The Journey of *Murabbis* in Architecture Pedagogy: the Case of Studio Teaching as Laboratory of Passion and Duty to Future *Khalifas* of the Built Environment

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Abstract: *Murrabi* in the context of architecture pedagogy is a "teacher" with conscience and responsibility towards the Creator Almighty Allah, Mankind and Environment. The task is to produce graduates as architects and architecture related *khalifahs* or stewards to enhance the built environment in God envisioned or *tawhidic* way. Design as the core course for architecture and studio as the laboratory or the *madrasah* for future architects in the making, making mistakes is part of the healthy learning process. Matrix of questions arises on how to educate the quantity of students from various background and mix, to qualify as the *khalifah* as he/she sets out upon graduation. How do we, teachers, the architecture *murabbis,* ensure and sustain the methodology of teaching to keep abreast with the expectations of the future *khalifah*'s amidst ever changing and demanding environment, technology and culture. This paper intends to share aspects of studio teaching methodology, the pioneering teachers of IIUM, as self-acclaimed *murabbis,* applied in the studio teaching and learning process within the span of 16 years. Qualitative and quantitative methodologies were applied for this study. Through literature review, observations, interviews, hands-on experience and constant feedbacks from industry, as an on-going research for constant improvement, this continuous research for "appropriate" studio teaching of the time and place would be displayed for discussion. Research findings confirm, as humans, we are fallible beings. However, the effort made with passion and sincerity throughout the 16 years had borne fruits that ignite the industry thus provides the "nor" as an incentive that motivates the architecture *murabbis* the zest and continuity in innovative studio teaching and learning.

Key words: Architecture · Studio teaching · *Murabbi* · *Khalifah*

INTRODUCTION

The difference in the management of architectural programme from one school to another in their approaches and niches. This paper's objective is to share the pioneering experiences of Department of Architecture (DoA), Kulliyyah of Architecture and Environmental design (KAED) in the International Islamic University Malaysia (IIUM) as an Islamic university. The paper intend to inform how the department pursue to make the programme of architecture not only "Islamic" as per the vision and mission of the university, but the students, who, upon graduation, be a "staunch Muslim" (for Muslims) or strong moral ethics (for non-Muslims) in their job and their daily lives –as *a khalifah*. IIUM, as a "special" university, is one of the universities that had its own foundation programme. The intake of architecture students from initial 14-24 students grew over the years to over 100 students per academic session. Management of the programme to ascertain quality input to individual student, as would be *khalifahs*, in quantity, is the issue.

The education of an architect involved matrix of courses that support the whole programme. For the purpose of this paper, the management and running of the studio design course, was chosen. The paper explained the background of the university's mission and vision, the definition of *murabbi* and *khalifah* in the context of the architectural programme, the study's methodology and limitation, before describing the historical facts and experiences that encapsulate studio teaching varied approaches taken place in the last 16 years and its outcome.

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The research methodology adopted for the study is both qualitative and quantitative with studio teaching for architecture programme, as the case study. Qualitative mode encompassthe followings:

- Data gained from primary sources based on the various authors' personal experiences in studio teaching throughout the 16 years of IIUM's Architecture School existence;
- The unstructured interviews with the past and former students through face to face and emails;
- As well as random feedback from part time lecturers which the department had employed throughout the years.

Secondary sourceswere from the following sources:

- The content analysis of relevant literature for background framework of this study; unpublished portfolio review reports on IIUM performances; and
- The Board of Architect's Malaysia or Lembaga Arkitek Malaysia (LAM)'s accreditation reports on IIUM.

The quantitative research method appliedas the triangulation technique, confirm or inform some of the findings taken as bases in the discussions. This include confirming findings from the questionnaire survey to current and former students as feedback to their opinion on the various studio modes they had experienced.

Thispaper introduced the architecture programme of International Islamic University Malaysia (IIUM) to the fore through discussion onto the background information of IIUM so as to provide the framework of the programme based on the vision and mission of the university. The background provide the quality and expectation of the programme as an Islamic university; thepioneering academic staff characteristic as a murabbi and studio teaching approaches; the quality of its pioneering students and their descendants; as the case study. The paper concluded with a discussion of the outcome and the follow up actions in the constant process of improvement. For the purpose of clarity on the development of studio teaching in IIUM, the case study wasclassified into the following periods:

- Pioneering Years from 1998-2004,
- The Formative Years from 2004-2008 and
- The Innovative Years from 2008 to date.

Limitations includes unrecorded data of over 16 years; inability to retrieve the poignant memory of the respective authors' and students' work; inability to retrieve past project briefs; design studio material; as well as permissible information from portfolio reviewers and accreditation panels on the studio output, for sharing.

The significant knowledge and experiences shared by this paper is the value added passion and submission attitude expected of the academic staff in IIUM with a responsibility of a *murabbi*and a trust-*amanah,* in delivering architectural education relentlessly. *A murabbi's* responsibility goesbeyond the boundary of general architectural education. Academic staff of IIUM, as a *murabbi,* dutifully and morally, to be able counsel and shape each student's mind and actions to be competent in his/her art, ethical and God fearing in his/her lifestyle and actions as *khalifah- a vicegerent of the Creator.* Innovations in studio teaching from the traditional and conventional to approaches that will add value through human touches, willgive meaningtothe students on his/her projectsas the basis of his/her designs. Although the effectiveness of the approache swere somewhat immeasurable, the school'stask to continually measures outcome qualitatively i.e.through individual student'screativity, ethics and caring decision making, as they grew in the system as well as after they have graduated into the industry, would truly provide succinct qualities ofthe *khalifahs*.

Background

IIUM Architecture Programme: The programme of architecture, as part of IIUMacademic programme, movedwith the mission and vision forIntegration, Islamisation, Internationalisation and Comprehensive Excellence (IIICE)[1]. The programme, through the Kulliyyah of Architecture and Environmental Design (KAED) have the mission to transform students from all schools, including religious schools such as *tahfizs,*into technocrats with *iman (faith), ilmu (knowledge), amal (practice), akhlaq (good character)* and *ihsan (courteous)* in their daily and professional lives. In tangent with the general learning processesin architecture, the course outlineswere in tegrated with Islamic world view along side the general and main stream worldview i.e. western worldview, as comparison, reorientation, discouragement, synthesise, reconstruct, improvement, new construct, new invention, *haram(prohibited), halal(permissible)* or *nasihah (advise)*modus operandi. Inteaching and learning

architecture and the built environment, the IIUM school of architecture established in 1996, had set its direction and output in two folds i.e.:

To be an accredited professional programme for architecture and

To produce *graduates that will champion and advocate the green, sustainable and correcting the "balance" agenda as a khalifah*in accordance to the *tawhidic* paradigm[2], for Mankind.

The IIUM Teachers-Murabbi: IIUM teacherswere generally appointed based upon their written statementin the application form as to'why, what as well as how'he/she could contribute to the *ummah* and humanity in his/her respective field, apart from his/her respective academic qualifications. The applicantswere interviewed the top management of the university. Upon offer, new teachersare given the job's terms of reference (TOR) which stated the role of staff as a *"murabbi"* beyond delivery of knowledge, skills and competency.

In the pioneering years of the architecture programme, all teachers with secular education were required to attend the Diploma of Islamic Revealed Knowledge (DIRK) classes to equip him/herself with appropriate knowledge; and vice versa to attend the

Diploma in Human Sciences (DHS) classes for those with Islamic religious educational background. Teachersneed to attend basic teaching methodology course (BTMC); the university's induction course or *Ta'aruf, for orientation*and Intellectual Discourse (TIDE). These courses were part of equipping teaching staff with the basic teaching techniques in line with the vision and mission of the university, vis-a-vis the*ummah*, as the bigger objective. Staffs were inspired and motivated but apprehensive on the adequacy to carry the task as the *'murabbi'*. The question arises whether we, as the staff, can undertake the tasks? Are we equipped to carry the tasks when we are still learningto be both the *murabbi,* personally and acquire teaching skills with Islamic worldview ourselves? The truth is, learning never actually stops. The form of learning andmethod of deliverydiffer through time, place, context or viewpoints. The mission of the university is the*amanah* (trustworthy)for which the staffs are entrusted with. The tasks need to start immediately and in whatever capacity one is endowed with.

