KEMENTERIAN AGAMA RI
DIREKTORAT JENDERAL PENDIDIKAN ISLAM

Jl. Lapangan Banteng Barat No. 3-4 Jakarta Tel. 021-3811642, 3811654, 3853449
Fax: 021-3812344, 021-34833981 http://pendis.kemenag.go.id/diktis.kemenag.go.id
J A K A R T A

Nomor	: 2361/Dj.I.III/PP.04/08/2018	Jakarta, 02 Agustus 2018
Sifat	: Biasa	
Lamp	: -	
Perihal	: *Pengumuman Pengajuan Proposal Penelitian, Publikasi Ilmiah dan Pengabdian kepada Masyarakat tahun 2019*	

Kepada Yth.
1. **Rektor UIN/IAIN Se-Indonesia**
2. **Ketua STAIN Se-Indonesia**
3. **Kopertais I-XIII**

di-
   Tempat

Assalamu'alaikum wr. wb.

Dalam rangka perencanaan anggaran tahun 2019 untuk penelitian, publikasi ilmiah dan pengabdian kepada masyarakat, baik pada Direktorat Pendidikan Tinggi Keagamaan Islam (PTKI) maupun di kampus PTKIN, maka dengan ini diumumkan beberapa hal terkait hal itu:

1. Semua SK Rektor/Pimpinan PTKI tentang penelitian, publikasi ilmiah dan pengabdian kepada masyarakat dari PTKIN harus diunggah (*upload*) ke portal **litapdimas.kemenag.go.id.** sebagai salah satu syarat pertimbangan dana penelitian, publikasi ilmiah dan pengabdian kepada masyarakat pada tahun 2019.

2. Diperlukan pembaruan atau pendaftaran ulang admin LP2M/P3M untuk operator litapdimas.kemenag.go.id. setiap PTKIN dengan surat tugas Rektor atau lembaga yang diberi wewenang Rektor. Jumlah admin minimal 3 (tiga) orang bagi IAIN/UIN dan 2 (dua) orang untuk STAIN. Adapun ketentuan admin sesuai dengan petunjuk teknis sebelumnya.

3. Bagi yang belum mempunyai ID peneliti harus mendaftarkan diri ke litapdimas.kemenag.go.id. sesuai jadwal yang ditentukan.

4. Mekanisme pengusulan proposal melalui litapdimas mengalami perbaikan, demi menjaga kualitas dan mutu proposal penelitian, yaitu dengan menulis secara langsung dalam form litapdimas.kemenag.go.id. (*fill in*) sesuai ketentuan.

5. Bagi PTKIS segala ketentuan pengajuan proposal mengikuti agenda klaster di Pusat (Direktorat PTKI).

6. Pengusulan proposal akan dimulai terlebih dahulu untuk klaster di pusat, baik penelitian, publikasi ilmiah maupun pengabdian kepada masyarakat pada tanggal 10-25 Agustus 2018. Untuk pengusulan proposal bagi PTKIN pada 1-15 September 2018 sesuai jadwal.

7. Klaster-klaster di tingkat pusat, sebagai berikut:

   A. PENELITIAN DAN PENGELOLAAN HKI

       A.1. Penelitian Kolaborasi internasional

       A.2. Penelitian Terapan Global/Internasional

       A.3. Penelitian Afirmasi Program Pasca Sarjana

       A.4. Sabbatical Leave Luar Negeri

       A.5. Sabbatical Leave Dalam Negeri (Professor Exchange)

       A.6. Short Course Overseas Research Methodology

       A.7. Short Course Metodologi Penelitian Perempuan dan Anak

       A.8. Short Course Metodologi Penelitian Agama dan Budaya

       A.9. Short Course Metodologi Penelitian Sains dan Islam

Klaster khusus PTKIS, sebagai berikut:

A.9. Penelitian Pembinaan/Kapasitas

A.10. Penelitian Dasar Interdisipliner

A.11. Penelitian Dasar Pengembangan Program Studi

A.12. Penelitian Pengembangan Nasional

B. PUBLIKASI ILMIAH

B.1. Bantuan Peningkatan Kualitas Jurnal

B.2. Penulis Jurnal Internasional Bereputasi.

B.3. Penyelenggaraan Konferensi Jurnal Tahunan.

B.4. Konferensi Internasional dalam negeri.

B.5. Alih Media/Film Pendek/Video Dokumenter.

B.6. Shortcourse Overseas Academic Skill Writing.

C. PENGABDIAN KEPADA MASYARAKAT

C.1. Pengabdian kepada Masyarakat Berbasis Riset Unggulan Nasional

C.2. Pengabdian kepada masyarakat terintegrasi Nasional

C.3. Short Course Pengabdian Berbasis Riset

C.4. Short Course Overseas Community Development

8. Klaster-klaster di PTKIN, sebagai berikut:

A. PENELITIAN

A.1. Penelitian Pembinaan/Kapasitas

A.2. Penelitian Dasar Pengembangan Program Studi

A.3. Penelitian Dasar Interdisipliner

A.4. Penelitian Pengembangan Pendidikan Tinggi

A.5. Penelitian Terapan Kajian Strategis Nasional

A.6. Penelitian Terapan Pengembangan Nasional

A.7. Penelitian Kolaborasi antar Perguruan Tinggi

B. PENGABDIAN KEPADA MASYARAKAT

B.1. Pendampingan Komunitas

B.2. Pengabdian Berbasis Riset

B.3. Stimulan Pendampingan Komunitas Kolaborasi antar lembaga

B.4. Pengabdian berbasis Program Studi

C. PUBLIKASI ILMIAH

C.1. Penulisan dan Penerbitan buku Berbasis riset dan E-Book

C.2. Penerbitan Buku Ajar berbasis riset; Buku Teks/Daras/Ajar/Reference

C.3. Penghargaan Penulisan buku Agama

C.4. Jurnal terakreditasi

9. Ketentuan Umum:

Pada dasarnya, semua penelitian di lingkungan Direktorat Pendidikan Tinggi Keagamaan Islam (PTKI) merupakan penelitian untuk integrasi keilmuan. Semua klaster penelitian dapat mengajukan judul penelitian tentang integrasi keilmuan, sebagai distingsi PTKI dengan PTU. Adapun ketentuan umum dalam pengusulan penelitian, pengabdian kepada masyarakat dan publikasi ilmiah sebagai berikut:

a. Pengusul harus mempunyai ID litapdimas, baik ketua ataupun anggota

b. Pengusul adalah tenaga fungsional, baik dosen, pustakawan, maupun laboran.

c. Peneliti, pengabdi, dan pengelola jurnal harus ber-NIDN dan mempunyai jabatan fungsional. Adapun khusus pustakawan/laboran tidak diharuskan ber-NIDN. Klaster pembinaan/kapasitas tidak diharuskan memiliki jabatan fungsional. Bagi yang mempunyai jabatan fungsional, klaster pembinaan/kapasitas hanya dikhususkan bagi asisten ahli.

d. Penelitian harus berkelompok, kecuali penelitian pembinaan/kapasitas dan program pascasarjana harus individu.

e. Selain klaster pembinaan/kapasitas, ketua peneliti harus memiliki jabatan fungsional minimal lektor atau menjabat sebagai ketua jurusan.

f. Penelitian kolaborasi internasional harus mencantumkan mitra luar negerinya.

g. Penelitian afirmasi program pascasarjana diperuntukkan bagi dosen PTKI yang sedang menempuh program doktoral di PTKI dan sedang proses penulisan disertasi minimal sudah menyelesaikan tiga bab.

h. Khusus pengusul bantuan pengelola jurnal dapat mengusulkan juga untuk penelitian atau pengabdian.

i. Jumlah anggaran atau nominal setiap klaster masih mengacu pada ketentuan petunjuk teknis tahun 2017/2018, kecuali sudah ada petunjuk teknis terbaru setelah surat ini.

10. Tema-tema penelitian, pengabdian kepada masyarakat dan publikasi ilmiah mengacu pada 15 (lima belas) tema Agenda Riset Keagamaan Nasional (ARKAN):

No	TEMA	SUB-TEMA
1	Kajian Teks Suci dalam Agama-agama	1. Kitab suci 2. Teks dan kehidupan masyarakat (*living* Quran dan Hadits) 3. Dialog antar teks dan studi agama-agama 4. Sastra dan teks suci dalam sejarah 5. Penterjemahan dan tafsir (hermeneutika) 6. Kitab dan interpretasi antar iman 7. Pertemuan teks dan iman 8. Kritik sastra dan teks
2	Syariah, Hukum dan Peraturan Perundang-undangan	1. Pancasila sebagai dasar negara 2. *Maqasid syariah* 3. Islam dan konstitusi 4. HAM dan humanitair 5. Pranata hukum 6. *Fiqh Dhoruri* 7. Lembaga layanan hukum dan keagamaan
3	Negara, Agama, dan Masyarakat	1. Identitas kebangsaan 2. Kewarganegaraan 3. Demokrasi 4. Gerakan sosial 5. Sekularisasi 6. Organisasi kemasyarakatan 7. Etnisitas 8. Relasi agama dan negara 9. Demokrasi, sekularisasi, patriotisme 10. Pemilihan umum 11. Desentralisasi
4	Keragaman dalam Etnis, Budaya, Sosial, dan Tradisi Keagamaan	1. Teori keragaman (budaya lokal) 2. Kebijakan negara tentang keragaman 3. Pendidikan dan keragaman 4. Dialog antar iman, agama, dan lembaga 5. Tokoh dan individu 6. Konteks global dan lokal 7. Masyarakat plural 8. Konflik dan resolusi

No	TEMA	SUB-TEMA
		9. Minoritas-mayoritas
		10. Radikalisme, fundamentalisme, liberalism, moderasi (*tawasuth*)
5	Studi Kawasan dan Globalisasi	1. Studi komparatif kawasan (Negara - negara di Asia, Eropa, Amerika, Afrika dan Australia); 2. Migrasi dan globalisasi; 3. *Human security* di beberapa kawasan konflik; 4. Pertahanan dan keamanan kawasan; 5. Ekonomi, sosial, agama regional dan global; 6. Tenaga kerja Indonesia (TKI/TKW); 7. Pengungsi (*refugees*)
6	Tradisi Pesantren dalam Konteks Masyarakat Indonesia	1. Karya dan tokoh 2. *Manhaj* pesantren 3. Sumber daya 4. Inovasi 5. Ekonomi 6. Kesehatan 7. Budaya
7	Pengembangan Pendidikan	1. Kajian kurikulum 2. Manajemen 3. Pendidik dan tenaga kependidikan 4. Inovasi pendidikan 5. Pengembangan kemitraan 6. *Character building* 7. Pengembangan pendidikan inklusi dan disabilitas 8. Pendidikan minoritas (anak jalanan, suku terasing) 9. Tema-tema pendidikan kontemporer 10. Psikologi 11. Pendidikan multicultural 12. Kepemudaan
8	Sejarah, Arkeologi dan Manuskrip	1. Penemuan naskah 2. Penterjemahan/alih bahasa 3. Pentashihan 4. Preservasi naskah 5. Benda-benda arkeologi 6. Periodisasi dan kronologi 7. Karya-karya ulama nusantara
9	Pengembangan Ekonomi dan Bisnis Berbasis Syariah	1. Ekonomi syariah 2. Perbankan syariah 3. Bisnis syariah (wisata, hotel) 4. Lembaga keuangan makro dan mikro
10	Isu Jender dan Keadilan	1. Teori feminism 2. Kesetaraan dan diskriminasi 3. Lingkungan ramah anak dan perempuan 4. Kesehatan reproduksi 5. Lesbian, gay, biseksual dan transgender (LGBT)
11	Kesejahteraan Sosial dalam Masyarakat	1. Suku terasing 2. Desa tertinggal 3. Narkoba 4. Manula 5. Anak jalanan 6. Disabilitas 7. Panti asuhan
12	Lingkungan dan Pengembangan Teknologi	1. Agama, masyarakat dan respons lingkungan 2. *Information technology system* (sistem teknologi informasi) 3. Teknologi dan globalisasi 4. Masyarakat religious dan lingkungan 5. Teknologi terapan 6. Teknologi dasar 7. Sains dasar
13	Pengembangan Kedokteran dan Kesehatan	1. Teknologi Kedokteran dan Kesehatan 2. Inovasi kedokteran 3. Produk Halal (obat dan vaksin) 4. Asuransi kesehatan syariah 5. Pelayanan kesehatan berbasis syariah 6. Integrasi kedokteran dan keislaman
14	Generasi Millenial dan Budaya Indonesia	1. Pandangan Keagamaan 2. Relasi Agama dan Negara 3. Kreatifitas pada Seni dan Tradisi 4. Teknologi Informasi 5. Ekonomi Kreatif 6. Media Sosial
15	Lain-lainnya	Psikologi, Sosiologi, Budaya, dst.

Informasi lebih lanjut dapat diakses pada **pendis.kemenag.go.id**, **diktis.kemenag.go.id.** atau **litapdimas.kemenag.go.id**. Demikian surat ini disampaikan, atas perhatian dan kerja samanya disampaikan terima kasih.

Wassalamu'alaikum Wr. Wb.

a.n. Direktur Jenderal
Direktur Pendidikan Tinggi Keagamaan Islam

ttd.

M. Arskal Salim GP

Tembusan:
Yth. Direktur Jenderal Pendidikan Islam (*sebagai laporan*)

KEMENTERIAN AGAMA REPUBLIK INDONESIA
DIREKTORAT JENDERAL PENDIDIKAN ISLAM
Jl. Lapangan Banteng Barat No. 3-4 Jakarta Tel. 021-3811642, 3811654, 3853449
Fax: 021-3812344, 021-34833981 http://pendis.kemenag.go.id/diktis.kemenag.go.id
J A K A R T A

Nomor : 953/DJ.I/Dt.I.III.5/HM.00.01/03/2019   14 Maret 2019
Sifat : Biasa
Lamp : Jadual dan Peserta
Perihal : Annual Conference Research Proposal (ACRP) PTKIN Tahun Anggaran 2019

Kepada yang Terhormat
Bapak/Ibu Rektor/Ketua Perguruan Tinggi Keagamaan Islam Negeri (PTKIN)
di-
     Tempat

Assalamu'alaikum Warahmatullahi Wabarakatuh

Dalam rangka pengendalian mutu dan kualitas bantuan peneltian, pengabdian, dan publikasi ilmiah Tahun Anggaran 2019 di lingkungan Direktorat Pendidikan Tinggi Keagamaan Islam, maka dipandang perlu untuk melaksanakan *Annual Conference Research Proposal (ACRP)* untuk Perguruan Tinggi Keagamaan Islam Negeri (PTKIN) Tahun Anggaran 2019. ACRP akan diikuti oleh seluruh *nomine* kecuali **klaster penulis jurnal internasional bereputasi.** Oleh karena itu, kami memohon kepada Bapak/Ibu untuk menugaskan para *Nomine* yang berasal dari PTKIN yang Bapak/Ibu pimpin sebagaimana terlampir untuk hadir pada:

Hari, Tanggal   : Selasa-Rabu, 26-27 Maret 2019
Tempat   : Hotel Horison Grand Serpong
               Jl. MH Thamrin KM 2.7 Serpong, Tangerang
Acara   : *Annual Conference Research Proposal (ACRP)* untuk PTKIN
Kegiatan dimulai : Selasa, 26 Maret 2019 Pukul 08.00 WIB
Check out   : Rabu, 27 Maret 2019 Pukul 12.00 WIB

Berkaitan dengan kegiatan tersebut, agar diperhatikan ketentuan sebagai berikut:
1. setiap pengajuan proposal hanya diwakili oleh satu orang *nomine* dan harus tercantum dalam pengajuan di sistem litapdimas;
2. *nomine* yang akan mengikuti ACRP harus registrasi online melalui **http://bit.ly/FormulirPesertaACRP2019** selambat-lambatnya Kamis, 21 Maret 2019 Pukul 23.59 WIB;
3. *nomine* membawa kartu identitas asli dan surat tugas dari instansi masing-masing;
4. *nomine* membawa bahan presentasi;
5. *nomine* klaster penelitian afirmasi program pascasarjana harus membawa surat rekomendasi direktur pascasarjana perguruan tinggi terkait dan 3 bab disertasi yang sedang dikerjakan;
6. panitia tidak menanggung akomodasi dan transportasi *nomine* (dapat menggunakan SPD masing-masing institusi);
7. narahubung kegiatan adalah Akhlis (0853-2467-3456);
8. khusus **klaster penulis jurnal internasional bereputasi** menunggu penetapan lebih lanjut dari Direktorat PTKI.

Demikian undangan ini kami sampaikan. Atas perhatian dan kerja samanya, diucapkan terima kasih.

Wassalamu'alaikum Warahmatullahi Wabarakatuh

a.n. Direktur Jenderal
Direktur Pendidikan Tinggi Keagamaan Islam

M. Arskal Salim GP

Tembusan:
Yth. Direktur Jenderal Pendidikan Islam (*sebagai laporan*)

Lampiran
Nomor : 953/DJ.I/Dt.I.III.5/HM.00.01/03/2019
Perihal : Jadual Tentatif ACRP PTKIN Tahun Anggaran 2019

Selasa, 26 Maret 2019

08.00 – 09.00	Registrasi
09.00 – 12.00	Pembukaan secara Resmi ACRP oleh Menteri Agama RI
13.00 – 13.00	Ishoma
13.00 – 14.00	Orientasi Kegiatan ACRP
14.00 – 17.00	Presentasi dan Review Proposal
17.00 – 19.30	Ishoma
19.30 – 22.00	Presentasi dan Review Proposal (Lanjutan)
22.00 –	Istirahat

Rabu, 27 Maret 2019

08.00 – 10.00	Presentasi dan Review Proposal (Lanjutan)
10.00 – 12.00	Penutupan

*Jadwal sewaktu-waktu dapat berubah

DAFTAR NOMINE PESERTA BANTUAN (PTKIN)
BIDANG PENELITIAN, PENGABDIAN KEPADA MASYARAKAT DAN PUBLIKASI ILMIAH
DIREKTORAT PENDIDIKAN TINGGI KEAGAMAAN ISLAM
DIREKTORAT JENDERAL PENDIDIKAN ISLAM
TAHUN ANGGARAN 2019

Klaster Penelitian Kolaborasi Internasional

NO.	ID REGISTRASI	PENGUSUL	JUDUL PROPOSAL	INSTITUSI
1	191010000012608	1. Abdul Fatah Idris 2. Lianah 3. Malcolm Wegener 4. Krisantini	Material Analysis of Bauhinia Scandens and Micromorphology Using Sem-Eds Application Techniques	Universitas Islam Negeri Walisongo Semarang
2	191010000011506	1. M. Dien Madjid 2. Johan Wahyudi	History of Hajj in Indonesia and Brunei Darussalam in XVII - Present (a Comparation Study)	Universitas Islam Negeri Syarif Hidayatullah
3	191010000013693	1. Hafidz Taqiyuddin 2. M. Zainor Ridho	Blater and Politics: The Roles of Charismatic Local Strongman during the 2012 Regional Election in Bangkalan Madura Regency	Universitas Islam Negeri Sultan Maulana Hasanuddin Banten
4	191010000026703	1. Najib Kailani 2. Asep Jahidin 3. David Rose	The Lived Experience of Disabled University Graduates in Finding Employment in Yogyakarta and Melbourne	Universitas Islam Negeri Sunan Kalijaga
5	191010000011109	1. Zaki Ghufron 2. Yanwar Pribadi 3. Henk Schulte Nordholt	Indonesian Religious Communities in Europe: The Nahdlatul Ulama and Other Muslim Groups in Search of Influence	Universitas Islam Negeri Sultan Maulana Hasanuddin Banten
6	191010000012308	1. Ahmad Wira 2. Reza Fahmi 3. Syafruddin Nurdin 4. Prima Aswirna 5. Ulfatmi	Exploration Study of Local Wisdom: Islam Nusantara and Islam Hadhari in Indonesia-Malaysia	Universitas Islam Negeri Imam Bonjol Padang
7	191010000027193	1. Ribut Wahyudi 2. M. Zainuddin 3. Arif Zamhari 4. Salim Alwan Al-Husainiy 5. Eva Kepplinger	The Discursive Constructions of Hybrid Identities of Islamic Education Teachers and Lecturers as a Way to be Australian and Austrian Moslems	Universitas Islam Negeri Maulana Malik Ibrahim
8	191010000027024	1. Rahman Ambo Masse	Pilgrim Fund Management in Improving Service of Hajj Maqashid Shariah Perspective (Comparative Study on Indonesian Hajj Financial Management Agency and Tabung Haji Malaysia)	STAIN Parepare

