nations of the Muslim World including war and natural disasters as well as due to ignorance and pressing demands for more lands and spaces for development thus, today's key Islamic architectural and cultural heritage might no longer be there tomorrow!

Finally, given KAED's 17 year experience in IoHK in architecture and the built environment, it is considered apt for KAED and IIUM to play the leading role. The ongoing ICABE 2013 is the best platform for these initiatives to be deliberated and a firm resolution on the best way forward is collectively decided.

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