It is with that vision and mission, as well as the will to submit to the all mighty our contribution, the pioneers of the IIUM's school of architecture, with known limitations and resources of academic staff from secular education background, developed the programme and manage the school till today.

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[1]Towards actualising the University's vision, IIUM endeavours to:

- Undertake the special and greatly needed task of reforming the contemporary Muslim mentality and integrating Islamic Revealed Knowledge and Human Sciences in a positive manner.
- Produce better quality intellectuals, professionals and scholars by integrating the qualities of faith (iman), knowledge (`ilm), and good character (akhlaq) to serve as agents of comprehensive and balanced progress as well as sustainable development in Malaysia and in the Muslim world.
- Foster the Islamization of the ethics of Muslim academic and administrative staff of IIUM, and certain aspects of human knowledge- particularly in the social sciences and humanities- with the view to making them more useful and more relevant to the Muslim Ummah.
- Nurture the quality of holistic excellence which is imbued with Islamic moral-spiritual values in the process of learning, teaching, research, consultancy, publication, administration, and student life.
- To exemplify an international community of dedicated intellectuals, scholars, professionals, officers and workers who are motivated by the Islamic world-view and code of ethics as an integral part of their work culture.
- To enhance intercultural understanding and foster civilization dialogues in Malaysia as well as across communities and nations.
- To develop an environment which instills commitment for life-long learning, and a deep sense of social responsibility amongst staff and students

[2]Tawhidic paradigm, as cited by Ismawi Zen, 'Relevance of Tawhidic Paradigm To Environmental Design' delivered at the Seventh Inaugural Lecture on 17th January 2002 at Kulliyyah of Architecture and Environmental Design, International Islamic University Malaysia, unite the three different concerns that are inherent in a Man, i.e. Man's relationship with the Creator, with his fellow Man and with Environment. Tawhidic paradigm stressed on the first relationship of Man with his Creator as this will subsequently controls the two later relationships naturally. The doctrine advocates the understanding of higher reasons for man's existence on Earth, i.e. as servants of the Creator as the true basis of environment which will eventually create a more sustainable prosperity for Mankind. The search for excellenceis part of a Tawhidic approachso as to gain the divine pleasure of the Creator and not just purely a capitalistic endeavor.

Intake of Architecture Students in IIUM: IIUM Centre for Foundation Studies (CFS), the former IIUM Matriculation centre andIIUM Admission and Registration Division admits students at different levels of entry through their competency in both Arabic and English. In the programme, Muslim students, among others, are required to complete studyingIslamic religious knowledge and Al Quran recitation as university's graduation requirement for Bachelor of Science in Architectural Studies as well as Bachelor of Architecture, apart fromprofessional programme courses, to complement the vision and mission of the university.

The pioneer students for IIUM architecture were 14 and 24 number of students at each consecutively semester intake for September 1998 and February 1999. For a pioneer programme, the small number of student intake was manageable for the quality individual teaching as the 'wholesome'personas envisaged by the architecture department's[3] and university's vision and missionfor 2001. Theideal situation was short lived with the entry growth of over 70 -132architecture students per intake in the subsequent years. The Architecture academic staff: student ratio of 1:10 then had to be stretched to 1: 15 and employment of over 30 numbers of part time architecture teachersfrom the industry to make up to the 1:10 ratio for studio teaching. Part time teachers from the industry were not given the responsibility in providing full adherence to the mission and vision of the university in propagating 'the message'. Thus the onus of ensuring the studentsreceive the right message and values of Islam in the process of learning architecture and architectural design decisions lies on the full time staff of the department.

After almost 16 years of existence and churning 4-112 graduates of Bachelor of Science in Architectural Studies annually since year 2001; and 19-47 graduates of Bachelor of Architecture graduates yearly since 2003, IIUM School of Architecture, were fully accredited in 2008. Table 1 provide a quick glance on the number of graduates since its inception in 1996. This achievement was made with much effort and sustenance from dedicated staff and students throughout the pioneering years. To IIUM School of Architecture, character building of the graduates through the process of teaching and learning, are the niche and the difference to other schools of architecture within or outside the country. IIUM'sschool of architecture believes that architectural graduates who had graduated with good character above knowledge and skill, will produce architecture that would be both ethical and well thought of for humanity.

This paper discusses and presentsdesign studio teaching as the coreandsoul of architectural education. The paper shares the "how" IIUM architecture teaching navigates, motivates and evaluates the scores of graduates to what they are today. IIUM Architecture school aims to produce architectural graduates that are successful in sustaining their good practices, perseverance in facing challenges and always strive for excellence (*itqan)* in whatever they sat their tasks. Like all schools of architecture, there will be excellent individuals who excel and make their mark as one of those great master architects in the industry and there are those that are position to be good architects for the society. IIUM's vision and mission requires delivering 'the message' to as many students as possibleand not merelyto selected individuals, on its principles and values fordaily life. For architecture, where professional degree is individually acquired and professed, the question of sustaining quality as the *architect khalifah with* knowledge, good professional ethics and *remembrance of submission to the Creator*, must constantly be in balance.Hence the responsibility and competency place upon the shoulders of the pioneersand the present teachers of the architecture programme are overwhelming.

Case Study: Studio Management and Studio Teaching Architectural Design Studio: As defined, Architectural Design studio is not just a facility or a place but defined as a particular environment that is much associated with the universal studio culture assimilating Architectural Design office of the *atelier* kind. The studio is the place where respective architecture students could have their own individual space to work on their respective studio assignments alone and yet has the peers to conductspontaneous *crits* (critique session); discussion with one anotherandwith the tutors. Spatially, the studio as a space should be able to accommodate individual spacesas well as shared spaces with a set of unwritten values to upkeep the communal living, creative and harmoniously. The studioshould be a flexible space and

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Table 1a: Bachelor of Science in Architectural Studies Student intake and graduated by cohort (Source: IIUM Accreditation (2011), Chapter 1)

Year BSc Arch. Studies	2007/ 2008	2008/ 2009	2009/ 2010	2010/ 2011
No. of Students Intake	110	130	88	132
No. of Students Graduated	98	112	109	128

Table 1 b: Bachelor of Architecture Student intake and graduated by cohort.

Year Bachelor of Architecture	2007/ 2008	2008/ 2009	2009/ 2010	2010/ 2011
No. of Students Intake	27	55	26	39
No. of Students Graduated	16	47	19	36

Table 2: Number of IIUM Architectural Graduates since 2000/2001 as per IIUM Academic Management and Admission Division). * estimated

Year	2001/2002	2002/2003	2003/2004	2004/2005	2005/2006	2006/2007	2007/2008	2008/2009	2009/2010	2010/2011	2011/2012	2012/2013*	Total
B.Sc in Architectural Studies	4	51	32	36	23	109	79	93	82	98	112	81	800
B Architecture			30	22	22	19	23	27	23	47	19	23	225

place with ability to conduct intermittent classes, briefing, tutoring, exhibition as well as social gatherings. Studio teaching and learning focuson students, teachers/ tutors/ studio masters;the project/s as the object as customers;g uided by accreditedprocesses with checkpoints requiring assessment criteria and assessment: with progressive and final outcome as output [1-3].

The Teacher: as Murabbi/Murabbiyah: All teachers in IIUM is geared as 'murabbi (male mentor) or murabiyyah (female mentor) by virtue of its term of requirements. In truest sense of the word, being an Arabic term, it encapsulates a concept of a true teacher, beyond parenting, derived and practiced from the early Muslim civilisationas a person, a mentor, who combines a life of learning with a life of virtue, educating, caring, growing and teaching with loving. The perfect living example of *murabbi* is the Prophet Muhammad (peace is upon him) himself. Kazmi [4] states in his essay that:

"… *being a murobbi* is becoming a person who not only know that but also know how to. All the action of murabbi *is based on the theoretical knowledge, but then he or she translates it through the action in his daily life. Through this person, then we will know the values of the truth and will actuate the truth in our real life…..being a* murabbi *is being a person who possess the knowledge then him or her process and interpret the information gathered from the world around through the action. A* murabbi *is a person who teaches trough his style of life. In the life of* murabbi, *there is a far less of a distance between knowledge and practice, between theory and praxis and between knowing and acting. In other words, the author states that a murobb*i is a living proof of why one should accept the body of knowledge, why and how the truth of that knowledge

matters….. Every one may have different idea on how he or she personalizes the knowledge as long as it does not violate the truth….Personalized knowledge will differ from place to place and from time to time. It depends on the context and the situation or the issues faced by the society." Kazmi [4].