9	191010000013250	1. M. Khusna Amal 2. Damanhur 3. Iksan	Islamist Populism and Indonesian Democratic Problems in Post-New Order Era: A Perspective of Indonesianists and Indonesian Muslim Intellectuals	IAIN Jember
10	191010000012915	1. Nur Ila Ifawati 2. Zakiyah Arifa 3. Siti Masitoh	Foreign Language Learning Strategies of Indonesian and Chinese Students: A Cross Cultural Study	Universitas Islam Negeri Maulana Malik Ibrahim
11	191010000026341	1. Yuli Yasin 2. Muhammad Irfan Helmy 3. Zawawi 4. Mehmet Toprak	دور الوقف في تحقيق التنمية المستدامة، دراسة مقارنة بين تجربة إندونيسيا وتركيا والسعودية	IAIN Pekalongan
12	191010000012201	1. Umi Farihah 2. Abd. Muhith 3. Saihan	Reading Literacy Learning in State Islamic Elementary School Iii of Bondowoso East Java (Indonesia) and National Elementary School Felda Seri Fajar of Selangor (Malaysia)	IAIN Jember
13	191010000011123	1. Tuti Kurniati 2. Neneng Windayani 3. Yaya Rukayadi	Characteristics and Bioactivity of Colostrum Kefir as Functional Food	Universitas Islam Negeri Sunan Gunung Jati
14	191010000026908	1. Sukendar 2. Priyambudi Sulistiyanto 3. Muhammad Saifullah 4. A. Hasan Asy'ari Ulama'i 5. Luthfi Rahman 6. A. Fauzan Hidayatullah	Women Access to Justice: Mediation for Domestic Violence Cases in Indonesia and Australia	Universitas Islam Negeri Walisongo Semarang
15	191010000026486	1. Lalu Supriadi Bin Mujib 2. Khairul Hamim 3. Ahmed Jaballah	At Ta'ayush As Silmi Baina Al Adyan: Dirasah Muqaranah Baina Lumbuk Wa Baris	Universitas Islam Negeri Mataram
16	191010000011563	1. Fatma Dian Pratiwi 2. Sulistyaningsih	The Millennials and Cyber Religion (Comparative Study Between Indonesia and Turkey on how Millennials Use Social Media for Religious Practices)	Universitas Islam Negeri Sunan Kalijaga
17	191010000012922	1. Septi Gumiandari 2. Uswatun Hasanah	The Implementation of Science and Islam Integration in Curriculum Development in Indonesia, Malaysia and Brunei	IAIN Syekh Nurjati Cirebon
18	191010000027524	1. Edi Erwan 2. Agus Suryawan	Effect of Coated-Leucine (King Techina Group, #20160822 or #20160823) Administration on Plasma Leucine Concentration, Plasma Metabolites and Growth Performance of Broiler Chicken	Universitas Islam Negeri Sulthan Syarif Kasim

19	191010000027202	1. Iting Shofwati	Islamic Sleeping Etiquette Practices to Reduce Sleeping Disorder Among Shift Workers in Indonesia and Malaysia	Universitas Islam Negeri Syarif Hidayatullah
		2. Catur Rosidati		
		3. Farahwahida Mohd Yusof		
20	191010000026285	1. Azhar Arsyad	The Dynamics of Arabic and Muslims Contemporary Issues in France and Austria	Universitas Islam Negeri Alauddin
		2. Sitti Aisyah Chalik		
		3. Azman		

a.n. Direktur Jenderal,
Direktur Pendidikan Tinggi Keagamaan Islam

TTD

M. Arskal Salim GP

KEPUTUSAN PEJABAT PEMBUAT KOMITMEN
DIREKTORAT PENDIDIKAN TINGGI KEAGAMAAN ISLAM
DIREKTORAT JENDERAL PENDIDIKAN ISLAM
KEMENTERIAN AGAMA
NOMOR 1968 TAHUN 2019
TENTANG
PENERIMA BANTUAN
PENELITIAN KOLABORASI INTERNASIONAL
TAHUN ANGGARAN 2019

DENGAN RAHMAT TUHAN YANG MAHA ESA

PEJABAT PEMBUAT KOMITMEN
DIREKTORAT PENDIDIKAN TINGGI KEAGAMAAN ISLAM
DIREKTORAT JENDERAL PENDIDIKAN ISLAM
KEMENTERIAN AGAMA,

Menimbang : a. bahwa untuk meningkatkan kualitas dan partisipasi aktif sivitas akademika Perguruan Tinggi Keagamaan Islam dalam penelitian, perlu dilaksanakan program bantuan Penelitian Kolaborasi Internasional Tahun Anggaran 2019;

b. bahwa nama-nama sebagaimana tercantum dalam Lampiran Keputusan ini dinilai memenuhi syarat dan ketentuan untuk menerima bantuan Penelitian Kolaborasi Internasional Tahun Anggaran 2019;

c. bahwa berdasarkan pertimbangan sebagaimana dimaksud dalam huruf a dan huruf b, perlu menetapkan Keputusan Pejabat Pembuat Komitmen Direktorat Pendidikan Tinggi Keagamaan Islam Direktorat Jenderal Pendidikan Islam Kementerian Agama tentang Penerima Bantuan Penelitian Kolaborasi Internasional Tahun Anggaran 2019;

Mengingat : 1. Undang-Undang Nomor 17 Tahun 2003 tentang Keuangan Negara (Lembaran Negara Republik Indonesia Tahun 2003 Nomor 47, Tambahan Lembaran Negara Republik Indonesia Nomor 4286);

2. Undang-Undang Nomor 14 Tahun 2005 tentang Guru dan Dosen (Lembaran Negara Republik Indonesia Tahun 2005 Nomor 157, Tambahan Lembaran Negara Republik Indonesia Nomor 4586);

3. Undang-Undang Nomor 12 Tahun 2012 tentang Pendidikan Tinggi (Lembaran Negara Republik Indonesia Tahun 2012 Nomor 158, Tambahan Lembaran Negara Republik Indonesia Nomor 5336);

4. Undang-Undang Nomor 12 Tahun 2018 tentang Anggaran Pendapatan dan Belanja Negara Tahun Anggaran 2019 (Lembaran Negara Republik Indonesia Tahun 2018 Nomor 223, Tambahan Lembaran Negara Republik Indonesia Nomor 6263);

5. Peraturan Pemerintah Nomor 37 Tahun 2009 tentang Dosen

(Lembaran Negara Republik Indonesia Tahun 2009 Nomor 76, Tambahan Lembaran Negara Republik Indonesia Nomor 5007);

6. Peraturan Pemerintah Nomor 45 Tahun 2013 tentang Tata Cara Pelaksanaan Anggaran Pendapatan dan Belanja Negara (Lembaran Negara Republik Indonesia Tahun 2013 Nomor 103, Tambahan Lembaran Negara Republik Indonesia Nomor 5423);

7. Peraturan Presiden Nomor 83 Tahun 2015 tentang Kementerian Agama (Lembaran Negara Republik Indonesia Tahun 2015 Nomor 168);

8. Peraturan Menteri Keuangan Nomor 190/PMK.05/2012 tentang Tata Cara Pelaksanaan Anggaran Pendapatan dan Belanja Negara (Berita Negara Republik Indonesia Tahun 2012 Nomor 1191);

9. Peraturan Menteri Agama Nomor 45 Tahun 2014 tentang Pejabat Perbendaharaan Negara pada Kementerian Agama (Berita Negara Republik Indonesia Tahun 2014 Nomor 1740) sebagaimana telah diubah dengan Peraturan Menteri Agama Nomor 63 Tahun 2016 tentang Perubahan atas Peraturan Menteri Agama Nomor 45 Tahun 2014 tentang Pejabat Perbendaharaan Negara pada Kementerian Agama (Berita Negara Republik Indonesia Tahun 2016 Nomor 2098);

10. Peraturan Menteri Agama Nomor 55 Tahun 2014 tentang Penelitian dan Pengabdian kepada Masyarakat (Berita Negara Republik Indonesia Tahun 2014 Nomor 1318);

11. Peraturan Menteri Keuangan Nomor 168/PMK.05/2015 tentang Mekanisme Pelaksanaan Anggaran Bantuan Pemerintah pada Kementerian Negara/Lembaga (Berita Negara Republik Indonesia Tahun 2015 Nomor 1340) sebagaimana telah diubah dengan Peraturan Menteri Keuangan Nomor 173/PMK.05/2016 tentang Perubahan atas Peraturan Menteri Keuangan Nomor 168/PMK.05/2015 tentang Mekanisme Pelaksanaan Anggaran Bantuan Pemerintah pada Kementerian Negara/Lembaga (Berita Negara Republik Indonesia Tahun 2016 Nomor1745);

12. Peraturan Menteri Agama Nomor 67 Tahun 2015 tentang Bantuan Pemerintah pada Kementerian Agama (Berita Negara Republik Indonesia Tahun 2015 Nomor 1655) sebagaimana telah beberapa kali diubah terakhir dengan Peraturan Menteri Agama Nomor 62 Tahun 2016 tentang Perubahan Kedua atas Peraturan Menteri Agama Nomor 67 Tahun 2015 tentang Bantuan Pemerintah pada Kementerian Agama (Berita Negara Republik Indonesia Tahun 2016 Nomor 2097);

13. Peraturan Menteri Agama Nomor 42 Tahun 2016 tentang Organisasi dan Tata Kerja Kementerian Agama (Berita Negara Republik Indonesia Tahun 2016 Nomor 1495);

14. Peraturan Menteri Keuangan Nomor 32/PMK.02/2018 tentang Standar Biaya Masukan Tahun Anggaran 2019 (Berita Negara Republik Indonesia Tahun 2018 Nomor 511);

15. Peraturan Menteri Keuangan Nomor 69/PMK.02/2018 tentang Standar Biaya Keluaran Tahun Anggaran 2019

(Berita Negara Republik Indonesia Tahun 2018 Nomor 847);

16. Keputusan Direktur Jenderal Pendidikan Islam Nomor 5459 Tahun 2018 tentang Petunjuk Teknis Program Bantuan Penelitian, Publikasi Ilmiah, dan Pengabdian kepada Masyarakat Tahun Anggaran 2019;

MEMUTUSKAN:

Menetapkan : KEPUTUSAN PEJABAT PEMBUAT KOMITMEN DIREKTORAT PENDIDIKAN TINGGI KEAGAMAAN ISLAM DIREKTORAT JENDERAL PENDIDIKAN ISLAM KEMENTERIAN AGAMA TENTANG PENERIMA DANA BANTUAN PENELITIAN KOLABORASI INTERNASIONAL TAHUN ANGGARAN 2019.

KESATU : Menetapkan Penerima Dana Bantuan Penelitian Kolaborasi Internasional Tahun Anggaran 2019 sebagaimana tercantum dalam Lampiran yang merupakan bagian tidak terpisahkan dari Keputusan ini.

KEDUA : Mekanisme pencairan dan penggunaan bantuan:

a. Proses pencairan bantuan mengacu kepada peraturan perundang-undangan;
b. Penggunaan bantuan adalah untuk membantu sivitas akademika Perguruan Tinggi Keagamaan Islam dalam pelaksanaan peningkatan mutu penelitian pada PTKI;
c. Penggunaan bantuan dipertanggungjawabkan oleh penerima dana bantuan dan dilaporkan kepada Direktur Pendidikan Tinggi Keagamaan Islam; dan
d. Ketentuan-ketentuan lain berkenaan dengan pelaksanaan dan pelaporan mengacu kepada petunjuk teknis yang telah ditetapkan.

KETIGA : Pemberian bantuan sebagaimana dimaksud dalam Diktum KESATU dibebankan pada Daftar Isian Pelaksanaan Anggaran (DIPA) Direktorat Jenderal Pendidikan Islam Kementerian Agama Tahun Anggaran 2019 Nomor: 025.04.1.426302/2019, 05 Desember 2018 dengan Kode Mata Anggaran Nomor 025.04.07.2132.050.514.004.E.521219.

KEEMPAT : Keputusan ini mulai berlaku pada tanggal ditetapkan.

Ditetapkan di Jakarta
pada tanggal 08 April 2019

PEJABAT PEMBUAT KOMITMEN
DIREKTORAT PENDIDIKAN TINGGI
KEAGAMAAN ISLAM
DIREKTORAT JENDERAL PENDIDIKAN ISLAM,

Disahkan Oleh
DIREKTUR JENDERAL,

KAMARUDDIN AMIN

M. ARSKAL SALIM GP

LAMPIRAN
KEPUTUSAN PEJABAT PEMBUAT KOMITMEN
DIREKTORAT PENDIDIKAN TINGGI KEAGAMAAN ISLAM
DIREKTORAT JENDERAL PENDIDIKAN ISLAM
Nomor: 1968 Tahun 2019 Tanggal: 08 April 2019
Tentang

**PENERIMA BANTUAN PENELITIAN KOLABORASI INTERNASIONAL
DIREKTORAT PENDIDIKAN TINGGI KEAGAMAAN ISLAM
TAHUN 2019**

NO	ID REGISTRASI	PENGUSUL	JUDUL PROPOSAL	INSTITUSI	BESARAN BANTUAN (RP)
1	191010000027524	Edi Erwan	Effect of Coated-Leucine (King Techina Group, #20160822 or #20160823) Administration on Plasma Leucine Concentration, Plasma Metabolites and Growth Performance of Broiler Chicken	Universitas Islam Negeri Sulthan Syarif Kasim Riau	200.000.000
		Agus Suryawan			
2	191010000027120	Nanang Nurcholis	Indian Cultural Agents Network's Role in the Formation of Javanese Islam in the 13 Th - 17 Th Century (Historical and Cultural Political Perspective)	FAI Univ. Wahid Hasyim Semarang (UWH), Jawa Tengah	200.000.000
		Noor Achmad			
		Misbah Zulfa Elizabeth			
		Syed Inayet Ali Zaidi			
3	191010000026285	Azhar Arsyad	The Dynamics of Arabic and Muslims Contemporary Issues in France and Austria	Universitas Islam Negeri Alauddin Makassar	180.000.000
		Sitti Aisyah Chalik			
		Azman			
4	191010000011109	Zaki Ghufron	Indonesian Religious Communities in Europe: The Nahdlatul Ulama and Other Muslim Groups in Search of Influence	Universitas Islam Negeri Sultan Maulana Hasanuddin Banten	220.000.000
		Yanwar Pribadi			
		Henk Schulte Nordholt			
5	191010000027202	Iting Shofwati	Islamic Sleeping Etiquette Practices to Reduce Sleeping Disorder Among Shift Workers in Indonesia and Malaysia	Universitas Islam Negeri Syarif Hidayatullah Jakarta	180.000.000
		Catur Rosidati			
		Farahwahida Mohd Yusof			

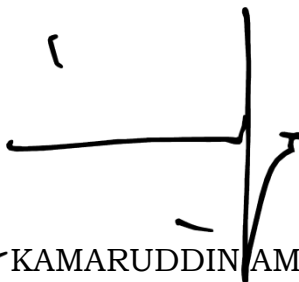| 6 | 191010000026703 | Najib Kailani | The Lived Experience of Disabled University Graduates in Finding Employment in Yogyakarta and Melbourne | Universitas Islam Negeri Sunan Kalijaga Yogyakarta | 200.000.000 |
		Asep Jahidin			
		David Rose			
7	191010000012608	Abdul Fatah Idris	Material Analysis of Bauhinia Scandens and Micromorphology Using Sem-Eds Application Techniques	Universitas Islam Negeri Walisongo Semarang	170.000.000
		Lianah			
		Malcolm Wegener			
		Krisantini			
8	191010000011123	Tuti Kurniati	Characteristics and Bioactivity of Colostrum Kefir as Functional Food	Universitas Islam Negeri Sunan Gunung Djati Bandung	180.000.000
		Neneng Windayani			
		Yaya Rukayadi			
9	191010000026341	Yuli Yasin	دور الوقف في تحقيق التنمية المستدامة، دراسة مقارنة بين تجربة إندونيسيا وتركيا والسعودية	IAIN Pekalongan	175.000.000
		Muhammad Irfan Helmy			
		Zawawi			
		Mehmet Toprak			
10	191010000026908	Sukendar	Women Access to Justice: Mediation for Domestic Violence Cases in Indonesia and Australia	Universitas Islam Negeri Walisongo Semarang	180.000.000
		Priyambudi Sulistiyanto			
		Muhammad Saifullah			
		A. Hasan Asy'ari Ulama'i			
		Luthfi Rahman			
		A. Fauzan Hidayatullah			
11	191010000011563	Fatma Dian Pratiwi	The Millennials and Cyber Religion (Comparative Study Between Indonesia and Turkey on how Millennials Use Social Media for Religious Practices)	Universitas Islam Negeri Sunan Kalijaga Yogyakarta	160.000.000
		Sulistya ningsih			
12	191010000012922	Septi Gumiandari	The Implementation of Science and Islam Integration in Curriculum Development in Indonesia, Malaysia and Brunei	IAIN Syekh Nurjati Cirebon	180.000.000
		Uswatun Hasanah			

13	191010000027193	Ribut Wahyudi	The Discursive Constructions of Hybrid Identities of Islamic Education Teachers and Lecturers as a Way to be Australian and Austrian Moslems	Universitas Islam Negeri Maulana Malik Ibrahim Malang	170.000.000
		M. Zainuddin			
		Arif Zamhari			
		Salim Alwan Al-Husainiy			
		Eva Kepplinger			
14	191010000012308	Ahmad Wira	Exploration Study of Local Wisdom: Islam Nusantara and Islam Hadhari in Indonesia-Malaysia	Universitas Islam Negeri Imam Bonjol Padang	170.000.000
		Reza Fahmi			
		Syafruddin Nurdin			
		Prima Aswirna			
		Ulfatmi			
15	191010000013250	M. Khusna Amal	Islamist Populism and Indonesian Democratic Problems in Post-New Order Era: A Perspective of Indonesianists and Indonesian Muslim Intellectuals	IAIN Jember	180.000.000
		Damanhuri			
		Iksan			
16	191010000012201	Umi Farihah	Reading Literacy Learning in State Islamic Elementary School Iii of Bondowoso East Java (Indonesia) and National Elementary School Felda Seri Fajar of Selangor (Malaysia)	IAIN Jember	160.000.000
		Abd. Muhith			
		Saihan			
17	191010000012915	Nur Ila Ifawati	Foreign Language Learning Strategies of Indonesian and Chinese Students: A Cross Cultural Study	Universitas Islam Negeri Maulana Malik Ibrahim Malang	170.000.000
		Zakiyah Arifa			
		Siti Masitoh			
18	191010000013693	Hafidz Taqiyuddin	Blater and Politics: The Roles of Charismatic Local Strongman during the 2012 Regional Election in Bangkalan Madura Regency	Universitas Islam Negeri Sultan Maulana Hasanuddin Banten	170.000.000
		M. Zainor Ridho			

19	191010000027024	Rahman Ambo Masse	Pilgrim Fund Management in Improving Service of Hajj Maqashid Shariah Perspective (Comparative Study on Indonesian Hajj Financial Management Agency and Tabung Haji Malaysia)	STAIN Parepare	160.000.000
		Ali Halidin			
		Majdi Amiruddin			
20	191010000026486	Lalu Supriadi Bin Mujib	At Ta'ayush As Silmi Baina Al Adyan: Dirasah Muqaranah Baina Lumbuk Wa Baris	Universitas Islam Negeri Mataram	155.000.000
		Khairul Hamim			
		Ahmed Jaballah			
21	191010000012753	Tamyiz	إمكانية التطرف من طلبة الإندونيسية في مصر و وأستراليا، وماليزيا	FAI Univ. Islam Indonesia (UII) Yogyakarta	155.000.000
		Mahsun			
22	191010000011506	M. Dien Madjid	History of Hajj in Indonesia and Brunei Darussalam in XVII - Present (a Comparation Study)	Universitas Islam Negeri Syarif Hidayatullah Jakarta	155.000.000
		Johan Wahyudi			
JUMLAH TOTAL					**3.870.000.000**

Ditetapkan di Jakarta
pada tanggal 08 April 2019

PEJABAT PEMBUAT KOMITMEN
DIREKTORAT PENDIDIKAN TINGGI
KEAGAMAAN ISLAM
DIREKTORAT JENDERAL PENDIDIKAN ISLAM,

Disahkan Oleh
DIREKTUR JENDERAL,

KAMARUDDIN AMIN

M. ARSKAL SALIM GP

SURAT PENCATATAN

CIPTAAN

Dalam rangka pelindungan ciptaan di bidang ilmu pengetahuan, seni dan sastra berdasarkan Undang-Undang Nomor 28 Tahun 2014 tentang Hak Cipta, dengan ini menerangkan:

Nomor dan tanggal permohonan	:	EC00201973573, 1 Oktober 2019
Pencipta		
Nama	:	**SEPTI GUMIANDARI, ILMAN NAFI'A**
Alamat	:	Karya Bakti RT 005 RW 010 Kelurahan Karyamulya Kecamatan Kesambi, Cirebon, Jawa Barat, 45132
Kewarganegaraan	:	Indonesia
Pemegang Hak Cipta		
Nama	:	**SEPTI GUMIANDARI, ILMAN NAFI'A**
Alamat	:	Karya Bakti RT 005 RW 010 Kelurahan Karyamulya Kecamatan Kesambi, Cirebon, Jawa Barat, 45132
Kewarganegaraan	:	Indonesia
Jenis Ciptaan	:	**Karya Tulis (Artikel)**
Judul Ciptaan	:	**The Implementation Of The Integration Of Science And Islam In Curriculum Development In Indonesia, Malaysia And Brunei**
Tanggal dan tempat diumumkan untuk pertama kali di wilayah Indonesia atau di luar wilayah Indonesia	:	1 Oktober 2019, di Cirebon
Jangka waktu pelindungan	:	Berlaku selama hidup Pencipta dan terus berlangsung selama 70 (tujuh puluh) tahun setelah Pencipta meninggal dunia, terhitung mulai tanggal 1 Januari tahun berikutnya.
Nomor pencatatan	:	000156552

adalah benar berdasarkan keterangan yang diberikan oleh Pemohon.
Surat Pencatatan Hak Cipta atau produk Hak terkait ini sesuai dengan Pasal 72 Undang-Undang Nomor 28 Tahun 2014 tentang Hak Cipta.

a.n. MENTERI HUKUM DAN HAK ASASI MANUSIA
DIREKTUR JENDERAL KEKAYAAN INTELEKTUAL

Dr. Freddy Harris, S.H., LL.M., ACCS.
NIP. 196611181994031001

LAMPIRAN PENCIPTA

No	Nama	Alamat
1	SEPTI GUMIANDARI	Karya Bakti RT 005 RW 010 Kelurahan Karyamulya Kecamatan Kesambi
2	ILMAN NAFI'A	Karya Bakti RT 005 RW 010 Kelurahan Karyamulya Kecamatan Kesambi

LAMPIRAN PEMEGANG

No	Nama	Alamat
1	SEPTI GUMIANDARI	Karya Bakti RT 005 RW 010 Kelurahan Karyamulya Kecamatan Kesambi
2	ILMAN NAFI'A	Karya Bakti RT 005 RW 010 Kelurahan Karyamulya Kecamatan Kesambi

The Implementation of The Integration of Science and Islam in Curriculum Development in Indonesia, Malaysia and Brunei

Septi Gumiandari
Uswatun Hasanah

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**Septi Gumiandari
Uswatun Hasanah**

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P R E F A C E

I n the long history of discussion about scientific integration in Islamic higher education institutions, there is one very crucial discourse/priority to be analyzed immediately, the discourse of scientific integration has not been formulated well into empirical-implementative areas. In fact, some Islamic higher education institutions have already had a scientific character and the whole concept of a unique scientific integration, and are pradigmatic-distinctively different from each others, unfortunately in the development of the implementation of the integration of science and Islam in various religious universities both in Indonesia, Malaysia and Brunei, it seems that there is a reluctance to ground the discourse of integration into a more practical and operational area.

It can't be denied, that some Islamic higher education institutions in Indonesia have dealt with uncertainty in implementing the integration of science and Islam in more operational and practical discourse. For example, UIN Syarif Hidayatullah Jakarta, does not have a significant integration pattern for their scientific intergration discourse into empirical-implementative areas. Moreover, UIN Makassar is struggling to find their concept of scientific integration through trials and experiments to generate Islamic Science by producing/publishing

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books which contain science that is associated to Islamic laws justification.

Those conditions should be responded seriously. If it is not followed up seriously, then the concept of scientific integration only stops at the level of mere discourse. Therefore, it is very important to conduct a comprehensive study related to the implementation of the integration of scientific discourse in religious universities in Indonesia, Malaysia and Brunei into operational-empirical areas, especially in the design and development of curriculum as an operational reference for the implementation of education in tertiary institutions.

This book tries to explore the practices of how Islamic higher education institutions in Indonesia, Malaysia and Brunei implement the scientific integration discourse in more operational practice, especially in the curriculum design and development. This study provides the description of best practices from some sample universities in three countries that can be used by other Islamic institutions to improve their curriculum management. In Indonesia context particularly, this attempts aim at formulating the concept of scientific integration systematically, empirically and operationally in the context of curriculum development and learning process in each institution.

The Research team realizes that conducting studies on scientific integration in three countries: Indonesia, Malaysia and Brunei is not easy. It will not be completed through research activities that are of short duration and in partial research activity, becaure it needs ongoing discussion by other researchers as well. That is because the scope of the study is quite broad and the samples taken are feared unable to represent all universities in the three countries. In addition, when talking about the implementation of the concept of scientific integration in the curriculum and learning, which of course its formulation requires the cooperation of

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all parties; the involvement of lecturers, professors, and most important is the political will from the top of the leader himself. That is because, through policies at the leadership level, the study of scientific integration can be well systemized and can continuously be studied, developed, and even applied at a more practical operational level, namely at the curriculum and learning level.

Nevertheless, researchers still hope that this research can make a substantive and positive contribution, at least it can become a 'mild reference' in seeding, fostering, continuing to foster a spirit of developing scientific integration in various Muslim countries. This study is expected to be used as a light step from the efforts made by the predecessors of this study in order to complete the search for models for a more systematic and sustainable scientific paradigm that can be continuously studied, developed, and even applied at a more practical operational level, namely at the curriculum level and learning.

Finally, the Research Team felt the need to express gratitude to Allah SWT for for all the blessings and gifts given to us, so that the Authors can compile books on the theme of scientific integration. Shalawat and salutations were conveyed to the Prophet Muhammad SAW. With his determination in defending the religion of God has led us to efforts towards understanding the teachings of Islam towards a better direction.

Appreciation and gratitude are also given to to the Ministry of Religious affairs, which in this case was represented by the Research Sub Directorate DIKTIS, especially the section of research and publications, who provided financial support, through the grant of an international collaborative research cluster, for the implementation of this research journey until the completion of this academic work. In addition, appreciation and gratitude were conveyed too for researchers' colleagues, through intellectual interaction with them, researchers are able to strengthen their

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analysis in the development of this research. Appreciation is also addressed to the leadership of IAIN Syekh Nurjati Cirebon, particularly the Chairperson of the Research Center (Kapuslit) who has supported the research process and provided discussion forums related to this research, as well as book readers, for their willingness to take the time to read this book and provide constructive suggestions or criticism in order to improve this study going forward.

The Research Team believes that this study still has too many shortcomings and weaknesses both technical and non-technical terms. Therefore, we do really apologize. We hope that what is presented in this scientific work can be useful and meet the expectations of all parties, especially those interested in scientific integration studies.

Cirebon, November 30, 2019

Researchers.

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Chapter I

I N T R O D U C T I O N

A. RESEARCH BACKGROUND

In the last 20 years, Islamic higher education institutions focused more on the study of Islamic sciences that tend to be exclusive without opening up to the development of general sciences. Nowadays, there is a new tendency where Islamic higher education institutions begin to open themselves to the presence of general sciences. The indicator can be seen in the number of Islamic higher education institutions that try to insert general knowledge in their fields of work such as Biology, Mathematics, Psychology, Social sciences and various other non-Islamic studies. These various disciplines have been taught in Islamic higher education institutions in Indonesia, Malaysia and Brunei since 10 years ago. The question is, what is the difference between studying and teaching various knowledge in Islamic labeled institutions with other public universities such as Gadjah Mada University (UGM), University Kebangsaan Malaysia (UKM), Sultan Sharif Ali Islamic University (Brunei), University of Indonesia (UI), and other public universities in Indonesia, Brunei and Malaysia?. If the answer is the same, then what is the urgency of opening a general study program in Islamic higher education institutions of Indonesia, Brunei and

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Malaysia?. If the answer is different, where is the difference?. This question does not seem to have received a conclusive answer, and this reflects the existence of a very acute epistemological problem faced by Islamic higher education institutions in both countries: Indonesia and Malaysia today.

Apart from the epistemological problems above, on the other hand, the phenomenon of the rise of Islamic higher education institutons inserting general knowledge above actually shows a strong tendency of Islamic thinkers and educators who want to keep Islam active in giving color to modernity. This effort is increasingly evident when various Islamic universities in Indonesia and Malaysia try to respond to the idea of the Islamization of science through the scientific integration-interconnection (I-kon) illustrated in "the scientific spider web" paradigm (Abdullah n Waryani: 2014), the State Islamic university of Malang with "the tree knowledge" paradigm (Suprayogo: 2009), State Islamic university of Surabaya with "the Integrated twin towers" paradigm (Huda: 2017)," as well as Malaysia with the concept of "the Islamization of science" carried out by Ismail Razi al-Faruqi developed at the International Institute of Islamic Studies (IIIT), Sultan Sharif Ali Islamic University, International Islamic University Malaysia (IIUM) (Alias: 2010).

Those paradigm and scientific concepts above derive from the same idea that is to develop a more integrative science. The dichotomy of Islamic and non Islamic studies which has been the paradigm of scientific development is considered as one of the reasons for enhancing Islamic higher education bargaining. The dichotomy of Islamic and non-Islamic studies caused inequality in the management of

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education, between educational institutions that manage religion and sciences in general. In addition, the existence of a dichotomy of science also greatly influences the way of looking at society. In the Islamic community, there is a view that only Islamic sciences such as *Fiqh*, the science of the *Qur'an*, *hadith*, *Sufism* and others must be studied. Meanwhile, sciences such as physics, chemistry, geography, sociology are considered secular and they are not required to be studied. There are also those who hold the view that Islamic sciences are not needed in modern life. Meanwhile the general sciences are field of knowledge that suits the needs of the modern world so it is very necessary to learn.

The opinion above greatly affects the existence of universities with Islamic labels which are getting weaker. Therefore, there needs to be a new scientific paradigm that can make Islamic higher education as a center for the development of science that can still be controlled. This is where the integration of science and Islam gain its momentum. The issue of integration of science and Islam can at least re-perception the public in general and not to underestimate the existence of Islamic higher education institutions nowadays.

In order to respond to the issue above, this study tries to trace the extent to which the concept has been carried out and implemented in various scientific fields in three countries, including in the development of its curriculum. Through the interview process with key persons and documentation studies on various documents in several universities in three countries, the results were obtained that there are some similarities and differences in the process of theorizing the concept of integration of science and Islam, as well as a model

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of scientific integration developed in the curriculum and the implementation of learning which has begun to be formulated conceptually.

B. THEORETICAL BASIS AND POSITIONAL DISCOURSES

1. Definition of Science Integration

The word integration literally comes from the English language, integration which means "merging." According to the Indonesian Dictionary (KBBI), the word integration comes from the verb integrate, which means to unite, combine, and unite. In other words, integration means combining several things into one solid unit, intact and inseparable from one another, so that the word integration means blending into a unified and rounded unit.

In the scientific context, the meaning of the integration of science is a process of not separating between one scientific discipline with other scientific disciplines which has been considered dichotomous, to make improvements or unite the sciences (religion and general) so as to produce an integrative understanding pattern of science concept. All of these sciences operate according to their context and complement each other and provide benefits in human life. Therefore, the integration of science and Islam means the integration or merging of scientific studies with Islam, or the integration of scientific studies with creed or sharia.

The results of the integration are really integrated into a study or discussion, both in the discussion of Islamic studies and in the discussion of scientific studies. So that the discussion about science cannot be separated from the creed or sharia, nor can the discussion on Islamic studies be

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separated from the discussion of science. M. Amir Ali stated that *"integration of sciences means the recognition that all true knowledge is from God and all sciences should be treated with equal respect whether it is scientific or revealed."*

So, according to M. Amir Ali, the concept of scientific integration departs from the premise *that all true knowledge comes from God.* In another sense, M. Amir Ali also uses the terms *all correct theories are from God and false theories are from men themselves or inspired by Satan*. With almost the same understanding Usman Hassan in Husni Toyyar uses the term *"knowledge is the light that comes from God"*.

Based on the meaning of the integration of science and Islam above, the learning of all sciences, both Islamic studies as well as social and exact sciences, has two functions. In learning science, in addition to functioning to instill cognitive, psychomotor, and affective relating to the theory being taught, it also functions for the learning of faith or sharia that is relevant to the topic being taught.

Likewise, Islamic studies, in addition to functioning as an inclusion and offsetting of Islamic knowledge, also serves to encourage students to study science as an object of study inseparable from the faith or sharia. This is in accordance with what is meant by Kadar M. Yusuf, that the motivation to study nature is one aspect that is obtained from the Koran as a source of learning. Likewise studying nature, where one must obtain from studying nature is the messages of faith and unity contained in the object being studied. Kadar M. Yusuf emphasized:

"There are three aspects that need to be learned from the Qur'an as a source of learning. First, messages relating to

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normative law must be practiced in this life. Secondly, the motivation of the Qur'an towards humans to study nature. Third, humans can capture the uniqueness and beauty of the Koran, so that it is realized that the Koran originates from the Designer and Creator of this nature.[1]"

Furthermore, the level of M. Yusuf said: *"According to the Qur'an there are at least two things that are expected to result from studying nature and all of its contents. First, scientific theories and natural laws are very useful in human life in this world, both individually and in relation to God. Second, the messages of faith or monotheism contained in the object being studied."*

Therefore, the issues discussed in learning using an integrated curriculum of science and Islam do not only focus on the scientific field taught but must be combined with the faith, so that science learning also means learning in the belief in monotheism. Likewise the study of Islamic studies, it also means encouragement to study nature and its contents as part of the verses of Allah.

Associated with the understanding of the integration of science, there are other terms that are also popularly used, namely the term Islamization of science which is often interpreted also to bring within Islam (including the spirit / perspective of Islam in it). This interpretation requires two main principles. First, the main source of all knowledge is the Koran and Hadith; Second, the method used to obtain knowledge and knowledge must be Islamic.

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[1]Kadar M. Yusuf. 2013. *Tafsir Tarbawi; Pesan-pesan Alquran tentang Pendidikan.* Jakarta: Amzah, p. 22.

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This is as reinforced by Kuntowijoyo who stated that the core of integration is an effort to unite that is not merely combining God's revelation and human findings.[2] Furthermore, Imam Suprayogo interprets the concept of Integration, as he applied in the scientific development at UIN Malang, as *"making al-Qur'an and Sunnah as grand theories of knowledge, so that the verses of qauliyah and kauniyah can be used."*[3] The meaning of Imam Suprayogo has further included the perspective of Islam (al-Qur'an and Sunnah) as a perspective in the process of formulating the concept of integration of science and Islam in the PTKIN environment.

In line with the meaning above, Ismail al-Faruqi interpreted the Islamization of science as a reciprocal relationship between reality and aspects of revelation. [4]

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[2]Kuntowijoyo. 2005. *Islam Sebagai Ilmu*, Jakarta: Penerbit Teraju, p. 57-58.

[3]Imam Suprayogo. 2005. "Membangun Integrasi Ilmu dan Agama: Pengalaman UIN Malang" in Zainal Abidin Bagir (ed)., *Integrasi Ilmu dan Agama: Interpretasi dan Aksi*, Bandung: Mizan, p. 49-50.

[4]Ismail al-Faruqi was born in Jaffa, Palestine on January 1, 1921. His father was named Abdullah al-Huda al-Faruqi, a judge and religious figure who was quite well-known among Islamic scholars. His family is classified as rich and famous in Palestine. After the existence of Israeli colonialism in his country, he and some of his relatives sought refuge in Beirut, Lebanon. Al-Faruqi received religious education from his father at home and also from the local mosque. Al-Faruqi started school at the Frence

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From this meaning it can be understood, that in understanding the Divine revelations that exist in the universe, Muslims must utilize science. Because if they do not utilize science, then Muslims will experience being left behind by other people. On the other hand, the spiritual aspects which are based on the normative side of the Qur'an and the Sunnah must always enter into an inseparable part in the application of science and various aspects and activities of human life.

From the above definition, it can be concluded, that the Islamization of knowledge model developed by al-Faruqi uses a purification model rather than an Islamic modernization model and a neo-modernism model. The basis of the methodology for the Islamization of this model of knowledge, according to Imam Suprayogo, is as follows: First, an explanation of the contemporary problems of Muslims can be answered from the results of ijtihad and the traditions of the scholars who are the result of interpretations of the Qur'an. Second, if there is no answer found in the tradition that is in accordance with contemporary conditions, then we must conduct a study of the socio-historical context of the verses of the Qur'an which became the basis of the ijtihad of these scholars. Third, through historical analysis will reveal the true moral message of the Koran, which is the social ethics of the

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Dominical College des Freres in 1926. In 1936, he continued his school of arts and sciences at Americcan University in Beirut. He earned a B.A. in philosophy (1941) See Ismail al-Frauqi. 1994. *Dialog Tiga Agama Besar.* Surabaya: Pustaka Progressif, p. 7-8.

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Koran. Fourth, conduct studies in the context of Muslims today with the help of the results of the study of science on issues that are evaluative and legitimate so that he can provide moral grounding and direction for the problem being addressed. [5]

2. The Meaning of Integrated Curriculum

In discussing about the integration of science and Islam, the terms of curriculum integration, integrated curriculum, integration of science and Islam, and integration of naqal and aqal science are also often appear. Literally or the meaning they contain, all the terms have different meanings. However, everything departs from the same passion and care, namely both social and exact sciences must be constructed on the principles of unity or sharia and or at least not in conflict with the Shari'a.

The idea of the integration of science and Islam emerged as a rejection of the secularization of science, which occurred in the West. Science is considered to have no relationship with religion. Whereas in its early development in the Islamic world, science was combined with faith, there was no dichotomy of science. So to restore the condition of science to the beginning of its growth and development, the idea of the integration of science and Islam was initiated, which initially began with the Islamic idea of science. But the term islamization illustrates that science is not Islamic, then Islam, even though science cannot be given religious labels. Knowledge belongs to

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[5]Imam Suprayogo, *Membangun Integrasi Ilmu danAgama. Ibid.,* p. 57.

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Allah and He gives knowledge to humans. The big problem is actually the "separation of knowledge from Islam" or "the erosion of faith from science", while the two things that are combined are never separated. So, the two things that have been deliberately separated are re-integrated in research, development and science learning activities so that learning science is also interpreted as studying faith and noble character.

This idea emerged triggered by the concern of Muslims themselves for the development of science and learning in this modern age, which is separated from Tauhidic religious values. In fact, in the period of growth and development of science in the Islamic world, both social and exact sciences were never separated from the main root of the belief in monotheism. Moreover, the Qur'anic conversations about natural phenomena are all oriented towards the belief in monotheism. Departing from this reality, the ideas emerge above despite using different terms.

The idea of integration of science and Islam greatly influenced the growth of the model or style of Islamic education in Indonesia, starting from elementary schools to universities. Basic education, for example was born SDIT (Integrated Islamic Elementary School), SMPIT (Integrated Islamic Middle School). But, it might be questionable whether the integrated Islamic school really uses an integrated curriculum between science and Islam? Or maybe more fundamentally still can be questioned, how the concept of integration of science and Islam in the perspective of the founders and managers of the integrated Islamic school? These questions demand the need for

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special research around the integration of science and Islam in integrated Islamic elementary and secondary schools.

The influence of ideas about the integration of science and Islam at the university level can be seen in the change of IAIN into UIN in Indonesia. In Malaysia, there is also Universiti Sains Islam Malaysia (USIM), where the tertiary institution was the object of study in this study. This university is a development of the Malaysian Islamic University College (KIUM). The university has a vision and mission of the integration of science and Islam, but the founders and the development of USIM called it the Integration of Naqal and Aqal Sciences, which means the combination of the sciences obtained through the study of revelation with the sciences obtained through the study of nature and phenomena happened to him.

The combination of science and Islamic curriculum in question covers many things, namely integration in the preparation of the Learning Implementation Plan (RPP), integration in the formulation of learning objectives, integration in the development of teaching materials, and integration in the implementation of learning in class. With this combination, the target of science learning achievement is not merely cognitive mastery, but also strengthening faith by admiring the Creator illustrated in teaching material.

Likewise in the development of teaching materials, teachers not only deliver teaching materials related to cognitive aspects, but are also required to develop these teaching materials so that aspects of the religious or divine aspects contained therein are clearly visible and illustrated. For this reason, it is hoped that learning science can

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strengthen and develop students' faith together with their increasing knowledge.

Before coming in to the deeper discussion abot integrated curriculum, it is better to know about the meaning of curriculum itself. Tonner & Daniel (1980) give meaning to the curriculum as, *"... to be composed of all the experiences children have under the guidance of teachers."* The curriculum is a learning experience felt by students under the guidance of the teachers. This statement is reinforced by the thinking of Gleen Hass (1960) who said that *".... the curriculum has changed from the content of courses of study and list of subjects and courses to all experiences which are offered to learners under the auspices or direction of school."* According to Gleen, The curriculum has changed its meaning from the contents or list of teaching materials to the experiences felt by students under the supervision and direction of the school. On the other hand, Hilda Taba (1962) interpreted the curriculum as *"... a plan for learning; therefore, what is known about the learning process and the development of the individual has bearing on the shaping of a curriculum."* According to Hilda Taba, the curriculum is the process of learning planning and individual student development.

To compile the different meanings above, Nana Syaodih revealed 4 (four) dimensions that exist in the meaning of the curriculum, namely:

a) Curriculum as an idea. The curriculum was born from various theories and research results, especially studies in the field of curriculum and education.

b) Curriculum as a written plan. Curriculum is not only as a collection of abstract ideas, but it needs to be

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manifested in the form of documents, which contain objectives, materials, activities, tools and time.

c) Curriculum as an activity. The curriculum is not only in the form of documents but needs to be implemented in a teaching and learning activity.

d) Curriculum as a result. The curriculum is not only a teaching and learning activity, but also must have a goal, a clear quality goal, namely the achievement of changes in behavior or ability of students, both cognitive, affective or psycholotor.[6]

While the term curriculum development is a comprehensive term, it includes: planning, implementing and evaluating. Curriculum planning is the first step in building a curriculum when curriculum developers make decisions and take action to produce plans that will be used by teachers and students.

The application of curriculum or commonly called curriculum implementation seeks to transfer curriculum planning into operational action. Curriculum evaluation is the final stage of curriculum development to determine the extent of learning outcomes, the level of achievement of planned programs, and the results of the curriculum itself. Curriculum development does not only involve people who are directly related to the world of education, but also involves many people, such as politicians, entrepreneurs, parents of students, and other elements of society who feel an interest in education.

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[6]Nana Syaodih. 2009. *Pengembangan Kurikulum, Teori dan Praktik*, Bandung: Remaja Rosdakarya, p. 78.

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Today, the integrated curriculum becomes a hot topic of discussion among academics. Research related to the integrated curriculum is still being explored, but until now the integrated curriculum is still theoretical. The effort to realize a truly integrated curriculum certainly requires a model, so the first step that needs to be done before integrating the curriculum is to determine the integration model that will be used.

One offer of a model for developing curriculum integration can be found in Robin Fogarty's presentation. He stated there were 10 ways or models to develop curriculum. According to him, the ten models he offered could be used as a foundation for designing curriculum. The ten models are:

a. Fragmented Model, it is a model of developing the old-fashioned curriculum. Each subject is fragmented, for example: mathematics, science, language, geography. Ethics teaches mathematics, the instructor says "Save your Geography Book, now we learn mathematics." As a result, there is separation, disciplining.

b. The Connected Model. This model sees from the opera glass, providing clear exposure to details, sub-details and interconnection with one discipline. The focus is on making explicit connections between subjects, connecting one topic, one conceptualisation with another. The key is trying to form relationships between studies, rather than letting learners understand connections based on their own understanding.

c. The Nested Model. This model views curriculum based on three-dimensional glass, targeting multidimensional

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learning. For example in computer learning, teachers include the task of designing mathematical relationships using computers.

d. The Sequenced Model. This model sees through glasses, the lens is separate but connected to the frame. Topics are taught separately but done in order to provide a broader framework for connected concepts.

e. The Shared Model. This model brings two different study disciplines into one study at a time.

f. Webbed Model. This model presents all curriculum constellations at once.

g. The Threaded Model. This model uses a big idea that is expanded through all content with a metacuricular approach. The model at the same time presents the ability to think, social ability to learn, technology and multi-disciplinary through all disciplines.

h. The Integrated Model. This model presents an interdisciplinary topic that rearranges overlapping topics and gives rise to patterns and designs.

i. The Immersed Model. In this model, integration takes place with students, with or without intervention.

j. The Networked Model. In this model, learners who directly process integration, because the learners themselves know the twists and dimensions of the study, target sources and explore areas of specialization. In this model, learners create various dimensions and focus directions.