Equipped with human knowledge from past education, competency through experience and passion as educator under the concept of *murabbi*, architecture teachers were prepared to take the first batch of students and always on the go, without fail for the subsequent students throughout the 16 years tenure. The process has not been easy with most of teacherseither being hardened through long periodin practice, carrying teaching style from previous schools, a fresh graduate from other schools of different vision and mission, coming home fresh from completing a doctorate or coming from different cultures to assimilate new ones, in a swift mode. The different experiences in handling students, of varied educational background and vocation, different cultures and languages are indeed a test of patience and endurance with much needed training and constant motivation. Despite all this complexity, it is imperative that IIUM teachers assume the role of a *murabbi* very quickly. A good teacher will instil good values in students. The methodology of delivery as a *murabbi* can change mere studentsto buddingkhalifahsfor tomorrow.

The Students: In the Making of Khalifahs: Every batch (of students) presents a different challenge to the team of teachers in quality, aptitude and attitude towards learning environment. IIUM, being a public university admitted students centrally through the national university entrance with minimum entry requirements annually to its Centre of Foundation Studies (CFS). Academically, the filtering of students to the generic

programme at foundation studies level is the secondary school examination certificate or Sijil Pemeriksaan Menengah (SPM). Students were assess on their religious knowledge; the *Al Quran* recitation as well as English proficiency to determine the entry level. Filtration to the architecture degree programme, after foundation studies, depends on the students' competency in design courses that require a B+ score grade and a minimum CGPA of 2.8, apart from passing the religious and language courses.

Aptitude, attitude and general character of students forms part of the assessment criteria as wholesome student of IIUM in line with the university's vision and mission. The requirements to conform to the Islamic tenets include students to be appropriately attired in all activities and events. Design base courses learning environment exposed students to the 'Studio culture'as early as at CFS level. 'Studio Culture', as an unwritten norm encompass staying up late at the studios for individual or group work; returning late to the hostel at night and early hours of the morning after doing the 'project'. The norm includesmixed gender in the same studio premise at odd hours and of casual attire. For IIUM, this culture opens the programme to be among the misfit of IIUM society if it is not properly monitored and controlled. Thisabnormality refers to the different way architecture students adorn oneself to the moral standing presumption of ones' character. The pioneering years had witnessed teachersbeing called relentlessly by the security and student affairs' officers to provide explanation and justification for the students' actions.

The students, by virtue of their *bai'ah* (oath taking) at the *ta'aruf* (orientation/briefing) ceremony, had understood that it is their legal and moral duties to upkeep the good character *(akhlaq)* based on Islamic tenets wherever they maybe, within or outside IIUM campus. The question thus was the interpretation of these Islamic tenets physically and morally within the conservative framework or from an innovative perspective without changing the succinct values and principles of a good Muslim (for Muslims) or a good human being (for the non-Muslim).

The students' presence in the campus for architecture degree programme ismonitored individually through the system of one teacher assigned to 10-15 students under his/her care. In the pioneering years, a system of mentor-mentee of 1 academic staff to 10 students wasimplemented. Today, there is only 1 academic advisor to over 300 students for BSc. Architectural Studies and 1 academic advisor to about <28-30 students for Bachelor of Architecture programme.

Thence it is imperative for the individual teachers, through moral obligations as a *murabbi,* to take the stand to counsel and look after the welfare of students where necessary in studio and off studio courses.

Currently the Department of Architecture (DoA) maintaineda ratio of 1 staff: 10-15 students in the studio courses for academic and personal monitoring of students. The studio teachers will infolrm the academic advisors on the status of students under their care, whether they would be requiring assistance or counselling. Counselling, as the second nature to a *murabbi*, is done concurrent at studio tutorial onindividual face to face; at lecture input; at studio section level as well as departmental *taaruf*(orientation briefing) programme. Academically, students with problems detrimental to their *'aqidah'* (concept of faith) would be detected at tutorial,interim and main crit levels. Their tell-tale signs maybe extracted from their oral presentation ondesign concepts, planning and the design of the project. These students weresent for counselling and continuous monitoring as rehabilitation exercise. Socially and ethically, students were advised through their peers and counselled discreetly by teacher-murabbi in a personal teacher/student relationship environment. Other supports in the shaping of the *khalifas* within and outside the ambit of the academic realm were carried out through students' own effort; by IIUM architecture student body or ARCH@IS as well as through the architecture student alumni from industry. These activities organised jointly or independently from their respective social network.

IIUM Architecture Design Studio Management
Introduction: Architectural Design Studio courses as the core architectural courses require major planning and forethought to its content and delivery. As a cauldron of applied arts, environmental sciences and social sciences in the built environment, apart from planning its hierarchy strategy of learning scale (of size and complexity) and from one level to another, Architectural Design courses also entails managing its various stages of implementation for every semester. Each semester includes the management and preparation of the project content as "problem based" or the "case study" that should be in accordance to the level of study and indicated in the course outline; management on the process of its delivery and monitoring including briefing, studio trips, input lectures, *charrettes* or workshops; management of setting assessment standards, conduct assessment, rationalisation of the marks and management of the human

resources itself -staff and students, so that content and process is integrated and inculcated in every student as the focus.

As a professional programme, where knowledge and skill need to be learned and acquired from one level to another, the architecture programme is structured so that each student may enter the next level upon satisfactorily passing the optimum level of the Architecture Design Studio course. The assessment is conducted by respective studio team as a *syura* (respective studio committee team by level and headed by a Studio Coordinator), reviewed by the Department and External Portfolio Reviewers and finally endorsed by the Department's Examination Board (EB, DoA) and the KAED's Examination Board (KEB) before it is brought to the university'acts Senate. Any appeal will be via IIUM general appeal process that may require independent team to review. To avoid any misunderstanding, students'were informedon the fundamental rules of the studio at the beginning of the course in the 'Important Notes' printed alongside the semester project brief. As part of the studio transparency practices, studio progressive marks werenotified intermittently for the students' wellbeing.

The History: Similar to all other schools of architecture, the curriculum for IIUM Architectural design studio of 1998-2001 was initially based on the Malaysia's first school of architecture i.e. University Technology Malaysia (UTM)'s model of a horizontal studio teaching technique[4] but with a different course content. Through a series of workshops, cross reference to other schools of architectureat local and international level, through informal and formal discussion with the Board of Architects (LAM) and Pertubuhan Akitek Malaysia (PAM) and finally the university senate, the course outline for the programme was born for the start of the semester in September 1998. The process includes scrutiny of the course content especially by the university Senate on the appropriate Islamic input at every course. For studio courses, the expected outcome was students' comprehensive knowledge, understanding, demonstrate skill and ability to make appropriate design decisions following the experiences through design project complexity hierarchy imbued with the Islamic/universal humane values. Studio, as core, sets and benchmark students' progress in the programme. Successful students are allowed to advance to the next studio level at the end of every semester.

As cited in Studio Teaching Project website at http://fod.msu.edu/oir/studio-teaching concentration in studio teaching boils down to the student, the process and the final outcome. For IIUM, the student, the process are measured through their progress and final outcome as guided in Table 3 of IIUM Architecture Design Studio Assessment Guide and Table 4 on Student Studio Assessment Criteria Weightage, after many years of deliberation. The percentage and emphasis vary through levels of complexity as the design problems. The value of Islam as the universal value based on *tawhidic paradigm*including the 'common sense' values as a human being, were integrated in the many facets of the design projectdevelopment fromplanning and design concepts, i.e.to the 'how'and 'why' the deliverables are processed. Although the students were expectedto have a sense of individuality and independenceto develop design ideas on their own, practice of face-to-face (1:1) tutorialor consultation, as a concept of madrasah learning i.e. equivalent to atelier and apprenticeship learning was implemented. IIUM's intention of producing good and ethical architects asa *khalifah*in a person, to the wellbeing of the built environment, in mass, is still the key. Hence, to understand and deduce students' general comprehension of the project being a significant social contributioncan only be made through face-to-face meeting of the*murabbi* withthe student.