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3. Models of Relationship between Science and Religion

Associated with the model of the relationship of science and religion, Barbour offers 4 (four) models of the integration of science and Islam as follows: [7]

a. Conflict Model.

This contradiction between religious leaders and scientists in Europe was caused by the radical attitude of Christian religionists who only recognized the truth and holiness of the Old and New Testaments, so that anyone who denied them was considered infidel and entitled to punishment. On the other hand, scientists conduct scientific investigations whose results are contrary to the beliefs held by the church (the clergy). As a result, not a few scientists who are victims of the findings of oppression and cruelty on the part of the church. [8]

The identification is in the reality of what can be measured and formulated with a mathematical relationship. They also assume that the scientific method is the only source of knowledge that can be trusted and understood. In the end, adherents of this notion tend to impose the authority of science into fields outside of science. While religion, for Western scientists is considered subjective, closed and very difficult to change. Belief in religion is also unacceptable because it is not public data that can be tested with experiments

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[7]Ian Barbour. 2004. *Bumi yang Terdesak*. Bandung: Mizan, p. 26

[8]M. Quraish Sihab.1994. *Membumikan Al-Qur'an,* Bandung: Mizan, p. 53

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and criteria as well as science. Religion is nothing more than mythological stories and legends, so there is nothing to do with science. [9]

This model holds that religion and science are two things that are not merely different but completely contradictory, where each party considers the other wrong and incorrect. Therefore, according to this theory, one person at the same time cannot possibly support scientific theory and, on the other hand, hold religious beliefs. That is because, religion cannot prove its beliefs and views clearly, while science is capable. For example, a believer's trust in his Lord does not need a concrete proof of God's existence. While on the other hand, science requires an empirical proof of anything. Because according to science, truth is everything that can be proven empirically. Both are embraced by the Biblical Literalism group, and the scientific materialism group.

Related to the above model, Barbour and Haught offer the concept of "harmony". According to them, the activity to interpret the Koran to express scientific knowledge was first carried out to regain the interest of Muslims in modern science. [10]

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[9]Ian Barbour, *Bumi yang Terdesak... Ibid.*, p. 26

[10]Zainul Arifin, *Model-Model Relasi Agama dan Sains* dalamhttp://ejournal.uin-malang.ac.id/index.php/ psikologi/article/view/353 (downloaded at 20 Maret 2019)

b. Independent Model.

A more neutral view of conflict is independence, where science and religion are like "two strangers". Their existence is separate independently, asking different questions, referring to different domains, and speaking in different languages.

Barbour incorporates complementary "independence" relationships, where science and religion which are seen to coexist separately have greater contradictory aspects overall. The arguments of this model are among others put forward by Lang and Gilhey, that science tries to explain objective, general, and repetitive data, while religion talks about the problem of the existence of order, the beauty of the world and one's experience such as forgiveness, meaning, belief, safety and so forth. The purpose of this model is to avoid conflicts between the two and as a consequence the emergence of new knowledge such as biological explanations of organ organisms. [11]

The second model is seen as more neutral than the conflict model. This model views science and religion as "two strangers". Their existence is separate independently, asking different questions, referring to different domains, and speaking in different languages. Responding to this model, Barbour embraces complementary "independence" relationships, where science and religion which are seen to coexist separately have contradictory aspects.

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[11]Zainal Abidin Bagir, at all. 2009. *Integrasi ilmu dan agama: interpretasi dan aksi*. Bandung: Mizan,. p.22

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c. Dialogue Model (Contact).

This model tries to build a bridge between science and religion like "friendship". Here there are similarities and parallels in both methodologies. Dialogue also arises because science has limits and dependence on natural inquiry outside itself. For one thing, historical roots and basic assumptions come from outside science itself. The influence of religious ideas took place early in Islam, where belief in the unity of knowledge in studying nature was a "religious obligation" to draw closer to the Creator causing scientific activity to develop rapidly.

In this model perspective, there is no significant difference between religion and science because the existence of scientific data which is seen as something objective actually actually contains subjective elements as well. The subjectivity appears in the selection, interpretation of data and reporting on the theoretical assumptions made.

This model intends to find similarities or methodical and conceptual comparisons between religion and science, so that similarities and differences can be found. This effort is carried out by looking for concepts in religion that are analogous, similar or comparable to concepts in science or vice versa. A model that is different from the second model that emphasizes differences only.

According to Barbour, the similarity between the two can occur in two ways, methodological similarity and concept similarity. Methodological similarities

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occur, for example, in that science is not entirely objective as religion is not entirely subjective. Methodologically, there is no absolute difference between religion and science, because scientific data as a basis for science which is considered to be a form of objectivity, actually also involves elements of subjectivity. Moreover, science subjectivity occurs in theoretical assumptions used in the process of selection, interpretation of data and reporting. Neither is religion. Barbour even added that this methodological equation lies in the principle of the relationship between theory and experience. The purpose of this model is for religion and science can broaden each other's insights and knowledge about nature. [12]

This model aims to dialogue between religion and science in order to broaden each other's insights and knowledge about nature. This model seeks to find similarities and differences between science and religion to then build bridges between the two like a "friendship".

d. Integration Model (Confirmation)

Barbour's last relation is the closest of all and resembles a close partnership or even marriage. In this view, theological systems or religious beliefs can be synthesized with modern scientific understanding into a unity of vision of reality. He identified three approaches:

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[12]Ian Barbour, *Bumi yang Terdesak...* p. 30.

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natural theology, natural theology, and systematic synthesis.[13]

The alternative relationship between religion and science which is considered the most ideal is the integration model. This model tries to find common ground on problems that are considered to be in conflict between the two. An example of this model is in the field of Natural Theology which states that evidence of design in the universe proves the existence of God, while Drees offers a sample of the concept of evolution theology a la Piere Teilhard da Chardin and the philosophy of the Alfred N. Whitehead process which is considered to have produced an inclusive metaphysical concept. In this model, the position of science is to confirm (strengthen or support) beliefs about God as the creator of the universe, Although Haught reminded that religionists do not allow religion to be involved (intrude) in the actual work of science. More than that, according to Haught's position of religion more as an epistemological root for scientific discovery. Thus religion provides the basis for scientific belief in the existence of rationality in science.

The most ideal model, in Barbour's perspective, is this last model, the integration model. This model seeks to find common ground between science and religion on issues that are considered conflicting. In this model, religion can be synthesized with science in a unity of reality vision. Among the examples revealed by Barbour

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[13]Zainal Abidin Bagir, dkk. 2009. *Integrasi ilmu dan agama: interpretasi dan aksi*. Bandung: Mizan. p. 22

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is a natural design that shows the existence of God. From this example, it appears that science strengthens humanity's belief in the existence of God as the creator of the universe. In fact, it reinforces that the position of religion in this case can be the basis of scientists' belief in the existence of rationality in science. [14]

4. Models of Integration of Science and Islam in Learning

There are at least four models that can be selected in integrating science with religion, namely: [15]

a. Material integration, which combines science learning material with the views of the Koran or sunnah about the material, both in the preparation of curriculum or syllabus and in its presentation in class. In addition, in the ranking of the course, also added the field of study of Islamic studies.

This integration model requires educators to be able to explore and understand the Islamic texts both the Koran and the Hadith that are relevant to the scientific material being taught. In learning, lecturers or teachers (borrowing the term Prof. Munzir Hitami) not only deliver lecture material related to their scientific fields, they are also required to deliver verses of the Koran or Hadith that are relevant to the material being taught. So that the two lecture material, science and religion, really combined. However, the difficulty in adopting this model lies in the ability to understand and refer to the

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[14]Barbour, *Bumi yang Terdesak…Ibid.*, p. 26

[15]Kadar M. Yusuf. 2007. *Curriculum Integration in UIN Suska Riau Lecturers' Perception.* p. 24 – 30.

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appropriate verses or Hadith. In addition, the problem is that not all theories of science can be found in terms of the Qur'an or Hadith conversations.

The field of Islamic studies needs to be added in the use of this integration model, because not all Islamic studies courses can be integrated directly with social science and exact sciences, such as fiqh courses. In general, Islamic studies that can be combined with social and exact sciences are creed and morals. Because the discussion of the Qur'an or the Sunnah of the Prophet relating to natural phenomena is more focused on planting faith. Scientific theories conveyed in class learning can strengthen the faith.

b. Integration in formulating learning objectives and integrating explanations of lecture material with the belief in monotheism.

Students are not only directed to the mastery of knowledge and skills, which are related to the scientific material they are learning, but are also directed to the cultivation and development of faith in their souls through the material. In addition, in the ranking of the course, also added the field of study of Islamic studies.

The integration of the second model does not require lecturers to master verses or Hadith that are relevant to the course material he teaches. Lecturers are only required to be able to explain the aspects of the faith and noble character related to the lecture material he teaches. In essence, all course material taught in class is not separate from monotheism and noble character. To see and understand the relevance of faith and noble

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character with lecture material delivered in class, lecturers are required to understand and live the nature of science according to Islamic perspective.

c. Integration Model by criticizing scientific theories that are contrary to the basic teachings of Islam.

Integration can also be done by criticizing the theories of science that are taught when they are in conflict with Islamic normative law or in conflict with the creed and morals of the Prophet. Although the theory is still taught, the students know their weaknesses from an Islamic point of view. And the most important thing conveyed to students in the framework of integration of science and Islam is the theory or discovery of Muslim scientists as the basis and foundation of the development of science in this modern era, including the development of science in the West and Europe. This can be done by describing its weaknesses and showing an Islamic perspective about it. That, for example, can be seen in Ribawi economic theories and other scientific theories.

Therefore, Although the lecturer is not required to search for and master verses or traditions related to the material being taught, the lecturer is asked to have a rather established Islamic insight. Because, he might not be able to criticize theories that contradict Islamic teachings without having a good insight about Islam. The intended insight includes two things, namely insight related to the faith and shari'ah.

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d. Integration model by adding only Islamic study fields.

This model is widely adopted by integrated Islamic schools, including Madrasah Tsanawiyah (MTs) and Madrasah Aliyah (MA). Although it is also undeniable, there are also integrated Islamic schools and madrassas that use the first or second model. The author is of the view that in essence the third model is not integration. Because, the presentation of social science and exact material is not really combined with faith. Pure educators teach science material without seeing its relevance to the Islamic view. In fact, this model can lead to contradictory understandings for students. Maybe, just a social science material being taught, for example, is contrary to the normative study of Islam. In learning, the material is not criticized by educators. Then other educators teach Islamic normative study teaching materials that conflict with other lecture material. Like the capitalist and socialist views in economic subjects, fiqh mu`amalah is also taught. This clearly gives rise to contradictory insights in the minds of the students

5. The Pattern of the Islamization of Science

Hanna Djumhana Bastaman, in his research "Islamization of Science with Psychology as an Illustration," shows that there are six patterns of thinking done in the framework of Islamization of Psychology, namely: similarization, parallelization, complementation, comparison, inductification and verification. [16] First,

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[16]Bastaman, HD. 1995. Islamisasi Sains dengan Psikologi sebagai Ilustrasi in Jurnal *Ulum al-Qur'an*. Jakarta, p. 10-17. Look his book as well, 1995. *Integrasi Psikologi*

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Similarization. Similarization comes from English = similar, which means the same. Similarization is a process to equate science concepts with concepts originating from religion, even though it is actually not the same. Second, parallelization. Parallelization also means to assume the parallel concepts derived from science with the concept of the Qur'an, only because of the similarity of connotation without equating the two. Third, Complementation. Complementation comes from English to complement, which means to complete. Complementation is a complementary process between religion and science, in which both will complement and strengthen one another, even though both remain in their respective existence. Fourth, Comparation comes from English, namely to compare, which means also to compare. Comparation is thus a process of comparing a scientific concept with a religious concept of the same phenomena. Fifth, Inductification is the process of connecting or introducing empirical scientific theories toward metaphysical thought. And Sixth, Verification comes from English, to verify, which means to prove. Verification is a process to prove the truths (verses of the Qur'an) through the results of scientific research.

The six thought patterns above are Bastaman's contribution in order to offer a pattern of integration of science with Islam. The Islamization of Psychology offered by Bastaman does not try to completely eradicate existing insights, theories, systems, methodologies, techniques and

dengan Islam: Menuju Psikologi Islami. Yogyakarta: Putaka Pelajar.

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approaches in the current Psychology environment, but rather aims to complete, perfect and make new interpretations and provide an integral view of the concepts which has existed through an Islamic perspective. So that Muslim Psychologists do not have to always start their studies from scratch, but do 'patchwork' on the various weaknesses that are owned by Western Psychology.

6. Ways of Integrating Science

Amin Abdullah explained six (6) ways in the integration of science and religion, namely: Clarification, Complementation, Affirmation, Correction, Verification, and Transformation. [17] By not intending to overtake the original initiator, the explanation of the six methods is as follows.

a) Clarification. In this way, scientific theories, social and humanities are used as references and even become the main material in explaining religious teachings contained in the Qur'an and al-Sunna, so that they will have a more contextual meaning, and will be well implemented in accordance with progress of human civilization. The Qur'an was formulated by Allah for all human communities throughout the world, and for all ages. Therefore, many statements must be drawn from a particular socio-cultural context. At least, if it is closely related to the socio-cultural context, the substantive meaning is very universal, which must be understood by

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[17]M. Amin Abdullah. 2006. *Islamic Studies di Perguruan Tinggi; Paradigma Integratif Interkonektif.* Yogyakarta: Pustaka Pelajar, p. 92.

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the contextualisation of a particular place and era by scientists (scholars). For this reason, God through His Messenger delegated this great work to scientists, so that religious teachings continue to enlighten all humanity in all ages.

b) Complementation is a way of providing normative explanations for various aspects of life that are not explicitly stated and are not explicitly included in the sacred text. Normative explanations based on theories of science and social sciences that govern human life, both in professional and social life, become part of religious thought insofar as they have significance and relevance to the whole mission of teaching (mashlahah). Techniques of analysis of the development of religious thought like this have been known since Islamic classics era with various methods of analysis, and can be adapted for religious studies in this modern era. Thus, scientists are demanded by religion to exert all of their abilities in enriching the formulation of religious thought in various aspects of life based on scientific knowledge theory, and developing technology or instruments that can guide the implementation of religious norms.

c) Affirmation is to provide reinforcement to the messages of the teaching, the source of the teaching itself actually has provided a detailed explanation, operational and implementative. The position of science and the social sciences of the humanities only reinforces with scientific explanations, so that Muslims can be absorbed, understood and believed, and they increase their position as followers of critical religions and

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understandings of the religion they follow.

d) Correction is when scientific and social theories are carried out to provide corrections to religious thoughts produced by the scholars. There is no authority for science or social theories to correct the sacred texts of the Qur'an and Sunnah. But it can provide corrections and improvements to religious fatwas on the product of analysis and thought of the scholars who are different or contrary to the sciences or theories of social sciences and humanities, both because of time differences, or because of the competency gap between religious and non-religious scientists, social and humanities. Therefore, academic interaction between scientists in the religious fields and those in the fields of science, social and humanities, becomes a necessity.

e) Verification. As the position of science and social theories or humanities for the correction of religious thought, verification can only be done on religious thought, not on religious doctrine. Religious doctrine in the form of the holy text of the Koran and the Sunna, can only be verified by God, and His Messenger for his Sunnah. Verification of scientists on religion can only be done on the products of Muslim scientists' thoughts in religious fields that are highly related to professional and social life, or to the interpretation of the scholars of the verses of the Koran related to professional life, social, or even interpretation of scientific illustrations in the verses that convey the message of teachings.

f) Transformation. Religious transformation can also be carried out on religious thoughts that have been left behind by the social context, and are also left behind by

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the development of science and technology. Religion as a teaching of God, must remain up to date, and continue to be in accordance with the progress of human civilization. Therefore, theories of science, social and humanities must continue to be penetrated against religious doctrines and thoughts, so that religion will continue to be a guideline of people's lives in all places and times, without having to endure staticism.

C. LITERATURE REVIEWS

Many studies and research related to the integration of science and Islam in educational institutions have been carried out by many people. Among those that can be mentioned here is a study conducted by Hendri and his friends in 2018 with the theme: "The Science Integration Phenomenon at PTKIN: Analysis of the Unity of Sciences Concept at Walisongo State Islamic University in Semarang." This study uses a qualitative method with a descriptive analysis approach. This study describes the history of the birth of the concept of scientific integration at UIN Walisongo Semarang. The scientific paradigm used by Walisongo Semarah UIN is *Wahdah al-Ulum* (Unity of Sciences). The concept is integrated with his Panca Kamil, which is virtuous character, achievers in academics, professional career, insightful knowledge of unity, and serving the community.[18]

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[18]Hendri dkk. 2018. "Fenomena Integrasi Ilmu di PTKIN: Analisa terhadap Konsep *Unity of Sciences* di UIN Walisongo Semarang" in *Jurnal Hikmatuna*; *Journal for Integrative Islamic Studies*, [S.l.], v. 4, n. 1, p. 1-24, June 2018.

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Fuad Jabali and Husnul Khitam in their book, *Muqaddimah Integration* (2014) discussed critically and reflectively the development and conceptual dilemmas of the scientific integration program and its implementation in the context of UIN Jakarta as the first IAIN which was transformed into UIN in 2002. Besides discussing various conceptual problems philosophical about the integration of science, this book also describes the experiences of several faculties in implementing the integration of science.[19]

Another works written by Nurlena et al. (2014) in "Scientific Integration in Curriculum Development at UIN throughout Indonesia." This study analyzes the concept of scientific integration that has been established in 6 (six) UINs in Indonesia; UIN Likes Riau, UIN Jakarta, UIN Yogya, UIN Malang, UIN Bandung, UIN Alauddin Makasar. From his research it was concluded, that the majority of UINs in Indonesia in general have not implemented scientific integration in curriculum development and development. The concept of scientific integration formulated by the majority of UINs throughout Indonesia still stops at the normative-philosophical level and still seeks forms of application that are in accordance with each UIN. Only 2 (two) UINs have done so, namely UIN Malang and UIN Yogyakarta who have attempted to apply the concept of

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[19]Fuad Jabali dkk. 2014. *Muqaddimah Integrasi.* Jakarta: UIN Press.

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scientific integration in the development of syllabi, Lesson plan (RPS), learning processes and academic culture.[20]

Zainal Abidin Bagir in his book "Integration of Science and Religion: Interpretation and Action" (2005) attempts to explain the relationship between science and religion. According to him, the fundamental problem of the integration of Islam and science is the issue of perspective on the nature of science and religion itself. The different perspectives of both will lead to different understandings, methods and objectives. The aim of integration is to produce a positive and constructive scientific paradigm. In another word, Mulyadi Kertanegara explained scientific integration in a book titled Knowledge integration: Holistic reconstruction (Kartanegara: 2005). In this book, Mulyadi Kertanegara wants to explain about the effort to reconstruct Islamic scholarship as a whole, not in a dualistic manner.

While Amin Abdullah in his book *"Islamic Studies di Perguruan Tinggi: pendekatan integratif interkonektif"* (2006) describes the relationship between science and religion is interconnected and integrated with one another. The presence of the interconnection science paradigm is something that is necessary (dârûrî). This paradigm emphasizes that scientific buildings with all their diversity, both religion, social and humanities. However, mutual cooperation, need, correction and mutual interconnection between scientific disciplines will be more able to help the complexity of life problems and at the same time efforts to solve them.

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[20]Nurlena dkk. 2014. "Integrasi keilmuan dalam Pengembangan kurikulum di UIN se-Indonesia" in *Tarbiya: Journal of Education in Muslim Society.* Vol I, No. 1. June.

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Nanat Fatah Natsir, in his book entitled Development of Higher Education in the Perspective of Revelation Guiding Science (2008), summarizes a number of writings from prominent Indonesian academics who had served as rectors of their respective Islamic tertiary institutions (STAIN / IAIN / UIN) in the first wave of transformation became UIN (Jakarta, Yogyakarta, Malang, Bandung, Makassar and Pekanbaru). The authors in this book explain the concepts, processes, forms, and experiments of the integration of knowledge in their respective institutions. This book is important as a reference for those who want to understand the dynamics and dialectics that accompany the first wave of the transformation process of STAIN / IAIN into UIN as observed, experienced and recorded by the rectors of each PTKIN.

Kusmana et al., Wrote the book: Scientific Integration of UIN Syarif Hidayatullah Jakarta Towards Research University (2006). This book formulates the concept of the integration of science UIN Syarif Hidayatullah Jakarta formally for the first time. They formulated the integration of science as the institutional attitude of UIN over the relation of religion and general science based on Qur'ani sources and natural resources. The integration of religion and general science is proportionate to the range of possibilities ranging from coexistence, dialogic interaction to the creation of new knowledge. The integration formulation is only at a philosophical level and has not yet been relegated to practical levels in the curriculum or learning process.

M. Atho Mudzhar (2015) formulates the integration of science as *"the unification of Islamic religious knowledge with other sciences, so that the sciences do not conflict and dichotomize each other."* The formulation formally became the official

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formulation of UIN Syarif Hidayatullah Jakarta as stipulated in the Rector's Decree 864 of 2017 concerning Science Integration Guidelines. In this sense, Mudzhar identified the possibility of integration of Islamic sciences with other sciences in the philosophical, substantive, applicative or implementative domains. Also the possibility of integration of the two in the realm of research, as well as in the process of reconstruction of the core sciences and supporting sciences.

Abuddin Nata and three other writers (2005) wrote their respective views on the integration of science, which in essence did not mean the integration of science in the sense of Islamization, but rather in an effort to appreciate the existence of each science and place religious knowledge as a foundation directed to create new science. Meanwhile, Abdurrahman Mas'ud, in his book, Initiating a Non-Dichotomic Education Format: Religious Humanism as a Paradigm of Islamic Education (2002), explains the unity of religion and science in Islam, and makes the integration paradigm as the basis for building a religious and humanist Islamic education.

Dede Rosyada, in his book "Islam dan Sains; Upaya Pengintegrasian Islam dan Ilmu Pengetahuan di Indonesia" (2016), translates and describes abstract-philosophical ideas about the integration of science that has been developed so far into various practical-axiological domains of higher education, by taking the setting of UIN Jakarta. The author offers a variety of approaches to the integration of knowledge in the curriculum and learning system, research, empowerment of UIN input supply institutions such as pesantren and alumni competency development so that they have competitiveness in the job market in the era of openness and regional and international economic cooperation.

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At another place, M. Amin Abdullah in collaboration with Waryani Fajar Riyanto wrote an article entitled "Integrasi-interkoneksi Psikologi: Implementasinya bagi Penyusunan Buku Ajar di Program Studi Psikologi" (2014). Both offer what they call "Integration-interconnection Psychology". This psychological paradigm takes the position between the spirit of the Islamization of science and Islamic Ilmuisation. It seems that the authors envision a way in which, on the one hand, they strengthen the study of local Islamic psychology so that it can develop better, and on the other hand, make religion one of the inspirations in the development of psychology in general. Amin Abdullah, on another occasion, wrote a sub-chapter entitled "Multidisiplin, Interdisiplin, dan Transdisiplin: Ilmu Pengetahuan dan Riset pada Pendidikan Tinggi Masa Depan" (2017), in which he explained the methodological inevitability of this disruptive era that requires researchers to have a way of looking at comprehensive and integrative in researching an object of study.

Miftahuddin in his book, *Model-Model Integrasi Ilmu Perguruan Tinggi Keagamaan Islam*, (2019) documented the dynamics of the formulation and explained the implementation of scientific integration concepts in the first three UINs in Indonesia, namely UIN Syarif Hidayatullah Jakarta, UIN Sunan Kalijaga Yogyakarta and UIN Maulana Malik Ibrahim Malang. The author argues that the implementation of the science integration concept in the three UINs shows diversity, but the general pattern can be formulated into three paradigms, namely the Islamization of science, Islamic inspiration and the dialogical paradigm.

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Muhyar Fanani in his book, *Paradigma Kesatuan Ilmu Pengetahuan* (2015) summarizes the results of a series of discussions among lecturers of UIN Walisongo Semarang on how to formulate a paradigm of the unity of science that includes Islamic sciences, social humanities and natural sciences in the context of Islamic religious tertiary institutions. The authors review the lengthy debates among PTKI scholars about the unity of science, the implementation of the paradigm of the unity of science in tertiary institutions and the search for the ideal concepts of Islamic universities where scientific integration is well implemented.

A. Qodri Azizy (2003) offers what he calls the process of deconstruction-reconstruction of Islamic scientific traditions and general scientific traditions. This scientific process is intended to "make fundamental changes" in order to enhance the role of PTKIN in the development and use of knowledge. He offered four processes: first, the use of relevant general knowledge to reinterpret Islamic teachings. Second, reforming other sciences based on Islamic sciences which has been further developed in the first process. Third, reconstruct the existing Islamic studies, especially in postgraduate programs so that they are in accordance with the times. Fourth, the development of Islamic studies towards a more empirical study.

Abd A'la in the book he edited, *UINSA Emas Menuju World Class University* (2016) named the concept of science integration carried by UIN Sunan Ampel Surabaya with the phrase *"integrated twin towers."* In summary, Abd A'la explained the meaning of this concept as follow: *"The basic sciences of religion (Islam) on the one hand, and the socio-humainora, science and technology, on the other hand, are two*

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entities, two different main families (or whatever their names). Each has its own ontology, and epistemology. Although it is different, but the two big trees of knowledge must not be distinguished. Everything is absolutely developed and directed for the purpose of the benefit of life and ultimate happiness of humanity. Besides having to be equally developed, the two major fields of science need to be dialogue with one another. In line with that, each science needs to be developed through the use of other scientific approaches. Thus the development of knowledge is not just for science, but for humans and life, all of which are undoubtedly devoted to the Creator, God as alpha and omega of all science and all beings."

In the book they edited, *Sinergi Sains dan Agama: Ikhtiar Membangun Pusat Peradaban Islam* (2005), Nurman Said, Wahyuddin Halim and Muhammad Sabri, summarizes philosophical and practical ideas from a number of Islamic scientific lecturers from UIN Alauddin and other scientific lecturers from several universities high level in Makassar about the integration of science. The scholars from different scientific backgrounds, whose writings are contained in this book, offer various possible forms, patterns and orientation of science integration in the context of UIN Alauddin Makassar, which was transformed from IAIN to UIN in 2005 under the leadership of Prof. Dr. Azhar Arsyad, M.A. Among the writings summarized in this book, some of the authors offer the term "synergy" as a counterpart or an alternative to the term "integration" of science and religion. With the term synergy, it implies that science and religion do not necessarily have to be integrated epistemologically and ontologically first in order to produce something that is holistic and beneficial to life, but rather enough to make the two synergize synergistically. In this sense, synergy has a goal that is more

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or less the same as the offer of the concepts of integration-interconnectivity and objectivity-interaction of science and religion offered by other UINs, as discussed above.

Do not want to lose with the state Islamic University, IAIN Surakarta launched a book which is an anthology of Ismail Yahya et al. (2016) with the theme "Wacana Paradigma Keilmuan IAIN Surakarta." This book presents various ideas offered by IAIN Surakarta academics in formulating the concept of scientific integration. Among these is the visualization of the symbol "Relasi Trilogi Suci Theo-Antropo-Kosmos" by Dr. Mudhofir, M. Pd., Symbol of "Kelopak Bunga Ilmu" by Prof. Dr. Usman Abu Bakar, MA, symbol of "Pohon Ilmu" by Prof. Dr. H. Nashruddin Baidan, the "Integratif Asosiatif" scientific paradigm model by Prof. Rohmat, PhD, paradigm "Teologi Transformatif atau Tauhid Sosial" by Dr. Nurisman, M. Ag, the concept of "Nur a tau Cahaya Keilmuan" by Dr. Ismail Yahya, MA, symbol of the "Piramida Keilmuan" by Dr. Zainul Abas, M. Ag., Symbol of "Segitiga Ilmu Teo-Antro-Kosmosentrisme" by Dr. Lastly, Toto Suharto, Ag., Also came up with the proposed symbol of "Gunungan Ilmu" in a focussed group discussion forum on the formulation of a scientific paradigm on March 2, 2016.

In Malaysia, the issue of integration of science and Islam grows faster than in Indonesia and Bruenei by the concept of Islamization of Scienc that has been introduced by Ismail Faruqi with his popular book *"Islamisasi Ilmu Pengetahuan"* (1984). This book explains how the scientific dichotomy will leads to secularism. The next generation is Osman Bakar, who stated in his book "Tauhid and Sains" (1994) that scientific integration must be based on understanding the *Tawheed* values.

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In summary, the discourse of science integration, both at the global level and specifically in the context of Islamic higher education institutions in Indonesia, as has been traced through a number of papers which have been reviewed above, shows an interesting and sustainable dynamics. Science Integration Discourse in the context of institutional transformation from high schools or institutes to universities has been developed and fostered by Islamic higher education institutions scholars themselves, both by those who sit at the management and leadership level of higher education institutions and as instructors. Among the media that they use to summarize, record and publish ideas about the integration of science in their respective institutions, are books, especially in the form of a collection of writings.

But apart from these dynamics, it is urgent and a serious response is needed to find or choose the patterns, models and constructs of science integration that are most relevant and effectively implemented in the context of Islamic higher education institutions among the models and experimentations of existing science integration. In addition, comparative studies conducted by researchers related to the implementation of the integration of science and Islam into the tertiary curriculum in the three countries (Indonesia, Malaysia and Brunei) have not been widely done. This research is expected to contribute a little to combing the similarities and differences in the patterns of integration between the three countries, so that they can take the best practice in the implementation of scientific integration concepts of the three countries into the curriculum in Islamic religious universities in Indonesia in particular, and other tertiary institutions in general.

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D. METHOD OF RESEARCH

This research used qualitative methodology. Qualitative Methods is a research paradigm to describe events, people's behavior or a situation in a particular place in detail and depth in narrative form. The qualitative approach is also used to study, to open, and to understand what is happening behind every new little known phenomenon. And the instrument in this research is the researcher herself. In other words, data collection depends on the researcher as a data gatherer. As stated by Moleong, that the instrument in qualitative research refers to the researchers themselves as a means of collecting data. (Moleaong: 2014).

This research seeks to raise the ongoing conditions in the field related to the development of Islamic Psychology studies in three countries: Indonesia, Malaysia and Brunei, so that this research is analytical descriptive and the research is really designed to obtain accurate data and information by trying to describe phenomena and concepts in the science of Islamic Psychology.

With the above description, the research will be carried out into a number of important steps, as follow:

1. Selecting Data Sources

In this research, data will be classified into two general source; Primary and secondary sources. Since this study will explore "**The Implementation of The Inegration of Science and Islam in Curriculum Development in Indonesia, Malaysia and Brunei**," the first and foremost sources are the monumental works of some Indonesian, Malaysian and Brunei Islamic Higher Education scholars concerning on the issue of integration of Islam and science

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implemented in their universities' curriculum. While the secondary sources are all literatures talking about the concepts of scientific integration and basic frameworks of curriculum development based on scientific integration. As much as possible data wil be attempted to be obtained from primary sources, but it does not rule out the retrieval of data from secondary sources.

2. Methods of Collecting Data

The data in this study will be collected using three techniques; documentation, observation and interview techniques. Documentation will be done in order to find the data related to various concepts, framework, and paradigm surrounding integraton of science and Islam which has been apllied in curriculum of Malaysian, Indonesian and Brunei's Islamic higher education institutions. Participant observations will be conducted to collect data on empirical facts occurring in Indonesia and Malaysia in relation to the problems, challenges and opportunities faced by Islamic scholars in the process on inserting Islamic values in the body of general sciences and its curriculum. While the third technique, an interview will be conducted in order to identify and clarify findings related to the perspective and commitment of Muslim scholars in both countries in giving space and struggling the idea of Islamization of science in the Malaysian, Indonesian and Brunei's universities.

3. Validity in Judging the Quality of the Data

In determining the validity of the data collected, the researchers will apply what so called triangulation techniques in which the researchers use other information

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beyond the scope of the previously already collected data. This method is aimed at checking the information provided or comparing data collected. In other words, this technique is working to highlight inter-connected phenomena from different points of view. In general, there are four methods of triangulation as follow as method-based technique, researchers' notions technique, data sources-based technique and theory-based technique.

4. Data Analysis Technique

All data collected through above collecting data techniques will be rewritten as a field note. This field note will be read in more detailed before being grouped in specific categories or key words. Those key words or categories will then be given a specific coding as to help the researcher easily tracing back to the data sources. The next step, those already encoded data will be edited in accordance with the already designed classification. As such, the researcher develops the meanings of those collected data before making synthesis and putting into a certain framework of thinking or a particular mode and pattern of relationship in order to make any conclusions and findings.

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Chapter II

THE DEVELOPMENT OF THE CONCEPT OF INTEGRATION OF SCIENCE AND ISLAM FORMULATED IN ISLAMIC HIGHER EDUCATION INSTITUTION OF INDONESIA, MALAYSIA AND BRUNEI

To get a comprehensive picture of the implementation of the concept of integration of science and Islam into the existing curriculum in some Islamic higher education institutions in Indonesia, Malaysia and Brunei, it is necessary firstly to present a concept of integration of Science and Islam which has been formulated in the three countries. This presentation is important to put forward in order to find out the geneology of the emergence of the idea of scientific integration in the debate and the many concepts offered. Therefore, this explanation can become a big paradigm that underpins the next discussion, which is related to the ontology, epistemology and axiology problems that arise in the process of theorizing the concept of scientific integration in various Islamic universities. Then, an analysis of "how" the concept of integration of Science and Islam can be implemented in the realm of science and curriculum in the three countries. The capter will describe the Concept of Integration of Science and Islam Formulated in Islamic Higher Education Institutions of Indonesia, Malaysia and Brunei.

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A. THE CONCEPT OF INTEGRATION OF SCIENCE AND ISLAM FORMULATED IN ISLAMIC HIGHER EDUCATION INSTITUTIONS OF INDONESIA

The emergence of various paradigms of scientific integration models in some Islamic higher education institutions in Indonesia basically come from the same desire, which is trying to bridge and even eliminate the debate about the dichotomy between general and religious sciences through the process of integration.

Scientific integration was born from the thought of the fact of the dichotomy between the religious sciences and general sciences. Many factors cause the sciences to be dichotomous or not harmonious, due to differences in the ontological, epistemological and axiological levels of the two fields of science. As we know that Islamic religion departs from revelation that is absolutely true and is assisted by reasoning that in the process of using it must not conflict with revelation (revealed knowledge). Meanwhile, the general science that has existed so far originated in the West and is based on an atheistic, materialistic, secularistic, empiricistic, rationalistic, even hedonistic philosophical view. The two things which form the basis of these two fields of study are clearly different, and difficult to reconcile.

From the above reality, various Muslim scientists at Islamic higher education institutions are working to integrate religious truth (revelation) with the truth of science, the final product of which is expected to be implemented into the realm of the education system in each institution. However, the scientific integration model as to what will be used is very dependent on the vision, mission, goals, strategies and culture of each institution.

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Not to mention, if we look at the implementation of the discourse of scientific integration into the curriculum, of course, this is very dependent on the meaning of each institution on their concept of integration. Is integration a combination of religious and general sciences which merges into an inseparable science? Or is integration meant as the Islamization of science? Or even the integration of science is symbolic, that is, it only opens general study programs under the umbrella of institutional management, but between general science and Islamic science both operate and are implemented individually? That is why each tertiary institution experiences have different steps, approaches, selected editors, and diversity of study elaboration.

Based on the above background, this discussion is important to put forward in the context of building a scientific integration model in the three countries: Indonesia, maaysia and Brunei. Because the model offer that has been formulated in various PTKIN is expected to be a material for analysis, open insight and learning for the research team and readers in generally to find out more in the course of the discussion of scientific integration that has been carried out, so that they can understand the scientific estuary that might and could be emulated by the integration team in the formulation of the concept of integration.

1. Integration Model of UIN Sunan Kalijaga Yogayakarta: *"Jaring Laba-laba"*

One significant development that is quite important for UIN Yogyakarta institutions is when the institution underwent a transformation from the State Islamic Institute (IAIN) to Yogyakarta State Islamic University (UIN) based

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on Presidential Decree Number 50 of 2004 dated June 21, 2004. These institutional changes demanded the existence of a direct consequence of scientific activities to conduct a study of the scientific establishment of UIN Yogyakarta which must be more accommodating to other general sciences. From this was born the vision of UIN Yogyakarta to become a university that: "Excellent and leading in the integration and development of Islamic studies and science for civilization."

Through this vision, Amin Abdullah as the Rector at the time, hoped for an integration (integration) between the two sciences. He rolled out a scientific model with the integration-interconnection paradigm. In other words, integration is a combination of religious and general sciences, while interconnection is connecting the two fields of science which were previously viewed as diametrically different, enabling the birth of a friendly, democratic, and *rahmat lil 'alamin*.[21]. According to Amin Abdullah, if during this time there were very sharp barriers between "science" and "religion" in which both seemed to be independent entities, having their own territory both in terms of object-formal-material, research methods, truth criteria, the role played by scientists to their organizing institutions, then

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[21]Please access, "Overview of UIN Sunan Kalijaga" at http: //www.uin- suka.ac.id/id/about/universitas-1-sekilas-uin.html (accessed on June 12, 2011).

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reduces these tensions by trying to bring them closer and relate them so that they "greet" one another.[22]

Elaboratively, the initiator of the integration-interconnection paradigm added, that with this integration-interconnection paradigm, there is no longer a separation between the areas of religion and science. Because the essence of Islam in its true meaning is to develop science that is universal and does not recognize the dichotomy between the sciences of qauliyyah / hadharah al-Nash (the sciences relating to normative textual religious texts such as fiqh, kalam, tasawuf, tafsir, hadith , philosophy and lughah, with rational kauniyyah / hadharah al-'Ilm sciences (natural and social sciences) that are empirical including science and technology, as well as with hadharah al-Falsafah (ethical sciences) that are rational like philosophy and culture Scientific integration is the integration of hadharah al-Nash, hadharah al-'Ilm and hadharah al-Philosophy which are carried out through 2 (two) models, namely (1) integration-interconnection within the internal area of Islamic sciences, and (2) integration-interconnection of Islamic sciences with general sciences.

UIN Yogyakarta integration-interconnection epistemology uses the metaphor of "Jaring laba-laba." This "jaring laba-laba" metaphor is a method used to bridge the gap between classical Islamic sciences and new Islamic sciences that have made use of the analysis of social sciences. and contemporary humanities. Because scientific

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[22]M. Amin Abdullah. 2006. Islamic Studies in Higher Education: Integrative-Interconnected Paradigm.. Yogyakarta: Pustaka Pelajar, P. I, p. 92-93.

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activities at PTKI throughout the country are often only focused and limited to the Lapis Satu Circle line and Lapis Dua Circle line, which consists of Kalam, Philosophy, Sufism, Hadith, Date, Date, Fiqh, Tafsir, and Lughah. That too may be called only limited to the space of the classical humanities. Institutions with IAIN status in general have not been able to enter discussions of social sciences and contemporary humanities as depicted in the Three Circle pathway (Anthropology, Sociology, Psychology, Philosophy with various approaches offered). It is within this framework that the epistemology of integration-interconnection with the metaphor of "jaring laba-labas" exists in order to reunite modern sciences with classical or new Islamic sciences so that they no longer stand alone, but will be interrelated with one another[23]. This can be seen in the illustration of the "Jaring laba-laba" image as follows[24]:

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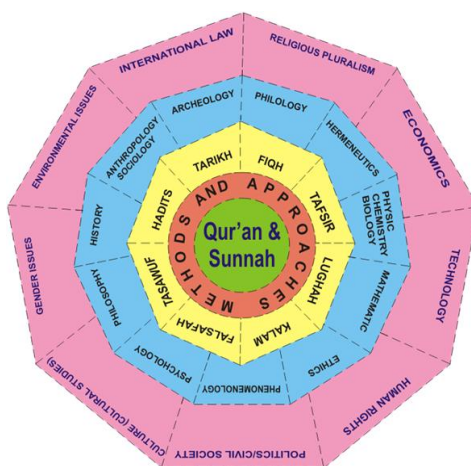
[23]*Ibid*., p. 370.
[24]*Ibid*., p. 107-108.

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The implementation of the integration model with the integration-interconnection paradigm is further strengthened by the support of the leadership through the following various strategic policies:

a) Lecturer selection system that puts forward the balance of religious and general competence;
b) Coaching New lecturers to develop integrative-interconnected competencies;
c) Establishment of Curriculum Development Directorate;
d) Integrated curriculum alignment;
e) Lecturer Training on Application of Curriculum Integration in Syllabus and SAP;
f) Making the syllabus development template and RPKPS (Semester Lecture Activity Program Plan) that are integratively interconnected;
g) Workshop on integrative-interconnected learning strategies; and
h) Lecturer Training on the Application of Scientific Integration in the Learning Process.

UIN Sunan Kalijaga Yogyakarta: Integration of interdisplinary and multidisplinary science with the scheme of the *jaring laba-laba* approach. The change of the institute into a university was carried out as an attempt by UIN Sunan Kalijaga Yogyakarta to launch a new intellectualism or paradigm in viewing and conducting studies of religious sciences and other sciences, better known as the integration-interconnection paradigm. In this case, Amin Abdullah carries the integration-interconnection paradigm which is an open science paradigm that provides space and opportunities for interaction between various disciplines - religion and

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general-, so as to produce knowledge relevant to the demands of the times that do not trigger conflicts with each other (Abdullah, 2014). Using four empirical cases in Indonesia, Amin Abdullah concluded that the paradigm of integration and interconnection that was symbolized by the spider web of science (Abdullah's spider web) was needed (Abdullah, 2014: 182), between religion and general science. complement each other in building human civilization.

2. Integration Model of UIN Syarif Hidayatullah Jakarta: *"Reintegrasi Kurikulum"*

The change of the Syarif Hidayatullah State Islamic Institute (IAIN) into Jakarta State Islamic University (UIN) Syarif Hidayatullah Jakarta departed from the institution's desire to continue to adapt to the pace of community needs in general, which is increasingly complex with the demands of the development of science and technology. This change of form was welcomed positively by the government with the signing of a Joint Decree (SKB) between the Minister of National Education of the Republic of Indonesia and the Minister of Religion of the Republic of Indonesia on November 21, 2001, which was then followed up with the issuance of Presidential Decree No. 031 on May 20, 2002 concerning the Amendment of Syarif Hidayatullah Jakarta IAIN to UIN Syarif Hidayatullah Jakarta. Responding to these changes, the initiator of scientific development who was also the Chancellor of UIN Syarif Hidayatullah Jakarta at that time, Prof. Azyumardi Azra considered, "This signing certainly marks a new history of

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IAIN Jakarta. We are determined not to have a dichotomy between theology and non-religion."[25]

Statement of Prof. Azra above shows that the initial basic concept of the development of scientific integration in the UIN Syarif Hidayatullah Jakarta environment began at that time. UIN Syarif Hidayatullah Jakarta strives to change the image of its institution which has been manifested by the claims of the Da'wah institution, because its field of study, which has so far only been concerned with the religious sciences, is a specialty of the IAIN, becoming an institution that is open to non-sciences religion. UIN Syarif Hidayatullah Jakarta must play a wider and optimal role, not only for the community, but also in the world of academics and bureaucracy. Curriculum and fields of study at UIN Syarif Hidayatullah Jakarta must also experience interaction, friction and reapproachement with the development of general knowledge.[26]

The scientific integration model offered by Azyumardi Azra is a reconciliation and reintegration between religious

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[25]Quoted from Oman Fathurrahman. 2002. "Prof. Dr. Azyumardi Azra, M.A: Realizing IAIN's 'Dream' into a UIN "in Badri Yatim and Hamid Nasuhi (eds.), Building a Center for Excellence in Islamic Studies. Jakarta: IAIN Jakarta Press, p. 323.