IIUM architectural students' intake into the programme had since fluctuated from the originally planned 70 students a year (based on available physical facilities designed) to over 100 students per intake. The student population is divided into 30-35 students per manageable sections with 3-4 studios or sections per level/year. Table 5 provide a comprehensive evolution on capacity and studio ratio by academic year for the first three years.

The teacher-*murabbi* had to work extra hard, to churn out new project briefs on appropriate projects (as problem based/case studies) at each semester. These briefs must meet the criteria of the level as required in the respective course outlines and are able to ensure integration of the intangible values within (the process). The department had ensued importance in the preparation of the project brief with its own process of check and balance prior to the beginning of each semester. Process of project brief preparation is illustrated as a flow chart in Figure 1: IIUM Architecture Department Preparation of Studio Project Briefs.

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[4]Horizontal Studio Management System refers to placement of students in design studios based on their level of study, where students of the same year of study would work on architectural projects of the same nature and complexity.' Fadzidah Abdullah *et al*., (2010)

Table 3: IIUM Architecture Design Studio Assessment Guide

IIUM Architecture Design Studio Assessment Guide (2008).

DESIGN	90%
CRIT 1	10%
CRIT 2	15%
CRIT 3	20-25%
FINAL CRIT	40-50%
PARTICIPATION	10%
TOTAL	100%

DECISION
Inform student of their status as follows:

VERY GOOD
GOOD
SATISFACTORY
WEAK

DEPARTMENT POLICIES
Need to have policies on datelines, extension, transparent (to associate with reality)

Incomplete	0
late	discretion
no submission	0
submission	means complete drawings
submission day	is a day before presentation day
presentation day	is display and present

DEVELOPMENT MONITORING
Consultation Report compulsory - standardised for the department

CRITERIA FOR PRESENTATION
Speech/Verbal Communications
Islamic Approach / Values

ASSIGNMENTS
Combine theory and studio projects
To inform other departments of our schedule (for multidisciplinary input)

Table 4: IIUM Architectural Student Studio Assessment Criteria Weightage

Department of Architecture
Kulliyyah of Architecture and Environmental Design
International Islamic University Malaysia

Appendix 2

STUDIO CRITERIA ASSESSMENT WEIGHTAGE CHART

Date Prepared   29th October 2008
(ref: 2006/2007 discussion on studio assessment)

(Based on Methods of Evaluation from the Course Outline)

Category	Stage	Bachelor of Science Architectural Studies								Bachelor of Architecture	
		Year 1 Sem1	sem2	Year 2 Sem1	Sem2	Year 3 Sem1	Sem2	Year 4 Sem1	Sem 2	Year 5 Sem1	Sem2
	DESIGN BRIEF										
PROCESS 40%	RESEARCH / DATA COLLECTION a) Site Analysis/ synthesis b) Case Studies/ Precedent Studies	5%	5%	10%	10%	10%	10%	10%	20% master panning	20% feasibility Studies issues	5%
	DESIGN a) Space Planning / Anthropometric b) Building Form c) Concept	20%	20%	20%	20%	15%	15%	15%	15%	5%	15%
	COMMUNICATIONS a) Graphic Drawing Conventions/ Model b) Verbal	10%	10%	5%	5%	5%	5%	5%	10%	10% d) report/graphic	10%
	TECHNICAL a) Structural Component b) Services c) energy	5% basic structure	5%	5% basic construction services	5% structure services	10% structure services	10% structure services	10% advance structures advance services	10%	5%	10%
FINAL 50%	DESIGN (as above)	25%	25%	25%	20-25%	20-25%	20%	20%	20% master panning	10% site panning design alternative/space planning	20%
	COMMUNICATION (as above)	20%	20%	15%	15%	15%	15%	10%	10%	35% report-15% drawing -15% verbal-5%	space planning concept/workability 15% report-15% drawing 5% verbal-5%
	*(INCOMPLETE DRAWING)										
	TECHNICAL (as above)	5%	10%	10%	10-15%	10-15%	15%	20% advance structures advance services	20%	5% structural concept services	15%
PARTICIPATION PORTFOLIO 10%		10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
TOTAL		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Table 5: Evolution of Studio Capacity, Ratio and Project Brief in IIUM Studio Teaching

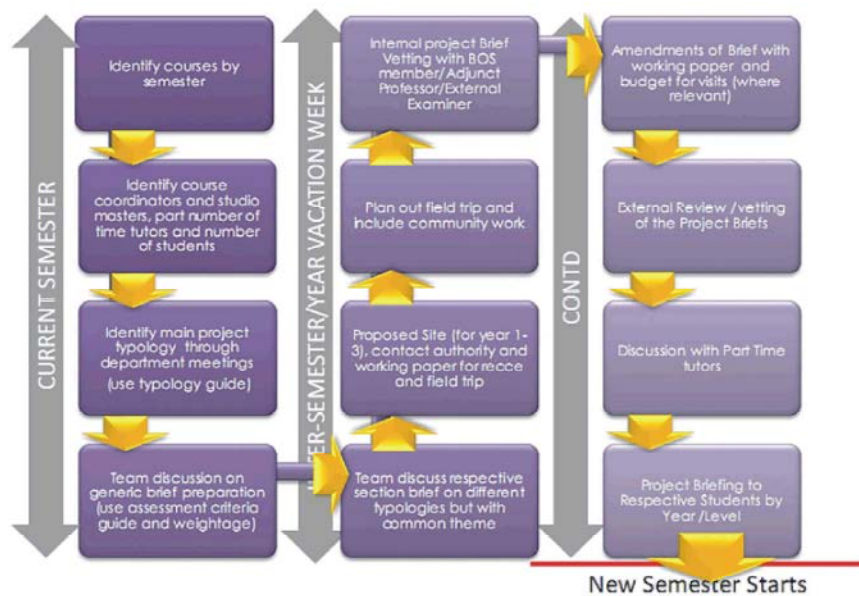| Academic Year	Level	Number of students	Number of Studio	Student and Staff Ratio	Number of Project Brief/Year
1998/1999	1	24	1	1:10	1
1999/2000	1	54	2	1:10	1
	2	24	1	1:10	1
2001/2002	1	39	1	1:10	1
	2	54	2	1:10	1
	3	24	1	1:10	1

Fig. 1: IIUM Architecture Department Preparation of Studio Project Briefs

Choice of Studio Project (the "What" and "Why"): The choice of "problem based" or "case study" projects for the semester is selected appropriately for the level and objective of the course. Year 1, as an introductory year, adopt both mode and other innovative approaches to provide maximum exposure in familiarising students with the nature and language of architecture. The early years are very important stage in the shaping of the mind and soul of students as the future *khalifahs*. Exceptions on the nature of the project are allowed in Year 1 to provide space for innovation for teachers. Every batch (of student) represents different reception to the general streaming of nurturing ideas. As a safe guard to the flow of ideas in shaping the mind and soul of the students, the project rationale for the year is discussed at length at the project brief vetting sessions.

While Year 1 is subjected to multiple short projects that emphasis on basic design theory of shapes, forms, space, texture, sound, colours, basic structures, anthropometrics and concepts; Year 2 -3 starts experimenting on selected building typologies that match the complexity and scale required. The minor projects could be structural, spatial or material expression of the major project presented as report, model making and posters. The minor project or precedent studies must be related to the major project for ease of information transfer, connectivity and knowledge building.

All studio projects will have the element of research (with case study, literature review, analysis and findings) on the typology function, building and philosophy; site analysis (with exception of year 1, semester 1) and site

synthesis, design (including design development) and presentations (of various mode). Studio community work is incorporated with the field work on fieldtrip to expose students to social responsibility. Input lectures or seminars are conducted as an integrated part of theory classes to studio or vice versa. Competitions, live projects, workshops, *charrettes,* where appropriate, are sometimes incorporated into the brief as an added dimension for a hands-on experience to both staff and students.