[26]Azyumardi Azra. 2000. "IAIN in the Middle of New University Paradigms" in Komaruddin Hidayat and Hendro Prasetyo, Problems and Prospects of IAIN: Anthology of Islamic Higher Education. Jakarta: Director General of Islamic Binbaga, p. 13

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sciences and general sciences, which is a return to the transcendent unity of all sciences[27]. According to Azra, Islam itself actually does not recognize the existence of a scientific dichotomy, because the source of all that knowledge basically comes from God. Even if it is currently experiencing a dichotomy, it is necessary to have an effort to reconcile or reintegrate between the religious sciences and general sciences. For this reason, the meaning of scientific integration, according to Azra, is to integrate religious and general sciences. This integration is carried out through 3 (three) aspects or levels, namely the level of ontology, the level of science classification and methodological level. But unfortunately, the methodological formulation of the implementation of integration has not been well documented. In other words, up to now there has not yet been found any operational policy formulation for the leadership of UIN Syarif Hidayatullah Jakarta related to the implementation of scientific integration in the curriculum and learning process. because besides there is no written documentation, also currently each Faculty at UIN Jakarta is developing a model of scientific integration based on creativity and ijtihad of each Faculty leader.

According to Azyumardi Azra (Azra, 2006), there are a number of important rationales that urge the

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[27]Azyumardi Azra. 2005. "Reintegration of Sciences in Islam" in Zainal Abidin Bagir et al. (eds.), Integration of Science and Religion: Interpretation and Action. Bandung: Mizan, P. I, p. 210-211.

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transformation of the Jakarta IAIN into UIN. The most fundamental argument is because the dichotomy between religious and general education that has been practiced in Indonesia has created inequality and injustice from various aspects of life, social, political, and economic. Among other things, the IAIN, which has focused on "religious" education, has so far not been able to play a significant role in academia, bureaucracy or social society at large, and its graduates are known to be only preaching oriented. In addition, in terms of sharing and budget allocation, there is a huge imbalance between general tertiary institutions and Islamic religious tertiary institutions. For example, the budget for 14 IAINs throughout Indonesia is almost equivalent to the budget of one Faculty of Medicine UI. Furthermore according to Azra, the IAIN curriculum has not been able to respond to the rapid development of science and technology technology with increasingly complex community structures. The dynamics must be addressed by UIN Jakarta through the development of interdisciplinary and multidisciplinary methodologies, which enable dialogical interaction, borrowing and assimilating, and creating new knowledge. With the opening of general science faculties, UIN Jakarta can accelerate the integration of its knowledge without theological obstacles and move to strengthen academic traditions and are projected to give birth to new sciences.

3. Integration Model of UIN Maulana Malik Ibrahin Malang: *"Pohon Ilmu"*

As with the two universities above, the concept of scientific integration of UIN Maulana Malik Ibrahim Malang began when the proposed institutional change at

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the institution occurred. STAIN Malang's proposal to become a university was approved by the President through Presidential Decree No. 50 dated June 21, 2004. The institutional change at UIN Maulana Malik Ibrahim, through the Presidential Decree, demands a new consequence of holding higher education programs in the Islamic religious and general science fields simultaneously. Because of that, the main task of UIN Malang is to eliminate the dichotomy between the religious sciences and general sciences.

The initiator of the concept of scientific integration in the environment of UIN Maulana Malik Ibrahim Malang is the Rector himself, namely prof. Imam Suprayogo. According to him, Islam is not just a religion for Muslims, but it is also a science and a high civilization. And the decline of Muslims, according to him, was partly because Muslims carried out a dichotomy on general science and religion. Because of that, one of the fundamental and strategic efforts that must be taken by UIN Maulana Malik Ibrahim Malang after the decreasing of the Presidential Decree above is to reconstruct the scientific paradigm, by putting religion as the basis of science.

After going through deep reflection, finally Imam Suprayogo found a scientific integration model for UIN Malang with the metaphor "Tree of Science" as follows[28]:

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[28]Imam Suprayogo. 2006. Paradigm Development of Islamic Scientific Perspective UIN Malang. Malang: UIN-Malang Press, p. 57.

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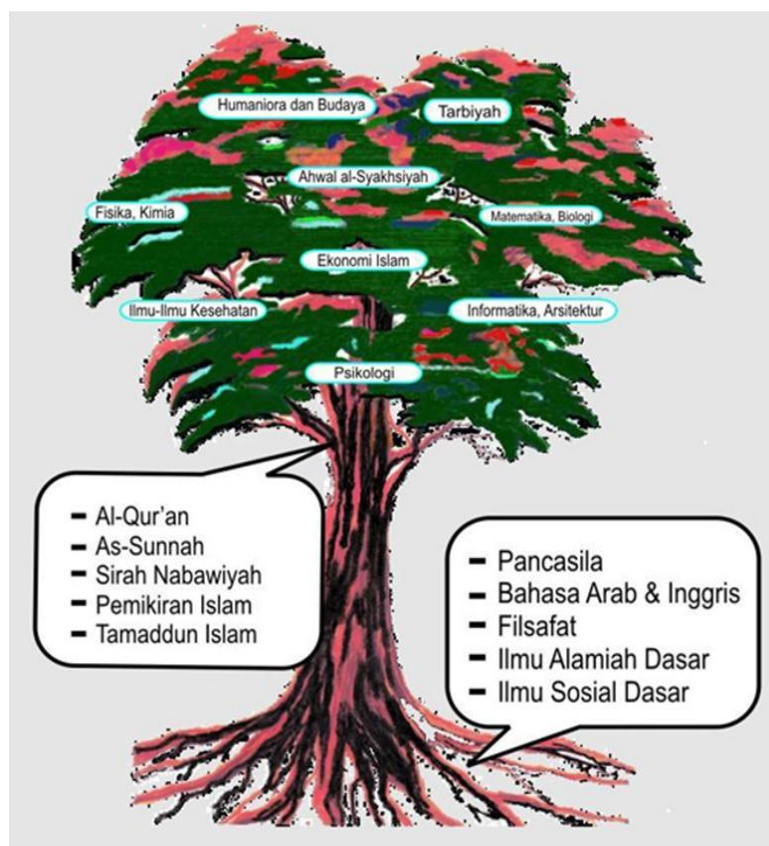
Dari gambar pohon di atas diketahui, bahwa bangunan struktur keilmuan UIN Malang didasarkan pada universalitas ajaran Islam. Islam sebagai sebuah agama dijadikan sebagai basis ilmu pengetahuan. Untuk itu, secara akademik, UIN Maulana Malik Ibrahim Malang mengembangkan ilmu pengetahuan tidak saja bersumber dari metode-metode ilmiah melalui penalaran logis seperti observasi dan eksperimentasi, tetapi juga bersumber dari al-Qur'an dan Hadis, yang selanjutnya disebut paradigma integrasi. Dalam paradigma ini, posisi al-Qur'an dan Hadis menjadi sangat sentral dalam kerangka integrasi keilmuan tersebut. Agama sebagai Al-

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Qur'an dan hjadits dalam pengembangan ilmu diposisikan sebagai sumber ayat-ayat *qauliyah*, sedangkan hasil observasi, eksperimen dan penalaran logis diposisikan sebagai sumber ayau-ayat *kauniyyah*. Dengan posisinya seperti ini, maka berbagai cabang ilmu pengetahuan selalu dapat dicari sumbernya dari al-Qur'an dan Hadits.

From the picture of the tree above, it is known that the structure of UIN Malang's scientific structure is based on the universality of Islamic teachings. Islam as a religion is used as the basis of knowledge. For that reason, academically, UIN Maulana Malik Ibrahim Malang develops knowledge not only from scientific methods through logical reasoning such as observation and experimentation, but also from al-Qur'an and Hadith, hereinafter referred to as the integration paradigm. In this paradigm, the position of al-Qur'an and Hadith becomes very central in the framework of scientific integration. Religion as Al-Qur'an and hjadits in the development of science is positioned as a source of verses of qauliyah, while the results of observation, experimentation and logical reasoning are positioned as sources of kauniyyah verses. With his position like this, the various branches of science can always be sought from al-Qur'an and Hadith.

The metaphor used is a sturdy tree, branching, leafy, and fruitful because it is supported by strong roots. A strong root not only serves to support the tree base, but also absorbs soil content for tree growth and development. The tree's roots illustrate the university's scientific foundation, namely Arabic and English, Philosophy, Natural Sciences, Social Sciences, and

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Pancasila and Citizenship Education. The mastery of this scientific foundation becomes the basic capital for students to understand all aspects of Islamic scholarship, which is described as the main tree that becomes the identity of university students, namely: Al-Qur'an and as-Sunnah, Sirah Nabawiyah, Islamic Thought, and Insights Islamic Community. Branches and branches represent the university's scientific fields which are constantly growing and developing. Flowers and fruits illustrate the outputs and benefits of this university education effort, namely: faith, piety, and scholarship[29].

The scientific integration model above is not just mere discourse, but has also been implemented in a learning process that refers to an integration-based curriculum and is also based on the vision, mission and goals as well as the knowledge tree paradigm set by UIN Maulana Malik Ibrahim Malang. In this context, university leaders continuously monitor the evaluation of the implementation of scientific integration to the development of curriculum and learning processes, so that it is known in the environment of UIN Maulana Malik ibrahim even a motto "University of Kejar faculties." The leadership's support for the ongoing process of the concept of scientific integration in the poor environment of UIN did not stop there, there were many

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[29]Please access the "Scientific Structure" in http://www.uin-malang.ac.id/index.php?option=comcontent&view=article&id=7:structure-cience&catid=1: introduction & Itemid = 144 (accessed December 10, 2013)

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strategic programs rolled out in order to strengthen the scientific building set out above, including the following:

a) Making Ma'had 'Ali;
b) Creating a Special Arabic Language Development Program (PKPBA);
c) Creating a Special English Language Development Program (PKPBI);
d) Establishment of the Qur'anic and Science Research Institute (LKQS);
e) Establishment of a Quality Assurance Office (KJM);
f) Cultivating the writing of integrated textbooks for lecturers;
g) Recruitment of general lecturers who memorized the Qur'an;
h) Integrated Curriculum Workshop;
i) Every year the University pays for undergraduate 3 (doctoral) education for 40 UIN lecturers;
j) Arranging textbooks that refer to the paradigm of scientific integration as outlined in the tree of knowledge
k) Develop an integrated SAP; and
l) Cultivate integrated thesis writing.

UIN Malang tries to eliminate the dichotomy of science and reconstruct the paradigm of science by putting religion as the basis of science, where the structure of science is based on the universality of Islamic teachings. Imam Suprayogo carries out the integration paradigm with the Tree of Science metaphor which means that if a tree grows and develops, so does science. If a tree develops, has branches and has branches, so does science (Suprayogo, 2009). Suprayogo makes Al-Qur'an and Hadith as the foundation of the whole education process. With this

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paradigm the development of science is not only sourced from scientific methods through logical reasoning such as observation and experimentation but also comes from the Qur'an and Hadith.

4. Integration Model of UIN Sunan Gunung Djati Bandung: *"Roda Ilmu"*

In line with the institutional changes of the 3 (three) universities above, IAIN Sunan Gunung Djati Bandung also underwent an institutional transformation to become the State Islamic University (UIN) Sunan Gunung Djati Bandung based on Presidential Decree of the Republic of Indonesia Number 57/2005 dated October 10, 2005. This transfer of status demands leadership policy to conduct an in-depth study of the educational process that it runs, which no longer only teaches the religious sciences but also science in general. For the sake of these interests, is Prof. Nanat Fatah Natsir who had initiated the integration model for the science of UIN Sunan Gunung Djati Bandung. According to him, science and science were born not only from deep reasoning towards the objects of knowledge contained in the material created by God, but more importantly is God himself as the source of knowledge itself. Therefore also, the combination of verses kauniyyah with verses qur'aniyyah will give birth to a scientific paradigm that is based on revelation and rationality.

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The integration of scientific UIN Sunan Gunung Djati Bandung as initiated by prof. Natsir uses the metaphor "Roda Ilmu" as follows:[30]
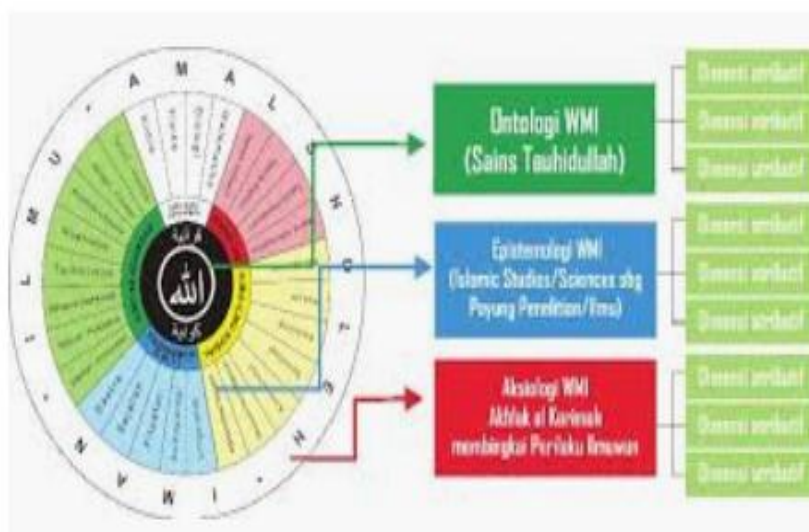
From the picture above, it is understood that the structure of UIN Sunan Gunung Djati Bandung's scientific structure is based on a wheel philosophy that has 3 (three) components: the axle (axle), the spokes (alloy wheels), and the tire / rubber part. The three components work together simultaneously in harmonious unity according to their respective functions. Like a wheel with three parts, the science of UIN Bandung refers to the "Filsafat roda" as follows:

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[30]Nanat Fatah Natsir, "Formulating the Foundation of the Epistemology of Integrating the Science of Qur'aniyyah and Kawniyyah" in the Editorial Team (eds.). 2006. UIN Scientific Views: Revelation Guiding Science. Bandung: Gunung Djati Press, P. I, p. 32.

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a) The axle symbolizes the central point of the strength of the human mind which is sourced and divine values, namely God as the source of all sources. This central point reflects the center of emission of virtue values derived from His owner, as well as the point of destination for all human endeavors. In other words, monotheism} is the foundation for the development of all knowledge, whether it is sourced from verses of the Qur'an or kauniyyah verses.

b) Wheel rims consisting of a number of spokes, inner circle, and outer circle, symbolize the knowledge family with various types of disciplines developed at this time. Although each science has its own characteristics, but has the same function, namely science as a tool to understand the nature of life. The existence of various colors of true scientific disciplines does not indicate separation that can be used by humans as a means of living. The rotation of the wheels on the wheels symbolizes that every knowledge developed at UIN Sunan Gunung Djati Bandung always expands its horizons to continuously develop according to the times.

c) An outer tire made of rubber symbolizes the reality of life that is inseparable from the spirit of divine values and the passion for the study of science. On the outside of the tire, three terms are symbolized, namely faith, knowledge and good deeds. This is the final target of the profile of UIN graduates. The power of faith is instilled through the educational process in a scientific and religious campus situation. The power of knowledge is the basis of UIN Sunan Gunung Djati Bandung which reflects the dynamics of the campus as a zone of struggle

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for scientists. While good deeds as a form of behavior that is guided by faith and science. In the context of the implementation of scientific integration in the preparation of the curriculum, UIN Sunan Gunung Djati Bandung does not seem to have a detailed formula as does the poor UIN and UIN Yogyakarta, namely to the level of curriculum preparation and learning process. This is not because, each University has different policies, including the application of the concept of scientific integration in the curriculum and learning process. UIN Sunan Gunung Djati Banduing considers that the learning process is a space for lecturers to innovate in the learning process. The leadership gives full autonomy and authority to lecturers in the learning process while still referring to the vision, mission, goals and paradigm of scientific integration developed. However, significant efforts to ground the concept of integration have been made through the following strategic programs[31]:

- Curriculum Alignment;
- Establishment of an Integrated Curriculum Preparation Manual;
- Cultivating integrated lecturer research;
- Writing integrated textbooks;
- Compilation of SAP collectively;
- Making lecture schedules based on lecturer competencies so integration is carried out; and
- valuate the shared learning process.

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[31]*Ibid.*, p. 32-43.

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The integration of science is described by UIN Sunan Gunung Djati Bandung as a dynamic spinning wheel with components inside that include the axle as the central point of the power of the human mind which is sourced from divine values. Wheel rims or bars illustrate very diverse branches of science, but all of them continue to pivot on divine values and finally rubber tires, as a picture of the reality of life that is inseparable from divine values and scientific studies.

5. Integration Model *of* UIN Alauddin Makassar: *"Sel Cemara Ilmu"*

IAIN Alauddin Makassar has officially changed its status to UIN Alauddin Makassar based on Presidential Regulation of the Republic of Indonesia No 57 of 2005 dated October 10, 2005. In order to develop its scientific paradigm, UIN Alauddin Makassar wants the opening of dialogue between religious and general science but by still making the Qur'an 'an and al-Hadith as a center of scholarship. These two sources should ideally inspire and inspire the sciences in the next layer, namely the Islamic sciences of Klasih, natural sciences, social sciences, humanities, and contemporary sciences. In the context of dialogue between these sciences, UIN Alauddin Makassar established the concept of scientific integration with the metaphor of "Sel Cemara Ilmu." This concept was initiated by Prof. Azhar Arsyad. According to him, "Sel Cemara Ilmu" contains metaphorical roots, grooves, branches and fruit and transcendental goals of science that are universal in nature, which can be realized in a forum called

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university.[32]

The metaphorical illustration of "Sel Cemara Ilmu" can be seen in the following image:

The illustration of the pine tree indicates something that is alive, not dead, cool to look at. Because it is a tree, it grows more and more, and develops, then cones. More and more shady. This tree will bear fruit, and that fruit will be the name of a science, which will certainly bear fruit again. The parts are integrated and interconnecting. The cell picture illustrates aspects of synthetic interconnectivity, while cypress depicts the final

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[32]Azhar Arsyad, "Buah Cemara Integrasi dan Interkoneksitas Sains dan Ilmu Agama", *Hunafa: Jurnal Studia Islamika*, Vol. 8, No.1, Juni 2011, p.11-12.

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transcendental, through Muhammad's apostolate towards God.

But unfortunately, the operational formulation of the "Sel Cemara Ilmu" concept in curriculum praxis, as well as UIN Bandung, has not yet been found. The concept has not yet been operationalized in the form of more practical policies, especially in the learning process. There is only general policy to support an integrative learning process. Among the macro policies that have been rolled out are as follows: First, the curriculum is adaptive to market needs, up to date on the development of science and technology and accommodating to the development of student personality; and Second, the curriculum is arranged in accordance with the framework of scientific integration and rests on the competence of study programs. The derivative policies are follows:

a) Curriculum review and syllabus for integrating religious sciences and general sciences
b) Incorporating religious values into the curriculum and syllabus used in the general faculty
c) Encourage all lecturers to conduct research on the integration of Islam, science, technology, and art at least 50% per year
d) Research on scientific studies carried out by general faculty lecturers is strived to incorporate religious values.
e) Publish the scientific work of educative staff is sought international publication - a minimum of 10 pieces per year

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f) Arranging textbook packages containing scientific integration between general science and Islam.

Illustration of philosophy or model of the integration of science with the metaphor of 'House of Civilization' at UIN Alauddin Makassar inspired by the local treasures of the people of South Sulawesi which are known for having unique and distinctive forms and philosophies of traditional houses, as well as being encouraged by the vision of UIN Alauddin as' Center for enlightenment and transformation of science and Islamic civilization 'based technology. Each element in the construction of the 'House of Civilization' is described as follows: (1) its foundation represents the Qur'an and Hadith; (2) the pillars are local religious values and wisdom; (3) the floor and yard are manners; (4) the walls are applicable science and technology; (5) the window symbolizes openness, insight and broad views; and (6) the roof is brotherhood and egalitarianism, as well as a reflection of moderate, tolerant and inclusive attitudes. Meanwhile, the prerequisite of 'House of Civilization' is discipline, integrated science, applicable and useful knowledge for humanity.

6. UIN Sunan Ampel Surabaya: "Menara Kembar Tersambung"

In order to respond to the demands of the development of science and technology, IAIN Sunan Ampel Surabaya participated in the process of proposing the transfer of its institutional status towards UIN Sunan Ampel Surabaya. The proposal was successful, to get a decision from the government, based

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on Presidential Regulation No. 65 of 2013, the IAIN Sunan Ampel Surabaya was officially recognized as having changed its institutional form to Sunan Ampel UIN Surabaya.

Like universities in general, this change in institutional status requires UIN Sunan Ampel Surabaya to also design the concept of scientific integration. In line with its vision, which is "Becoming an internationally competitive and competitive Islamic University"[33], UIN Sunan Ampel Surabaya develops a scientific integration paradigm called "The integrated twin towers[34]" or Menara kembar tersambung. This scientific integration paradigm was originally called the Twin Towers which was first conceived by Prof. Nur Syam when he was Rector. According to him, the concept of the "Twin Towers" (Twin Towers) was adopted when he ran for Rector in August 2008, as an offer to label the Islamic sciences typical of IAIN Sunan Ampel Surabaya[35].

Since 2013, the Twin Towers paradigm changed to *"Menara kembar tersambung"*. According to the UIN Sunan Ampel Surabaya Team in the UIN Sunan Ampel

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[33]Please access "Vision, Mission and Tagline" in http://www.uinsby.ac.id/id/185/visi-misi-dan-tagline.html (accessed on November 20, 2015)

[34]Please access, "Scientific Paradigm" in http://www.uinsby.ac.id/id/251/paradigma-keilmuan.html (accessed on November 20, 2015).

[35]Nur Syam, "Twin Towers Model for Islamic studies" in http://nursyam.uinsby.ac.id/?p=762 (accessed on November 20, 2015).

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Surabaya Academic Design book: Buiding Character Qualities for the Smart, Pious and Honorable Nation, epistemologically, the "Menara kembar tersambung" scientific paradigm seeks to build scientific structures that enable religious science and social/humanities. and natural sciences develop adequately and naturally. Both have the same authority, so that one does not feel superior or inferior to each other. Islamic science develops in its capacity and possible development, so does other sciences also develop in its range and capacity. Islamic science is like one tower, and other sciences like the other tower. The two are connected and meet in a greeting peak, known as the multidisciplinary Islamic science concept. One tower becomes the subject matter and the other as an approach.[36]

The following is a picture that illustrates the paradigm of the integration of the "Connected Twin Towers" UIN Sunan Ampel:[37]

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[36]UIN Sunan Ampel Surabaya Team. 2015. Academic Design of UIN Sunan Ampel Surabaya: Buiding Character Qualities for the Smart, Pious and Honorable Nation. Surabaya: UINSA Press, P. II, p. 34-35

[37]*Ibid.*, p. 47.
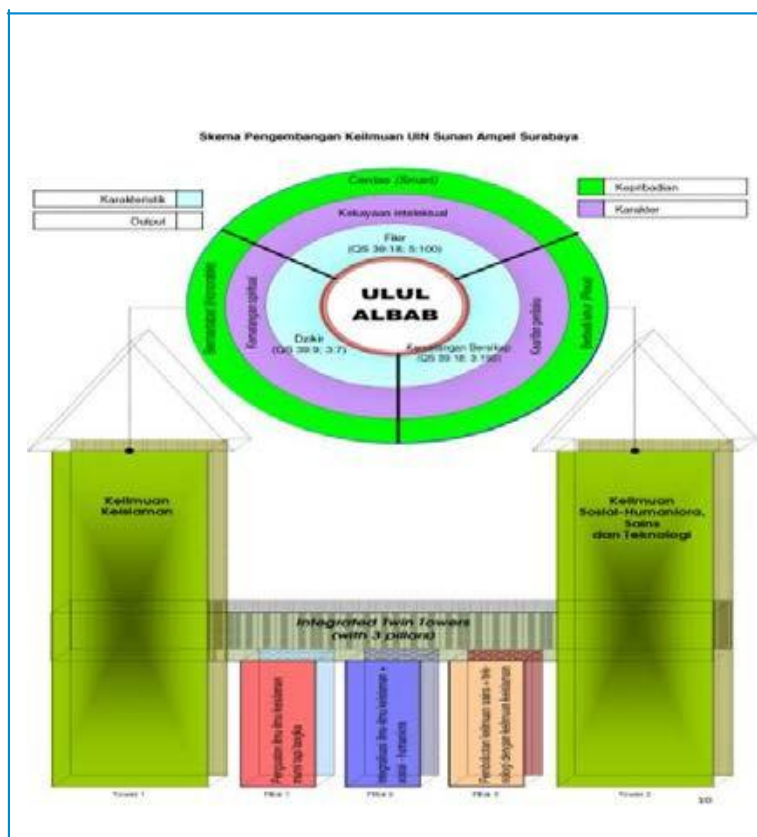
The picture above explains that the paradigm of scientific integration "UIN Sunan Ampel UIN Sunan Ampel" intends to produce graduates who are Ulu> al-Alba> b as human resources capable of integrating the practice of remembrance and thought in the practice of daily life (QS 39: 9 ; 3: 7). He also has the maturity to behave and is able to make the best choices in life based on divine guidance (Q. 39:18; 5: 100), besides being able to offer intellectual stability (Q. 39:18; 3: 190). Concretely, graduates of Ulul al-Alba> b are translated into graduate competency standards (SKL) which have intellectual property, spiritual maturity, and behavioral wisdom.

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Intellectual property is expected to be able to transfer individual graduates who have smart smart personalities).

Spiritual maturity is idealized in order to be firmly planted in the self-respect of individual honorary personality graduates. Behavioral wisdom is intended so that individual graduates are enriched with pious (virtuous) personalities[38]. To produce graduates like this, UIN Sunan Ampel designed the scientific integration that "connects" between Menara I (Islamic Science) and Menara II (Humanities, Science and Technology). The conciliation between the two towers is between three pillars, namely pillar (1) strengthening of pure but rare Islamic sciences, pillar (2) integration of Islamic sciences and social-humanities, and pillar (3) weighting of scientific and technological sciences with Islamic scholarship.

UIN Sunan Ampel Surabaya is trying to build a structure of science that enables the science of religion and science / social science to develop simultaneously and adequately, where the status of religious knowledge and other sciences is equal, as strong without anyone feeling more superior than others. Through this integration, UIN Surabaya hopes to produce graduates who are ulul albab, who are able to integrate the practice of dhikr and thinking skills in daily life. The connecting bridge symbolizes that in the development of the religious sciences and other sciences simultaneously, both are possible to be able to interact with each other

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[38]*Ibid.*, p. 46

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mutually. The bridge has another symbolic function, namely the interaction between the religious sciences and other sciences enriching the tradition of scientific construction both.

7. *UIN Walisongo Semarang: "Intan Berlian Ilmu"*

IAIN Walisongo Semarang officially became the Walisongo State Islamic University (UIN) since December 19, 2014. In order to account for the academic consequences of the transfer of institutional status of the Walisongo Semarang UIN, UIN Walisongo emphasized the Unity of Science *(Wahdat al-'Ulum)* academic status with the Walisongo UIN Semarang's institutional status. the "Intan berlian Science" model as the scientific paradigm of the UIN Walisongo Semarang institution. This scientific paradigm was conceived by Dr. H. Abdul Muhayya, M.A. and Dr. H. Muhyar Fana.ni, M.Ag.[39]

According to Muhyar Fanani, what is meant by "Unity of Science" is that all knowledge is basically a unity that originates from and empties into God through His revelation, either directly or indirectly. In this paradigm, revelation is seen as the glue foundation for the unification of knowledge. Science always proceeds and dialogues towards a single goal, namely the All-Knowing Creator. Because all knowledge originates

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[39]Please access Luthfiyatul Hiqmah, "Wahdatul Ulum as the Concept of Integration of Islam and Science at UIN Walisongo" in http://hiqmah12.blogspot.co.id/2014/05/wahdatul-ulum-as-concept-integration.html (accessed at 20 November 2015).

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from and empties into One source, then all knowledge must also dialogue and lead to one goal, which is to deliver the reviewer to get to know and be closer to God as al-alAlim (the All-Knowing) [40]. In illustrating the integration paradigm of "Unity of Science," UIN Walisongo Semarang uses the metapora "Intan berlian ilmu ." What is meant by "Intan berlian ilmu" here, as confirmed by Tsuwaibah, is that Intan berlian is a very beautiful, high-value, brilliant, sparkling metapora. by emitting light, is sharp, has axes and sides that are interconnected with one another, and enlightens with five interconnected sides[41].

The following is the integrated paradigm of "Unity of Science" of UIN Walisongo with the illustration of "Intan berlian ilmu" from Muhyar Fanani:[42]

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[40]Muhyar Fanani, "Unity of Sciences Paradigm in IAIN Walisongo's Vision and Mission", Presentation in the form of Powerpoint was delivered on 30 October 2013 at the Novotel Hotel, Semarang.

[41]Imam Taufiq, "IAIN National Commitment" in Suara Merdeka, 7 April 2014.

[42]Muhyar Fanani, "Unity of Sciences Paradigm in IAIN Walisongo's Vision and Mission", Presentation in the form of Powerpoint was delivered on 30 October 2013 at the Novotel Hotel, Semarang.

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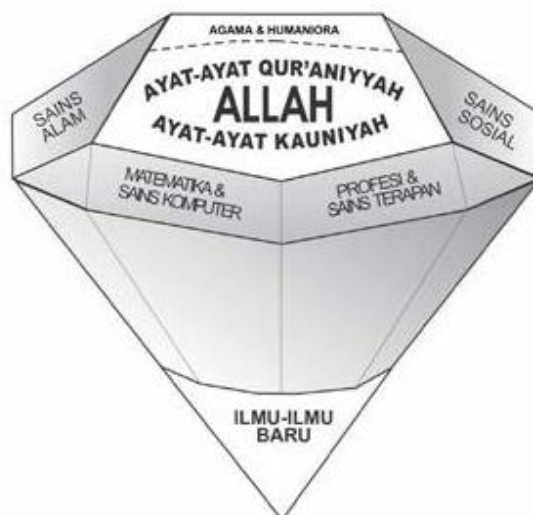
From the picture above, it can be seen that the middle axis portrays God as a source of values, doctrines and science. Allah revealed verses of the Qur'aniyah and verses of kauniyah as a land of exploration of knowledge that is complementary and impossible to contradict each other. Exploration of the verses of God produced five clusters of knowledge, namely: (1) Religion and humanities (religion and humanity sciences); (2) social sciences; (3) natural sciences; (4) mathematics and computer science (mathematics and computing sciences); and (5) professional and applied sciences (professions and applied sciences).[43]

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[43]Tsuwaibah, "Ibn Sina's Unity of Science Epistemology: Ibn Sina's Scientific Integration Study in the Asy-Syifa Juz I Book and its Relevance with Walisongo's IAIN Unity of Science", Individual Research Reports, IAIN Walisongo Semarang, 2014, p. 72-73.

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UIN Semarang believes that all knowledge is basically a unity that originates from and empties into Allah swt., Through His revelations. Therefore all knowledge must lead to one goal that can bring the observer closer to Him.

From the above explanation it can be concluded, that in a sustained manner, the scientific integration model offered by the 7 (seven) UINs above actually wants to eliminate the dichotomy between the religious sciences and general sciences. Besides that, all these universities also make revelations (the Qur'an and Sunnah) as the core or basis for the knowledge they develop. In other words, whatever the expertise of a Muslim intellectual, whether in the natural sciences, social sciences or humanities, always make the source of Islamic teachings (al-Qur'an and Sunnah) as the basis and core for scientific spirit. This spirit in turn brought Muslim intellectualism to its golden era, all thanks to the spirit and encouragement of the first revelations, which had inspired the lives of the Muslim community at that time.[44]

If the classification of several State Islamic universities is carried out, it appears that there are 3 (three) grades in seeing the concept of scientific integration that has been formulated in a number of UINs mentioned above, namely: The first grade is owned by UIN Maulana Malik Ibrahim Malang and UIN Sunan Kalijaga Yogyakarta. Both UINs have been able to

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[44]Abdullah Idi and Toto Suharto. 2006. *Revitalizing Islamic Education* in Yogyakarta: Tiara Wacana, P. I, p. 4

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formulate the concept of scientific integration systematically and continuously, starting from the philosophical paradigm to the operational curriculum preparation and learning process. Both UINs have been able to follow up the concept of scientific integration into a more operational-implementative level, both in curriculum development, syllabus development, lesson plan, learning and in academic culture. While at other UINs, the concept of scientific integration still stops at the normative-philosophical level and is still looking for forms of application that are appropriate to each UIN. it still stops at the normative-philosophical level and has not been followed up in a more operational-implementative form.

The second grade is owned by UIN Sunan Gunung Djati Bandung, UIN Syarif Hidayatullah Jakarta and UIN Sunan Ampel Surabaya. These 3 (three) UINs have the concept of scientific integration, but they are still in the form of pastiche, have not been formulated operationally and so far do not have operational reference books that can be used as guidelines by the academic community. Third Grade, owned by UIN Alauddin Makassar and UIN Sultan Syarif Kasim Riau. Both UINs are still in the process of understanding and studying the scientific integration model that will be developed.

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B. THE CONCEPT OF INTEGRATION OF SCIENCE AND ISLAM FORMULATED IN ISLAMIC HIGHER EDUCATION INSTITUTIONS OF MALAYSIA

One of the universities which declaratively mentioned its distinction with other universities in Malaysia about the concept of integration of science and Islam in its learning system is University Sains Islam Malaysia (USIM). At USIM, the concept of scientific integration has been highly emphasized from the aspect of the name of the university that blends and aligns science and Islam. This is further strengthened by his vision of Leader in the Integration of Naqli and Aqli Knowledge, with the motto: "Knowledge, Disciplined and Devout.

Based on this vision and motto, USIM has aspirations as a leader in all aspects of science and as a global reference center for the integration of Naqli and Aqli sciences. For this reason, USIM uses a balanced approach in education, which applies elements that meet physical and spiritual needs, which can be seen in various aspects of the organization of education, namely the academic program, and administration. The approach presented by USIM includes a holistic approach to the delivery of knowledge, which brings together revelational science (Naqli science) and rational science (Aqli science).

Based on that, USIM offers a unique model for Islamic higher education, which distinguishes it from other Islamic universities throughout the world. Integration of religious science with social and physical science in all USIM programs, provides a comprehensive understanding and offers a new approach and solution to global problems. Universal values contained in Islamic values and history have also proven that

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these values can be adopted by all humans including living together in harmony with mutual respect and tolerance among humans. This is also one of the efforts to restore the values of scientific knowledge and technology developed by previous Muslim scholars so that they are increasingly in the future. These values are applied to USIM students so that they become professionals and referrals in their respective fields. They are also willing to contribute and make changes to the community.

USIM presented the concept through academic and research programs to the following foundations, including Islamic Studies, the Quran and Sunnah, Islamic Science, Technology and Engineering, Islamic Literature, Social Science and Humanity.

Based on this phenomenon, this research seeks to examine and explore the integration of science with Islam that has been carried out by USIM, especially in the Al-Qur'an and Sunnah Study Faculties and the Faculty of Science and Technology as a representation of various universities in Malaysia. It is expected to get specific results on how the form of implementation of integration for faculties with Islamic studies background in science in Malaysia and vice versa what form of implementation of integration for faculties with scientific studies with Islam.

1. Brief History of USIM

Universiti Sains Islam Malaysia (USIM) is one of the tertiary institutions under the auspices of the kingdom of Malaysia. The establishment of USIM stems from the desire of the Kingdom of Malaysia to give birth to leaders who have the character and pattern of leadership in

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accordance with Islamic teachings. Through USIM, the Kingdom of Malaysia expects intellectuals from college graduates who do not only possees general knowledge but also master Islamic scholarship.

This desire began to be formulated by the Malaysian Minister of Education, the Honorable Datuk Seri Najib Tun Razak in Pasir Puteh, Kelantan, on June 14, 1996. The idea was formally manifested in the founding of the Malaysian Islamic University Colleges by the Honorable Datuk Seri Najib Tun Razak on June 14 1997, in Besut, Terengganu, after obtaining approval from the Cabinet on June 11, 1997.

Then, this idea was implemented by Prof. Dato 'Dr. Abdul Shukor Haji Husin, Dean of the Islamic Studies Faculty, Universiti Kebangsaan Malaysia (UKM) and Prof. Madya Dr. Abdullah Mohamed Zin, UKM shrug with solemn advice from Exco Terengganu, Datuk Dr. Mohd Yusof Noor and Minister in the Position of Prime Minister, Dr. Datuk Abdul Hamid Othman. The operation was assisted by Mr. Haji Addenan Abd Rahman as Registrant and Puan Hajah Rohani Abu as Treasurer. On June 13, 1997 the Cabinet agreed that Arabic was the language of instruction.

The establishment of KUIM is a form of the desire of the Malaysian kingdom to make Malaysia the main model of Islamic countries in the world and to become a center of educational excellence by using a local curriculum to ensure the integrity of Islam in the country in order to realize the formation of new Islamic civilization. It also aims to restore the declining character of Islamic science.

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The establishment of KUIM also provides an opportunity for students graduating from State Religion High Schools (SMAN), People's Religion Middle Schools (SMAR) and the Ministry of Religious National High School (SMKA) Ministry to explore religious knowledge without the need to go to West Asia. This step will reduce the burden on the kingdom because students can continue their education without having to go abroad. The kingdom has the desire to have an institution capable of producing Islamic intellectual scholars.

"If other Islamic countries are not capable, Malaysia will take over rather than them to create a center of Islamic brilliance to show that Islam is not backward or old-fashioned, but rather progressive" ~ Mohd Najib Tun Abdul Razak.

2. USIM's Vision, Mission, Themes and Objectives

As an international standard university, USIM is based on Islamic studies by cultivating a quality-based management system and striving to enhance the culture in a sustainable manner in terms of:

a. provide services that coincide with the wishes of the customers and stakeholders of the Universiti;
b. provide education and management system that is capable and quality towards the dignity of Islamic Education that is relevant to the will of the universe; and
c. use the best practice to give birth to Islamic scholars who are educated in unison and human capital who live the motto "Knowledge, Disciplined and Devout."

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To realize this desire, USIM formulated the following philosophy, vision, mission and objective.

a. Philosophy: The combination between the knowledge of Naqli and Aqli and noble character is the main terrace forming a brilliant generation and knowledge society.

b. Vision: Integrating the knowledge of Naqli and Aqli to transform and produce value to the state, ummah and people of the universe.

c. Mission: Determined to become a leading science institution that is devoted to the study of Islam and is a forwarder of new knowledge that uses the latest technology to produce innovations that are capable of transforming the nation, the ummah and people throughout the world.

d. Theme: knitting Integration of Naqli and Aqli Sciences

e. Objectives:

- Raise the dignity of Islamic education and bring it into the mainstream of state education
- Fostering cohesiveness between theory and practice in every graduate student
- Giving birth to Islamic scholars who have an integrated education, who are able to lead a pluralistic society and have a high potential in developing the country.
- Returning the superior Islamic scientific tradition in accordance with the environment and the latest technology
- Providing strong human capital with the appreciation of the value of Islam that is able to interact and communicate impressively in society

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f. Logo:

The corporate logo motif of Universiti Sains Islam Malaysia is symbolized through a dome along with five stars or "Arabes". The inscription 'USIM' is summarized and formed into a rehal which carries the purpose of an foundation or an introduction. This foundation symbolizes the Universiti Sains Islam Malaysia as a place to convey knowledge to its students. The dome located in the middle of the logo symbolizes an Islamic institution that is sovereign in conveying Islamic sciences.

The five Arabes motifs are located beneath the dome. Each of them carries the meaning of one pillar of Islam. This sentence is placed above the rehalation to show that USIM is a plain based on Islam. The circuit which is located next to USIM's writings also intends to bring science and technology together in conveying

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their knowledge. Overall, this logo shows the Universiti Sains Islam Malaysia as an Islamic institution of higher learning based on the foundations of Islam in conveying knowledge to its prosecutors.

USIM uses a balanced approach in education, that is, applying elements that meet physical and spiritual needs, which can be seen not only in the administration of academic programs, but also in aspects of administration and administration as well. The approach presented by USIM is a holistic approach to the delivery of knowledge, which brings together revelational science (Naqli science) and rational science (Aqli science). So based on the results of the university steering committee deliberations in 2014 agreed to establish the Naqli and Aqli Science Integration Development Center (PIINA). PIINA was officially established in February 2015 and began operating in May 2015. Structurally, PIINA is directly under Naib Counselor.

PIINA is the institution that is fully responsible for the implementation of the integration of Naqli and Aqli at USIM on 7 (Seven) Bright Terraces, namely (1) Learning and Teaching, (2) research and Innovation, (3) Balanced and Entrepreneurial Holistic Graduates, (4) Governan and Human Capital Development, (5) Ease in Physics and Infrastructure, (6) Appropriateness and Authority, and (7) Naming and Positioning. The seven terraces of USIM's brilliance are based on the integration of Naqli and Aqli knowledge (Inaq).

In its implementation, PIINA refers to the target of USIM to become a world reference university from the

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aspect of integration of Naqli and Aqli science in 2025. These stages of achievement have been started since 2000-2012 as a year for laying down principles (basic). In 2013 USIM's target as a national reference university (Malaysia) was achieved. In 2016, USIM is targeting to become a referral college.

The Concept and Philosophy of Integration at USIM

To get the integration concept adopted by USIM, it is necessary to refer to the opinions and writings of the figures and academics that are published either in journals or books published by USIM. In this connection, in addition to sources from the interview, there are several relevant works discussing the concept of integration such as the Ilmu Naqli Integration book and the Aqli Perspective of the Study of Quran and Sunnah Studies, edited by Muhammad Khairul Nizam Zainal et al., 15 Tahun Mengemudi Integrasi Naqli dan Aqli, Integration of Naqli and Aqli: Faculty Science and Technology, and others.[45]

True science is science that starts, originates, encourages, and is endangered from the knowledge of God. The clear spring comes from faith in God. Qur'anic knowledge is the

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[45]This book, as far as researchers know, has been published by all faculties. The books become a guide about the implementation of naqli and aqli science integration in their respective faculties. Even certain study programs, such as the Quran Study Program with Multimedia, also have their own guidebooks

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source of the spring *(manba')* of all knowledge.[46] Therefore, as mentioned earlier, that integration of sciences means the recognition that all true knowledge is from God and all sciences should be treated with equal respect whether it is scientific or revealed. This is because in Islam Allah is the Supreme Master. He is the one who teaches man things he does not know. Humans are born in a state of knowing nothing, God gives him hearing, vision, and heart as a medium to study and study His creation.

USIM also always refers to the first descending verse, in addition to verse 56 of Surah al-Zariyat about the mission of human creation, when explaining the concept and philosophy of its integration. For USIM, which is determined to be a leading institution in introducing the concept of integration of naqli and aqli science in the design of its universal curriculum, the integration of science is a combination of modern science and religious science that is guided by the Qur'an and the sunnah, aiming at giving birth to a generation of ummah that is not brilliantly brilliant, instead helping the country and the world witnesses the Koran and the sunnah (naqli) with the support of modern science (aqli).[47]

The word integration, according to Mohd Khairul Nizam, lecturer in the Qur'an and modern science, comes from the Latin integer which means whole or whole. In

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[46]Muhammad Khairul Nizam Zainal et. all., 2014. *Integrasi ILmu Naqli dan Aqli Perspektif Fakulti Pengajian Quran dan Sunah,* Bandar Nilai, USIM), p. 17-18.