Choices of building typologies such as institutional, commercial, habitation are kept broad to allow multitude of project types to be selected under the same banner. General consensus include public buildings, social and welfare facilities, educational and rarely into the pompous kind that may defeat the message. Thus Islamic values and worldview through architectural provision, concepts /philosophies, actions and traditions are inculcated in the project brief to remind students on the universality of the good values intrinsic in our daily lives, the architecture of which they are designing and in the built environment. Architecture is a submission and not to be flaunt and architects are servants and thus need to be reminded to be subservient (to Allah alone). Integration of theory courses to studio courses as part of the field trip assignments is generally incorporated. Product of the field trips are generally expressed in exhibitions and seminars conducted by students post trip. Figure 3 above is one example of the exhibition held after the field trip that involves year 1-3 from the vertical studio Residential typology.

Fig. 2: Sample of Project Brief Cover for Vertical Studio on Commercial Typology

Fig. 3: Sample of Students Exhibition Brochure for Residential (Habitation typology) studio from Vertical Studio mode. Majid [7]

Assessment Management: Assessment of students' work for design across the sections is based on the same criteria and marking scheme set by the Studio Coordinator on the set rubrics (refer Figure 4). Group works are presented through presentation boards, multimedia, models and written report in hardcopy as well as in a digital copy. Either a spokesman among the group present or they take turns. Group works is assessed as a group for the work and as individuals, through their assigned role, for participation. Individual work is assessed through tutorials, desk crit (critique), interim crit and final crit. Final crit involved both internal and external assessors from the industry. At some time, the client of the project takes part in the assessment for live or simulated projects. The criteria provided for assessment vary for user-client of the facility from the technical and design assessment by the academic staff. The involvement of lay-man or users of the facility is intentional. It provides students meaning to their designs that address others other than themselves in meeting the needs and philosophy of the client. In their passion to give their best, students design their projects, seemingly, for themselves and to their own satisfaction. This is duly express through words such as "I like" or "my building". It is at these individual
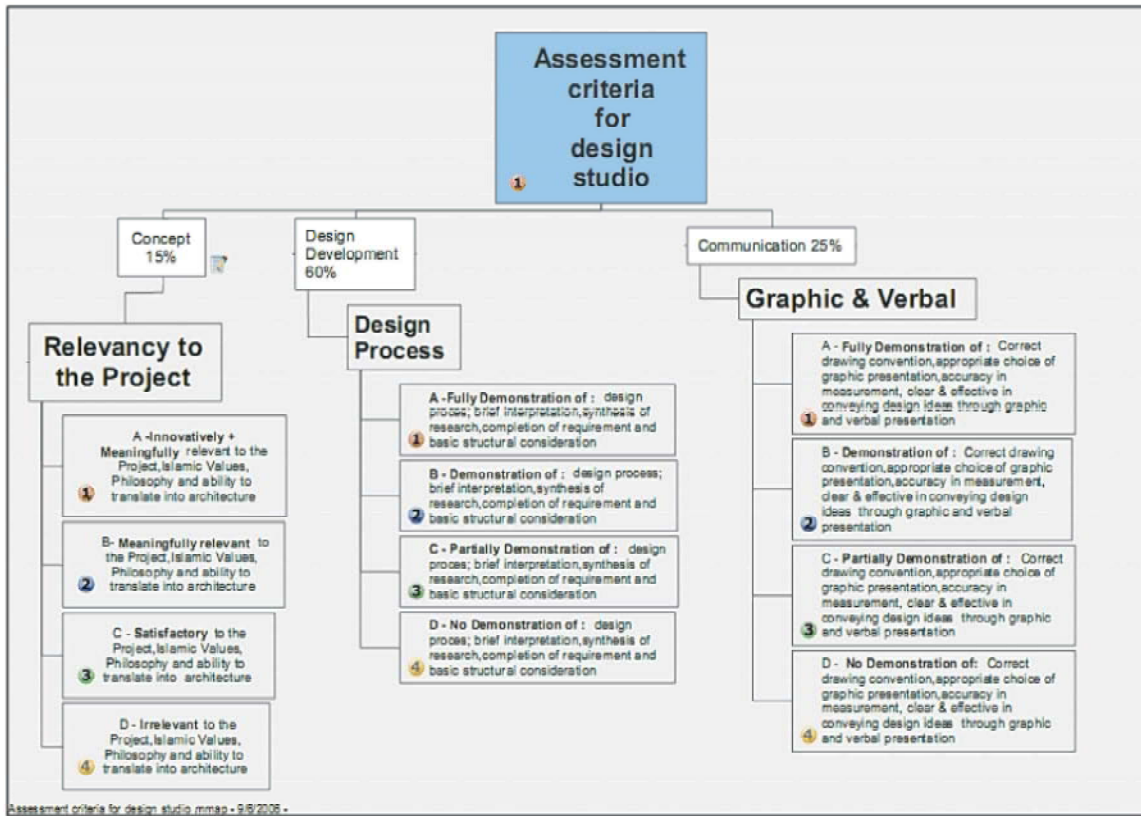
Fig. 4: Studio design assessment criteria rubric (generic)

assessment sessions that formal and informal education of addressing architecture with care so as to avoid ego-centric-ism that affects the majority of the architectural profession, was made.

Current Studio Programme: Currently, with the running of the overall five year programmes at the same time since 2003, the management of studios, from a simple assignment then, now demand a clear direction for ease of coordinating and monitoring of input and outcome at different levels of expected skills and competency. The decision to rotate studio masters and lecturers per studio through preference of the staff, as it was done in the *pioneering years*, was no longer practical nor effective. Fulltime architecture (qualified) lecturers are considered part of the studio management human resources with exception of teachers holding administrative posts. Currently, the department worked on assigning teachers to per year basis i.e. for 2 semesters, to ensure students' progress of each level is monitored. The arrangement ensures that students will be exposed to different combination of teachers and teaching delivery at every level.

In the *formative years,* only one teacherwas assigned to coordinate the studio by levels per semester. This was implemented to ensure the commonality of the level, in terms of scale of the project, complexity and marking between sections were fair and justified. Hence we had year/level 1-5 coordinators. With the ratio of 1-15 students, each level/year will be further divided into sections of 30-35 students. With exception of year 5 where students commence their design thesis, other years will have studio sections with their respective studio master and sets of tutors. Each studio master is responsible to prepare the project brief for the semester's projectand undergo the process of vetting for quality and conformance as shown in Figure 1.

The *innovative years* of IIUM architecture programmewas earmarked by IIUM gaining full accreditation from the Council of Architectural Accreditation Education Malaysia (CAAEM) in 2008. Maslow [5] discussed the psyche of human motivation where when one met one's basic needs, one will have the tendency to naturally climb subsequent tier towards self-actualisation. It was at this period that IIUM embarked on another approach in studio teaching upon

feedback from graduating students that existing studio programme were not planned to allow variety of building types to be designed and experienced as the main studio project. As *murabbis*, driven by passion to add newness in the studio teaching approaches to alight interest and motivation to the young students, innovative and daring teachers, with the support of the Head of Department, made the distinct change to the methodology of teaching despite mixed feelings. The first objective was to ensure all students will be exposed to as many building typologies as possible while learning the scale and complexity as varied experiences. The second objective embedded in the first was the union of the same typology studios through year 1-3 for peer review as well as for a senior-junior closer fraternity. The innovation was introduced by way of a structured studio programmed base on category or types of buildings. The intention was not to restructure the existing accredited studio teaching but to enhance it with added value of variety, depth and control. In the deliberation, there were opinionsthat specialisation streaming through unit based studios as practiced by UTM, where teachers who are experts in the field will lead the unit for specialisation, such as in passive design or housing, may not be a good idea as it depends very much on the presence of the experts.

Akin to a medical programme, the society needs general practitioners (GPs) at all level of the society for general ailments. Society will only refer or seek specialist help when there is a need to consult one. For architecture, society will seek general practice architects most of the time as deemed in the scope of architectural professional services as basic services. Architects with specialised knowledge will only be consulted or engaged as and when it is necessary. The specialist architects will be engaged in specific building typology where planning process, construction or detail technical information are required. It is acceptable and considered good architectural education if the programme prepares students broadly in basic aspects of architecture within the 5 years and later specialises in his/her postgraduate years. Thus the course outline for the studio courses has to remain generic, based on scale and complexity.

In retrospect, while the pioneering and formative years general implementation of studio teaching was to adopt any typology for the semester as provided by the course outline in the formulation of the project brief upon background research made with current issues without strategic planning to 'what' students should be exposed to in their 1-5 years of training, the innovative methodology proposed provide the necessary structured

guidelines apart from building complexity and scale i.e. the fresh elements of variety and interest. Much later identified as the 'Vertical Studio', the innovative studio teaching was initiated through identifying the typology for each level of learning basing on the Board of Architect's (LAM) category of building (refer Table 6) through the building's complexity. The modus operandi of this studio teaching includes analysing the mode of studio management across typologies through the years/levels 1-3 to be by various coordinators for design and rationalised marking schemes across the same level i.e. respective marking scheme for Year 1, Year 2 and Year 3 differently. The process includes the requirement ofcoordinated studio field and site trips (refer Table 7), exhibition, lecture input and assessment. Table 8a illustrate studio coordination matrix and Table 8b give an overview on the Term of Reference for Coordinatorsthat demonstrate the quantum and expand of management requirements on the studio teaching to ascertain the quality, rationale and justification of the process. Islamic aspects and worldview relevant to the typology were researched, integrated, imparted and guided alongside other technical and social issues as lecture inputs, workshops, tutorials and visits, for both approaches.

Figure 2 is a an example of the project brief of a commercial typology and Figure 3 is an example of an exhibition brochure that demonstrate example of the vertical studio implementation using the Residential (Habitation) Typology as part of the studio trip for case and precedent studies. The Islamic input is imbued in the project brief that expand the width and breadth of the history of needs, function and concepts of residential typology. For the particular semester, the hierarchy of the complexity for the differing years in the Habitation Typology were identified as Housing for single mother in Year 1 that address anthropometric and space; Orphanage for Year 2 which address scale, multiple spaces and introduction to technology; and Ingenious Architecture addressing culture, material and technology in Year 3.

The role of the *murabbi* at this juncture was to ensure that by doing so, there will be continuity and connectivity in the knowledge gained at all the 3 levels (year 1, 2 and 3) on the same typology although of differing scale and complexity, which the students may not have the opportunity of being exposed to as they ascend the years, without strategic planning. Through 'vertical studio' approach, students would be able to speak the same language, engage in a discussion and witness how each level resolved their respective issues effectively. In this scenario, the situation encourage

Table 6: Description of Typologies. Majid [6]

Habitation	Commercial	Institutional
Housing	Retail Transportation Tourism Industrial & Manufacturing Hospitality	Public Services Health Care Facilities Education Community Research And Development Law And Judiciary Safety and Security

Table 7: Vertical Studio -studio trip management

STUDIO TRIPS FOR ARCHITECTURE PROGRAMME SEMESTER 2, 0809

Typology	Section	Year	destination	date	no of students	Unit cost RM 20 per	Bus	duration	cost	Sub Cost	community & contigencies	TOTAL COST (RM)
BACHELOR OF SCIENCE IN ARCHITECTURAL STUDIES												
Residential	2	1	Ulu langat		45	900	1 b, 1 van	1 day	1000			
		2	Tumpat & Ketereh	8-11 jan	45	900	1 b, 1 van	3 days	3000			
		3	Tumpat & Ketereh	8-11 jan	30	600	1 b	3 days	3000			
					120	2400			7000	9400	940	10340
Commercial	1	1	cyberjaya		45	900	1 b, 1 van	1 day	1000			
		2	Penang/Jbharu	15-18jan	45	900	1 b, 1 van	3 days	3000			
		3	Penang/JBharu	15-18jan	30	600	1 b	3 days	3000			
					120	2400			7000	9400	940	10340
Religious	3	1	putrajaya		45	900	1 b, 1 van	1 day	1000			
		2	Kedah	2-5 jan	45	900	1 b, 1 van	3 days	3000			
		3	Kedah	2-5 jan	30	600	1 b	3 days	3000			
					120	2400			7000	9400	940	10340
TOTAL BSc Arch Studies					360	7200			21000	28200	2820	31020
BACHELOR OF ARCHITECTURE												
Educational	1	4	Kedah	2-5 Jan	53	1060	2 b	4 days	8000	9060	906	9966
Thesis	1	5	Varied Locations		26	520	1 b	4 days	4000	4520	452	4972
TOTAL B Arch					79	1580			12000	13580	1358	14938
TOTAL COST						8260			29000		3726	45958

Prepared by
Department of Architecture
14th November 2008

Verified by
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Head, Department of Architecture   Date   14-Nov-08

'peer to peer' critique and guidance, junior and senior students' opportunity to discuss, share and promote ideas; and thus able to generate camaraderie that will enrich the young minds faster in resolving contemporary issues effectively. Teachers facilitate this merger as facilitators, advisors, referees and counsellors. For the upper years, the mentor mentee relationship of student and teachers, as *murabbi*, is established through the one to one supervisory and panel monitoring system. Although Year 4 and 5 were intentionally excluded from the typology studio mode as this level covers higher level of building complexity that would cover across the board in their master-planning, complex projects and individual design thesis, the Islamic input runs concurrently based on the subject matter as a revision, enhancement and reminder to the students and the teachers.

Feedback and Action on the Implementations: In architectural pedagogy, whatever the best intentions of the *murabbis* in the zest for excellence, the outcome has to be empirically measured. Independent early studies on feedback by Abdullah, *et al*. [8] on the implementation of the 'vertical studio' in comparison to traditional horizontal studio, as non-participant teachers, were conducted through questionnaire survey on the 12th week of the 14th week semester, Semester 2, 2008/2009. The study was made on all levels (year 1 to 5) i.e. including participating and non-participating staffs and students of the programme. The survey result, although some felt rather too soon to gaugewhether the move was successful or not, did produce statistics that represents certain areas of the vertical-typology studio for improvement and preference for horizontal studio being resisting to change. Subsequent study was conducted of the system by the participating staff in 2013 through another questionnaire survey after the amendments were made to the experimental phase. The result is yet to be consolidated and deliberated.

Table 8a: The first Vertical Studio matrix in IIUM

Department of Architecture, KAED, IIUM
Bachelor of Science in Architectural Studies (PART 1)
Semester 2, 08/09

Level	Commercial	Residential	Religious	Community Work	Coordinators Marking	Coordinating Trip	Studio Master for level
Teaching staff by Typology	Azrul Izwan (Lead), *Aida, Noor Aziah*	Zuraini (Lead) *Zaiton, Noor Hanita,*	Nurul Huda (Lead), *Ahmad Shukri, Norwina, Zeenat*		All Typology Coordinators		
1st year Multi spaces, dwelling, shops; capacity 4-8 people (single storey) *Site planning Site context Landscape Anthropometric floor area 200-300 sq m*	Section 1 Businessman/ shop house detached	Section 2 House for Single Parent /Detached house	Section 3 Mini Caravanserai (bath, toilet, musolla and food/vending machine)		Ahmad Shukri	By typology	Zaiton Abdul Rahim
In Charge	*Noor Aziah*	*Zaiton*	*Ahmad Shukri*				
2nd Year Medium span multi functional spaces, mini resorts, culture centre, club house and community centre; capacity 50-100 people *Site planning Site context Landscape floor area 1000-1500 sqm*	Section 1 *Factory outlet (branded)*	Section 2 Community Housing (Townhouse single parent, elderly)	Section 3 Madrasah on Primary years for the community		Zuraini Denan		Aida Kesuma Azmin
In Charge	*Aida Kesuma*	*Zuraini*	*Nurul Huda*				
3rd year Medium rise - 3-5 stories, museum, shopping centres, health clinics; capacity <200 people Nature and complexity - medium rise *floor area 3000-6000 sq m*	Section 1 Shopping Complex *Azrul*	Section 2 Affordable medium rise housing *Hanita*	Section 3 Jamek Masjid & Madrassah *Minor project: surau norms Norwina*		Norwina Mohd Nawawi		Noor Hanita Abdul Majid

Table 8b: The Term of Reference of Coordinators for the Vertical Studio matrix

Department of Architecture, KAED, IIUM

Bachelor of Science in Architectural Studies (PART 1)
Semester 2, 08/09
TERM OF REFERENCE

Type/Task	1	2	3	4	5	6
Typology Coordinator	Prepare overall framework brief for typology	Prepare visit and trips to types	Site Selections	Prepare Budget with Studio Level Coordinator	Review typology framework	Write report on portfolio assessment
Marking Coordinator	Acertain marking level is appropriate for the specific level (vet brief)	Assist marking scheme with Typology Coordinator and Studio Level Coordnator based on project briefs	Audit tutorial / review progress results	Invite Internal and External Assessors in collaboration with typology & studio level coordinator	review marking pre and post portfolio	Consolidate Portfolio Report to HoD
Studio Level Coordinator	Coordinate the Generic Input Requirement for the level	Students' Attendance, staff attendance verification	Booking Venues/booking equipment	Granting permission to stay-up /extension/ postponement	prepare for portfolio assessment	Write report on portfolio assessment

Table 9: Summary of Comments by Portfolio Reviewer on the Vertical Studio. Wardi [12]

2.2 STUDIO MANAGEMENT

● The concept of Vertical Studio (VS) is interesting concept andthe department is encouraged to continue to develop the idea. As with all new ideas (new to us at least) we need to spend time detailing out the process and systems, otherwise it will fall short.

SUGGESTIONS

● I suggest a small group of the lecturers be asked to continue to work on the problem. It may be many years before the system stabilized to its full potential.

● Prepare a concept paper. Make the project a key department effort to improve the system. Make it public. Get everyone committed.

● I see potential in developing staff management skill (horizontally) and expertise in key area of the profession (Vertically)

● The ability to coordinate the learning outcome of students across professional areas (commercial, housing, institutional projects, etc.) is complex. It's an area for someone with interest to study and develop the method and process for managing the process. For example there could be new and better ways of organizing student academic advisors.

● The current three areas of expertise can be further developed to include conservation, vernacular architecture, housing, urban design, hospital design, etc. If lecturers, either individually or as a group, takes up these areas as their research areas, they would over time develop expertise in the area individually or as a group, takes up these areas as their research areas, they would over time develop expertise in the area.

The experimental semester's outcome were assessed by external examiners and members of the Board of Studies (BOS)as part of their end of semester review in for 2009, summarised in Table 9. The examiners advisedthe department to review the implementation despite explanations and effort made that would otherwise harvest knowledgeable young *khalifah's*with somedepth on the building typology and its environment. Other feedback includes persons who are willing to share the craft and know-how through teamwork, with shared respect, leadership and humbleness as siblings of a family.That early commotion, however, till today, the typology studio is still in use. Its approach had excluded year/level 1 as Level 1, as an introductory year (as advised by [Lembaga [9], Lembaga [10], Lembaga [11]]), requires basic form of architecture for single and multiple spaces oblivious of specific building typology. Another exclusion was the combination of 1, 2, 3 level/years or vertical studio to horizontal studio.

Currently, the studio is managed horizontally i.e. with year 2 remain with year 2 and year 3 remain with year 3 (refer Table 10 and 12a). Although the selection of projects for each semester is based on typology to meet the first objective of the proposed change i.e. more typology of buildings exposure, this objective is kept and monitored through semesters in a package scheme as illustrated in Table 11. The second objective i.e. to meet the social, leadership and soft skills needs of the students across levels became the department's effort in other activities.Abdullah, *et al*. [8] studies on the IIUM version of vertical studio had indicated that most teachers (participant and non-participant) were reluctant to change from traditional method although understand the need to change for improvement. The department was not able to be carried out the study of the outcome after its initial implementation due to non-continuity of the full vertical system.

Modified vertical (typology) and horizontal studio management, as currently used today (refer Table 10 and Table 12a and 12b), were reviewed for continuous enhancement to meet the comments recently raised by the Accreditation 2012 panel as follows:

• "Niche" area of IIUM Architecture school;
• Monitoring and rationalising varied marks based on the assessment criteria on implementation;

Table 10: Revised Typology Studio Matrix. Majid [6]

SE-MES-TER	SEC	TYPOLOGY-SUBTYPE	PROJECT Y1	PROJECT Y2	PROJECT Y3	
II, 2008/09	1	COMMERCIAL-RETAIL	Residential with Commercial Unit	SPA and Herbal Centre	Shopping Complex	VERTICAL STUDIO, SEMESTER 2, 2008/2009
	2	HABITATION-HOUSING	Housing for Single Mothers	Orphanage	Ingenious Housing	
	3	INSTITUTION-COMMUNITY	Caravanserai	Madrasah	Mesjid Complex	
I, 2009/10	1	COMMERCIAL-TRANSPORTATION	Basic Design Point/Plane/Form in Space	Domestic Water Taxi	International Ferry Terminal	HORIZONTAL STUDIO BUT VERTICAL TYPOLOGY EXCLUDING YEAR 1, SEMESTER 1.
	2	COMMERCIAL-HOSPITALITY		Homestay Resort	Heritage Inn	
	3	INSTITUTION-EDUCATION		Permata Hati-Kindergarten	Community Art School	
II, 2009/10	1	HABITATION	Nucleo Disegno		SOHO	
	2	COMMERCIAL-INDUSTRIAL & MANUFACTUR-ING		Neighborhood Recycling CommercialCentre	ECO-DECO	
	3	INSTITUTION-SECURITY & SAFETY		Tsunami Warning and Rescue Centre	Embassy Building	

Table 11: Studio Typology Packages by Semester. Majid [6]

	Semester 1	Semester 2
Package 1	Commercial -Hospitality	Habitation
	Commercial -Transportation	Commercial -Retail
	Institution -Education	Institution -Community
Package 2	Institution -Health Care	Institution -Security & Safety
	Commercial -Tourism	Commercial -Industrial & Manufacturing
	Institutional -Research & Development	Habitation
Package 3	Commercial -Hospitality	Habitation
	Commercial -Tourism	Commercial -Retail
	Institution -Education	Institution -Community

Table 12a: Sample of Studio Coordination & Management Matrix as managed

Semester 1 Session 2010/2011

No.	Year		Title	Sections (30-35 students per section, ratio of 1 Staff:15 students)			
1	1	1 studio coordinator	AAR 1104 Architectural Design 1	1 Studio master	2 Studio master	3 Studio master	4
			Minor Project:	One's Man Garbage…			
				Point in Space: Bio-mimicry product design			
				Plane in Space: A viewing pavilion			
			Major Project:	Form in Space: A flexible retreat			
2	2	1 studio coordinator	AAR 2101 Architectural Design 3	1 Studio master	2 Studio master	3	4
			Minor Project:	Bridge Design			
			Typology	Institutional: Transport	Institutional: Education		
		Major project:	Water Taxi Terminal	Childcare learning Centre			
3	3	1 studio coordinator	AAR 3100 Architectural Design 3	1 Studio master	2 Studio master	3 Studio master	4
			Minor Project:	Sleeping Capsule			
			Typology	Institutional: Transport	Institutional: Education	Commercial: Hospitality	
			Major Project:	International Ferry Terminal	Educating Art through Architecture	Heritage Inn	
4	4	1 studio coordinator	AAR 4100 Architectural Design 5	1 Studio master	2 Studio master		
			Designing Master Plan	Kampar Administrative Centre Master-plan and Mixed Use development			

Table 12b: Term of reference for Studio Coordinators and Studio Masters in the modified matrix as currently managed

Role	Generic Project Brief & Field trip arrangement	Typology based project brief by section and assist in field	Assist Studio Coordinator and studio master with studio trip arrangement tutorial and crit	Preparation of Assessment monitoring, input lecture, Sheet and determine crit and final sessions	Marking rationalisation	Key in Final Marks
Studio Coordinator	√		√	√	√	
Studio Master		√	√		√	√
Tutors (including part time lecturers)			√		√	

- Understanding of cost and building economics;
- The perennial problem of integration of learning from theory courses to design;
- Integration of landscape and context to building planning and design;
- Construction details; scale and sizes of projects that dealt with depth and complexity and not just magnitude;
- And as IIUM, the reinforcing of emphasis on the integration of Islamic framework of thinking, the concepts and the implementation of its values as a second nature, naturally.

The 2nd questionnaire survey targeted on the alumni of the programme was also carried out after the accreditation process also in 2012s through emails and online questionnaire survey (survey-monkey) for general feedback of the programme since it is initiated in 1998. The survey collected 34 respondents from various intake cohorts. Althoughthefindings on the 'innovative studio' teaching of Abdullah, *et al*. [8] survey informed of the resistance to change, the feedback through online survey in 2012 (refer Chart 1 and Chart 2) had no new adverse implications on the product. The affirmative answersinclude their successfully being exposed to 2-6 building typologies with 'habitation typology-housing' taking the lead after 'institution typology-healthcare' within their study period.

Feedback on what the students gain on design studio with emphasis on Islamic concepts and values (refer Chart 3) in their studio design projects, revealed only 60% is aware of the substance. Although Islamic concept and values is universal and intrinsic in all actions and produce, this result imply the presence of schism or secularism or non-clarity within the mind-set of the teacher that is indirectly impart to students as separate entity when it should be integrative as a way of life, a culture.

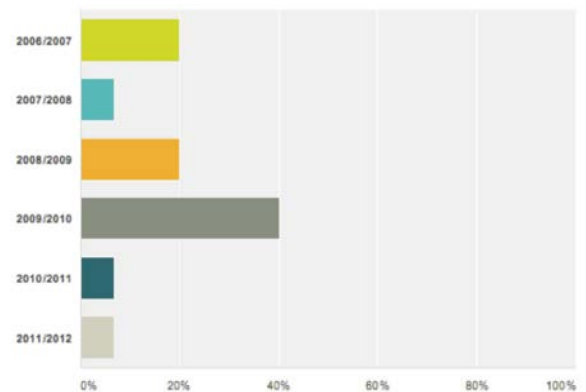On query on the quality of teachers as *Murabbi*, in the same survey, selected comments are as follows:

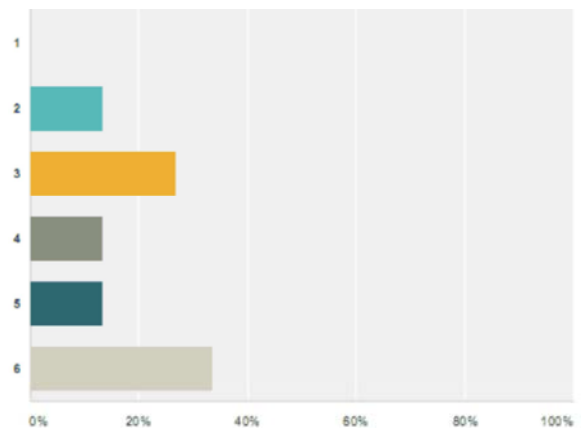
Chart 1: Cohorts of Student Response

Chart 2: Typology of Building Projects Students are Expose to in the duration of their study period

Student A:*"lecturers and students need to understand and respect each other and lecturer must give more attention for those who are likely weak than other. do not fail or underestimate them. every human have different IQ level. so as professional, treat them as professional too. treat them as they have potential to change or maybe they still didn't realize their own potential. conclusion, choose the lecturer wisely and the one that we can contribute from the beginning until the end of the design project."*
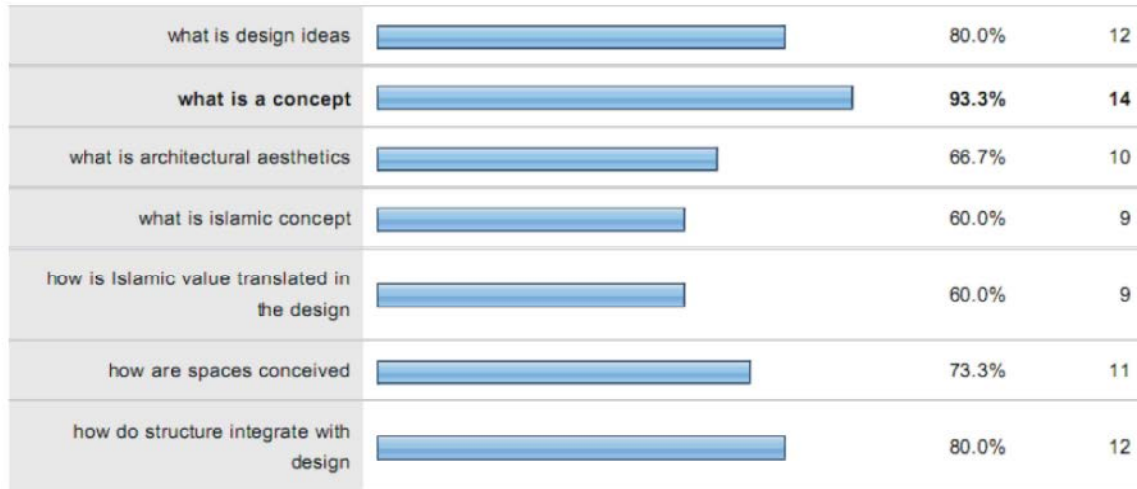
what is design ideas	80.0%	12
what is a concept	**93.3%**	**14**
what is architectural aesthetics	66.7%	10
what is islamic concept	60.0%	9
how is Islamic value translated in the design	60.0%	9
how are spaces conceived	73.3%	11
how do structure integrate with design	80.0%	12

Chart 3: Selected Answers on the Query:'What Do You Expect To Learn from Design Studio'

Student B: *"The lecturers play a vital role in guiding my design process. Everytime I had to choose to be in which studio, i always chose the ones whom I thought i'd feel comfortable with."*

Both comments by Student A and B indicated there is a still a gap among teachers as true *murabbis* envisaged. A true *murabbi* must be able to deliver and guide the subject effectively and professionally, but also with respect, responsibility and most of all with sincerity and wisdom.

In assessing the quality of the *murabbi*, the university conduct a 'Teachers Evaluation Rating' or TER exercise for every semester through online for students to rate their teachers by courses taught for the semester. For IIUM, the questions posed include competency of the teacher not only on the subject matter but whether the character and delivery are integrated with the Islamicisation objectives of the university. The results gauge from the TER were reported back to the teachers as feedback to encourage positive improvement.

Semester 2, 2012/13 witness yet another style of studio teaching as an improvement to earlier method based upon the Accreditation Panel comments. Again as an experimental endeavour, the studio focus on issues of the time. The formal result is yet to be assembled. Current semester is again an 'improvement' to the last base on comments made by external reviewers as check and balance.

Customary to previous development, recent move to gauge feedback direct from studio courses include department's initiative in providing Studio Evaluation Forms to the students at the end of the semester just on studio proceedings. The feedback is evaluated and the results forms part of the Studio Coordinator's Studio Report to the department and a reference to future implementation and management of the studio. The outcome is yet to be tabled for department's consumption.

Summary: The role of teachers in IIUM goes beyond the role of a teacher with a written term of reference as a *murabbi*. Design is core for architecture and the studio is the laboratory or madrasah of a make-believe world for would-be architects. This study had chosen studio management and studio teaching as the case study. Choice of "problem based" or "case study" projects with intangible element of social and environmental contributions based on *"tawhid"* or remembrance on the oneness of the "Creator" as a submission, is constantly raised amidst the act of balancing in meeting the accredited requirements of the professional board. The bigger needs of the society/*ummah,* humanity and the environment, with the expectations of the future *khalifah's* is kept in view always.

In architectural discipline, the teachers need to self-nurtured with good conscience and responsibility towards Allah, Mankind and Environment to produce as many quality architects and architecture related *khalifahs* to enhance the built environment based on the *tawhidic* approach. Findings revealed that not one methodology is perfect. The approach needs constant reviewing to suit the nature of the stakeholders – the students, the society/*ummah*, humanity, the environment, within the

*tawhidic*framework. To date atotal of over 800students of B.Sc. Science Architectural Studies and 255students of Bachelor of Architecture had since graduatedfrom 2001 as *khalifahs* of the built environment. While learning never ends, the students' successin life as alumni either as an architect or as a person of good character, providesthe motivational factor that gives meaning to the endless hours of teaching and nurturing, as pure joy.

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