[47]Siti Suriani et al., 2015. *Variasi Gemilang Naqli dan Aqli: Fakulty Kepemimpinan dan Pengurusan.* Bandar Baru Nilai: Penerbit USIM, 2015, p. 20.

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Arabic it can have several meanings namely al-takamul, al-damj, altauhid. Integration can be associated into five processes or stages: ta'ishil, taqrib, tadmij, tatwir, and taqwim.[48] This stage of the integration process then becomes a model that is dedicated in the implementation of the science of naqli and aqli integration at USIM.

However, in practice the model that is "more agreed" and applied in faculty or study programs is a model that consists of four levels as will be explained later. This means that there are still disagreements among USIM academics about the concept or model of integration.

In general, they divide knowledge into two types, namely ma'rifah (illuminative knowledge) and science (scientific knowledge). The first type is a metaphysical science which is also known as al-ulum al-imaniyah. While the second is knowledge that is produced by certain methods within the framework of each science itself.[49]

When the Koran and the Sunnah become the foundation of the establishment of all the sciences and the emergence of each science, the study and learning in these sciences will bring people to the truth and know their Lord, both the study begins with the Qur'an and Sunnah as well as from the physical sciences, social sciences , human sciences and Islamic sciences. The study will still lead to one essence, namely the essence of faith and ma'rifatullah. In short, it can be said that, in the perspective of USIM, each field of science is actually

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[48]Mohd Khairul Nizam et al., *Integrasi Ilmu Naqli Aqli*, p. 43–45.

[49]Mohd Khairul Nizam et al., *Integrasi Ilmu Naqli Aqli*, p. 20-21.

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serving the Koran and the Sunnah, so that the ideals of USIM reintegrating science that has long been dichotomized deserves appreciation. In fact they call this 'project' integration as fardhu kifayah, which has been suspended for a long time since secularization. Now, with patience and caution, they take on this responsibility and are determined to be the advance of the integration of naqli and aqli science.

An explanation of the concept of USIM integration can be seen in the following figure:
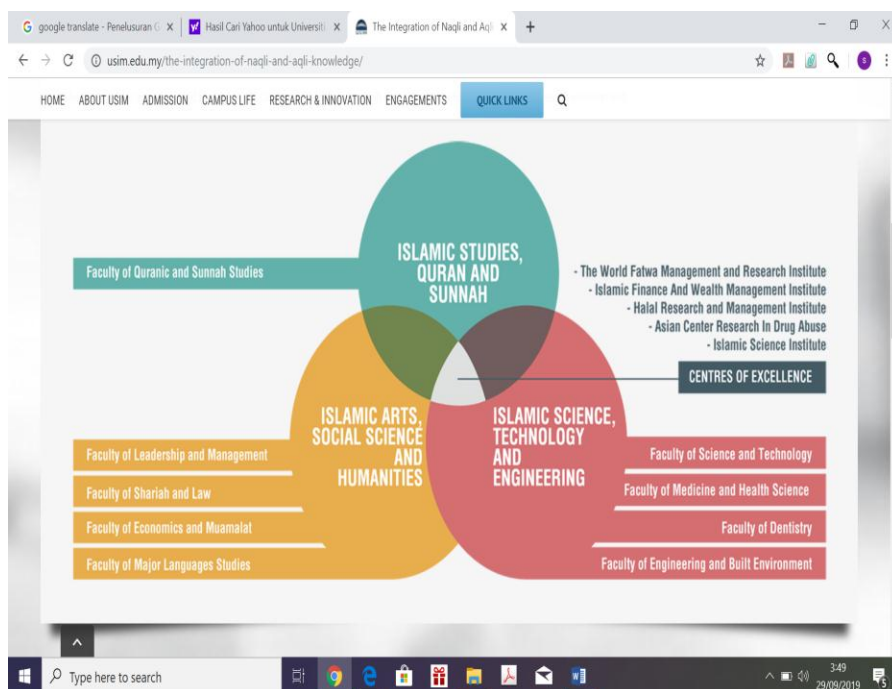
USIM is determined in three directions through academic and research programs. The foundation are:
1. Islamic Studies (religious sciences)
2. Islamic Science, Technology and Engineering
3. Islamic Art/Literature, Social Science and Humanity

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These three foundations are reinforced by six Center of Brilliance (6 CoEx) which are responsible for increasing the investigation environment.[50] The six centers of excellence are:

No	Name of the Center of Brilliance	web address
1	Institut Pengurusan dan Penyelidikan Fatwa Sedunia (INFAD)	http://e-infad.usim.edu.my
2	Institut Pengurusan Harta dan Kewangan Islam (IFWMI)	http://ifwmi.usim.edu.my
3	Institut Penyelidikan dan Pengurusan Halal (IHRAM)	http://ihram.usim.edu.my
4	Pusat Penyelidikan Dalam Penyalahgunaan Dadah Asian (ACREDA)	http://acreda.usim.edu.my
5	Institut Sains Islam (ISI)	http://isi.usim.edu.my
6	Pusat Permata Insan	http://permatainsan.usim.edu.my

USIM Integration Model

Universiti Sains Islam Malaysia (USIM) is one of the universities that can be said to be new in applying the concept of integration in its education system. Nevertheless, USIM has

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[50]Yusoff A. M. 2015. *15 Tahun Mengemudi Integrasi Naqli dan Aqli*, Fakulti Pengajian Quran dan Sunnah: USIM, p. 164.

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formulated and laid a relatively strong and clear foundation, making it easier to apply.

Since its inception, USIM has formulated its vision of "integrating naqli and aqli science to transform and produce value to the nation, ummah and universal people." to produce innovations that are capable of transforming the nation, the ummah and people throughout the world. "With such a vision and mission, USIM is determined to make the integration of science a top agenda.

Unfortunately, according to Prof. Dato Dr. Musa bin Ahmad, there is no model [integration of naqli and aqli knowledge] compatible with the philosophy of USIM that can be adopted. This is a big challenge for USIM to develop its own model. In fact, to achieve the vision and mission, an agreed pattern or model is needed, so that its implementation in the field is more directed and measurable. Existing integration models, such as the 10 models abstracted by Husni Thoyyar, still seem to face a number of problems at the application level.

A series of discussions, workshops and seminars have been held and finally they succeeded in arranging the integration of USIM's naqli and aqli models. This consensus was reached at a workshop on curriculum review for aqli and naqli on June 19-21 in Malacca. This model, in various USIM publications, is called the integration of the USIM model.[51]

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[51]Mohd Khairul Nizam Zainal. 2014. *Integrasi Ilmu Naqli Aqli Perspektif Fakulti Pengajian Quran dan Sunnah*. Bandar Baru Nilai: Penerbit USIM, p. 68; Integration of Naqli and Aqli: Faculty Science and Technology, p. 11.

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This was stated by Madihah Mohd Saudi, vice dean of USIM's FST academic field, as follows:

"USIM's model of integration of naqli and aqli categorised into four mustawa (level), which ayatization, comparizon, adaptation, and integration. These mustawa have been mapped into our curriculum structure. In order to produce a balance graduates and excellent lecturers, the integration of naqli and aqli knowledge also has been mapped into our research and community engagement activities."[52]

C. THE CONCEPT OF INTEGRATION OF SCIENCE AND ISLAM FORMULATED IN ISLAMIC HIGHER EDUCATION INSTITUTIONS OF BRUNEI.

Before talking about the concept of integration of science and Islam di University Brunei Daarussalam (UBD), it is important to explore the nature and evolution of education in Brunei Darussalam, from the time before its formal establishment until the present. Discussion of these periods is crucial for investigating the patterns of education based on brunei's historical, cultural, social, religion and political background, so that relevant ideas can be suggested for the improvement of the educational system. The main aim is to determine whether or not brunei experienced dualism in its educational system. The discussion covers four main periods, the first being the beginning of social and educational civilization, when education was delivered in a non-formal way. The second and third parts of the residential political era

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[52]Madihah Mohd Saudi (deputy dean of academic and research FST), in the introduction to his book *"Integration of Naqli and Aqli: Faculty of Science and Technology."* Bandar Baru Nilai: USIM.

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saw drastic changes in the patterns of education, from non formal islamic traditional institution to formal secular schools that had positive and negative impacts on the people. The last period covers the efforts to from brunei's own national identity in education.

The process of learning and teaching Islamic education in Brunei began seven centuries ago, in an informal way, conducted in balai-balai, mosques, surau-surau, residential, and instructors' houses. When the first formal Malay vernacular school was established in 1912, religious education was not included in the curriculum; it was said that most of the lessons were conducted privately during the evenings (Jumat, 1989, p. 186). In 1936, religious education was included in the school curriculum as a subject called *Shar'iyyat*. The contents were limited to the *'ibadat* and *tawhid* fields (Mohd Daud, 2004, p. 1). In the early part of that year, the government only provided one religious teacher to teach the subject in the Brunei Town school and it was held only twice a week with only 150 boys attending (Jibah, 1983, p. 6).

Dato Seri Setia Dr Hj Mohammad, 1998, is of the view that although an increased number of teachers taught Islamic religious subjects in 1937 the teaching was ineffective, due to the lack of trained teachers specialised in Islamic studies. Furthermore, the evening religious class was not conducted consistently; the content of the subject was inappropriate, with no specific curriculum and an insufficient class length. This disorganization might also have been caused by the unstable administration of the Department of Justice at the time. All these factors contributed to the poor basic Islamic knowledge of the children (Haji Abd Rahman, 1998, p. 9).

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Recognizing this problem, the Late Majesty Al-Marhum Sultan Haji Omar Ali Saifuddien invited two religious officers from the state of Johore, Malaysia, to make a study into the effectiveness of the teaching of Islamic knowledge in Brunei' s government school. The two officers were Haji Othman bin Haji Mat Saad, an inspector (officer) of the Johore religious school and Haji Ismail bin Omar Abdul Aziz, a judge from Sagamat. The two officers arrived in Brunei on the 31st December 1954. Based on their research, they concluded that the weaknesses of Islamic education in Brunei and English government schools were as follows:

a) The duration for the learning of Islamic education was insufficient, because each session took only an hour and a half.
b) The religious education did not achieve most of its goals; for instance most students did not know how to utter the shahadat and did not know the basic Islamic pillars.
c) Most teachers did not have a sufficient academic and professional background'. (Mohd Daud, 2004, pp. 1-5)

The Religious Affairs Department commented on the insufficiency of the time allotted for learning religious knowledge in Chadangan Mengenai Pelajaran Ugama dalam sistem Persekolahan Negara Brunei Darussalam (Proposal of Religious Studies School system in Brunei Darussalam).

The fact is that religious education should comprise more than one subject as it is taught in the Malay and English schools. It cannot be treated the same as Geography, History, Science and so on, all of which represent a branch of a major discipline. Religious education comprises several disciplines. Each discipline has its own characteristics, for instance Fiqh, tawhid, the Quran, Recitation, etc. Therefore, it is not

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justifiable to teach either all or a large section of these various disciplines as a subject in an allocated time of say 3 periods a week. 3 periods per week is even insufficient to teach one or two religious disciplines effectively.

The teaching of religious studies through one subject has evidently been insufficient and does not allow for the objectives to be attained. Even though it is intended to increase these periods up to 5 per week, this would possibly cause some negative effects on other subjects where their allocated periods would have to be reduced as a result. Such action may not be well received by teachers of other subjects. There£ore, Religious Studies as a subject cannot be compared or even regarded on an equal footing with the Religious Schools System'.(Jumat, 1989, p. 189).

The two religious officers from Johore had suggested that instead of the religious subject being held twice a week it should be taught daily during the evening school time, separately from other subjects. The duration per day should be one hour for primary school and an hour and a l1alf for secondary school. 100 teachers were needed and they suggested that teachers from the Johore religious school could be hired (Mohd Daud, 2004, pp. 2 & 3).

The Majesty accepted the report and agreed with these suggestions. On 16th September 1956, by command His Late Majesty Al-Marhum Sultan Haji Omar Ali Saifuddien III, Brunei opened its first formal religious schools. Seven schools were opened in four different towns (Mohd Daud, 2004, p. 5). These schools were located in the same buildings as the Malay and English schools as follows:

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1) Ahmad Tajuddin Malay School, Belait Town
2) Laila Menchanai Malay School, Brunei Town
3) Muda Hashim, Tutong Town
4) Muhammad Alam, Seria Town
5) Muhammmad Jamalul Alam Malay Schools, Brunei Town
6) Sultan Hasan, Brunei Town
7) Sultan 'Orri.ar 'Ali Saifuddien College, Brunei Town (Pg. Hj. Abd Rahman, 1998, p. 10).

These religious lessons were conducted during the afternoon, separately from the normal or public Malay and English teaching, and no longer treated as a single subject like other subjects. The curriculum followed only the existing curriculum and system of education that was run in Johore religious schools during the time. The same textbooks were used also, and in the early stages most of the teachers and office administrators were hired from Johore State (Mohd Daud, 2004, p. 9).

The admission of the students to the primary one level of religious schools were open to those who were studying at primary three level in Brunei and English public schools. The duration of religious studies was up to six years (until primary six level) (Rahman, 1998, p.10). In the early stages, the administration of these religious schools was conducted by the Department of Customs, Religious Affairs and Communities Welfare, while later, on 1st May 1960, the religious affairs section was separated from the customs section and upgraded into the Department of Religious Affairs and Community Welfare (Mohd Daud, 2004, p. 9).

The religious schools offered additional religious subjects leading to the Religious Primary School Certificate

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Examination, controlled by the Ministry of Religious affairs (Jumat, 1989, p. 196).

According to Abd. Rahman Khatib Abdullah (1979), the opening of religious schools received a positive response from the Muslim community. The number of students attending religious schools increased. Some Malay and English schools had to provide religious classes in both the morning and afternoon sessions. With increasing numbers of students, religious classes were held in the balai-balai, surau-surau and temporary buildings, provided by the local people with help from the Department of Religious affairs. The development of religious schools was rapid and the classes were available in mornings and afternoons (See Pg. Abd Rahman, 1998, p. 7).

According to Jumat (1989), the educational system during this period was a result of gradual growth and evolution. Lack of firm educational policy prior to the 1959 constitution resulted in the emergence of three different systems of education in the state; the specifications of which were that the Malay medium vernacular schools were only for Malays, and were run by the Department of Education, Chinese medium schools were only for the Chinese, and were privately run by the Chinese community, and the English medium schools were for English children and middle class Malay and Chinese people, and were privately run by the British Petroleum company under the organization ofthe Anglican mission (Jumat, 1989, pp. 112, 113). Yang Berhormat Pehin Orang Kaya Seri Kerna Dato Seri Setia (Dr) Awang Abu Bakar bin Haji Apong (1980), states in his thesis 'The development of Education in Brunei during Self-Government Period' that 'Malaysia, Singapore

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and Brunei had experienced and followed almost the same pattern of education: compartmentalization of education - education in Christian mission schools, Government Malay schools, community Chinese schools (and Tamil schools in Malaysia and Singapore [Tamil schools were non-existent in Brunei])' (See Jumat, 1989, p. 120).

Apart from these three types of schools, the state also provided Religious schools for Muslims in other racial and class groups, run by the Departent of Religious Affairs and communities welfare within its own system of education.

After independence, the approach to Islamic education became more progressive. In 1993, Tahfiz Al-Qur'an Sultan Haji Hassanal Bolkiah institute was established by His Majesty Sultan of Brunei under the supervision of the MOE. The main aim for the establishment of this institute is to produce the *huffaz* (persons who memorize the Qur''iin) without neglecting other academic fields. This institute has successfully produced 43 *huffaz*. The students of this institute also manage to further their study in local and overseas institutions   in   the   area   of Engineering   and   Islamic studies; Shar'iyyat, Revealed Knowledge and the Qur'an and Qira'at. Overall, the institute has managed to produce *huffaz* as   well   as   preparing   them   to specialize in different academic   fields   (*Pencapaian   dan   Penilaian 20 Tahun Pendidikan* (1984-2003) dan *Perancangan 20 tahun Akan Datang* (2004-2024), 2004, p. 39).

With the new Bilingual Education System, the religious and Arabic Schools remain under the supervision of the Ministry of Religious Affairs, but a dilemma has emerged. Pg. Mustapha Pg. Metassan (1979) has detected the existence of dualism in the system of education in terms of control and

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management. According to him, it would be more effective if the administration of schools were the responsibility of one body, so that there would be no waste of financial resources and man power. Furthermore, most of the people responsible for administrating religious schools were not educationists, so it is better for them to concentrate on propagation of Islam. To Pehin Dato Dr Hj Ahmad Hj Jumat (1989), this lack of integration has created a situation in which the national education system has come to be divided into religious and non-religious schools. The dual approach to education has created the problem of "two worlds" in the child's mind, one the religion and the other the scientific, with each held in isolation from the other. This matter was discussed by Allahyarham Dato Paduka Seri Setia Prof. Dr Haji Awang Mahmud Saedon in the School Curriculum Towards t1/ e 21st Century convention in 1998. In his paper School Curriculum Following Islamic Perspective, he argued that this dualism in the system has resulted in categorization of knowledge into religious and non-religious, in the mindset of the people. They tend to have a misconception that religious knowledge has no connection or relationship with the world and environment, and also has nothing to do with the development of science and technology. Further, Allah yarham Dato Paduka Seri Setia Prof. Dr Haji Awang Mahmud Saedon states that knowledge known to be religious knowledge (Naqly) should not contradict acquired knowledge ('Aqly). Acquired knowledge must be guided by revelation. As mentioned in Chapter One, this is the kind of problem faced by most Muslim countries in the world. This problem was discussed during the educational convention in 1998. As a result, efforts have been made, starting with the placement of three sections from the Islamic Studies

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Department, Ministry of Religious Affairs namely the Inspectorate Section, Examination Section and Curriculum Section under the jurisdiction of the department concerned in the MOE, effective from 1st March 2001. This was followed by the placement of other sections: administrative and scholarship under the administration of the MOE. The merger was fully implemented in January 2002 with the transfer of the Department of Islamic Studies and all the religious schools under its jurisdiction to the MOE. With the merger of religious schools and general schools, the schools share the same building, facilities, and come under the single management of MOE. This solves the problem in terms of control and management but the curriculum is not yet integrated. Towards integration, in 14th February, 2002, the MOE run the "Whole Day Schooling Pilot Scheme" called *''Skim Rintis Pendidikan Sepadu''* (Pilot Scheme on Integrated Education) to 37 schools which it aimed to integrate both public schools and religious schools under one management of the MOE.

The MOE has conducted several projects in schools; one of the important ones is the " Pelajaran Al-Quran dan Pengetahuan Agama Islam" (PAI); " Learning Al-Qur'an and Islamic Revealed Knowledge" as a subject in the public schools that replaced the IRK. The PAI project had been conducted in 1994 in nine schools in the state. The aim was to make Bruneian children capable of reading the Qur"an . The curriculum of this subject was later integrated into the new religious education curriculum in the year 2004.

All of the improvement of the implementation of the Integrated Education System in Brunei Darussalam was a response to the call to solve the Muslim dilemma

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of the dual system of education. The exploration of its philosophy and design models reflects the true Islamic model, as suggested by Muslim scholars and intellectuals. The curriculum model is founded on the *Tauihid* perspective as a way to develop, by means of integration, an outstanding and balanced student in terms of intellectual, spiritual, emotional, social and physical development without neglecting the nation's philosophy and aspirations. This is in line with the consensus arrived at by 313 scholars who gathered in Mecca at the First World Conference on Muslim Education, which was held at the Hotel Intercontinental, Al-Mukaramah, from March 31-April 8, 1977 thus: "Education should aim at the balanced growth of the total personality of man through the training of Man's spirit, intellect, rational self, feelings and bodily senses. The training imparted to a Muslim must be such that faith is infused into the whole of his personality and creates in him an emotional attachment ,to Islam and enables him to follow the *Qur' an* and the *Sunnah* and be governed by the Islamic System of values willingly and joyfully so that he may proceed to the realization of his status as *Khalifatullah*, to whom Allah has promised the authority of the universe" (AI-Attas, 1979,p.158-9).

But, it is regrettable that this beautiful and worthwhile effort was implemented in Brunei Darussalam for only two years, from January 3, 2004, to December 2005. There have been opposition and complaints regarding the system, and survey findings demonstrate that there are five main issues and

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challenges concerning the implementation of the Integrated Education System. The first is the lack of knowledge on the issue of dualism in education among teachers; the second is misunderstanding and incorrect perceptions regarding the aims and curriculum structure of the system; the third is the lack of infrastructure and facilities; the fourth is the working culture and attitudes among teachers; and the fifth is insufficient acknowledgement of the implementation of the system.[53]

It is our view that the system should have been given the chance to improve and develop further. In the future, it is suggested that any proposed changes to the system should be presented much earlier to teachers, school administrators and the public. Furthermore, a booklet containing information about the new system should be provided. This should be supplemented by clear briefings, the creation of a link to the new system on the MOE web site, presentation of workshops on how to run the new system in schools, and clearly identified points of contact who can explain the system.

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[53]The result of interview with Mulyani Kartanegara, one of lecturers of Bruner daarussalam university. It can also be compared with Norhazlin Muahmmad. 2014. *The Educational System in Brunei daarussalam.* Brunei: UBD press, p. 67

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Chapter III

THE IMPLEMENTATION OF THE CONCEPT OF INTEGRATION OF SCIENCE AND ISLAM IN CURRICULUM DEVELOPMENT IN ISLAMIC HIGHER EDUCATION INSTITUTIONS OF INDONESIA, MALAYSIA AND BRUNEI

Formulating the concept of integration of science and Islam is not easy. Universitas Islam Negeri (UIN) as big as UIN Yogyakarta, UIN Jakarta, UIN Malang, UIN Semarang, UIN Bandung, UIN Makassar and others who have started this discussion for a long time and have not yet even received a standard formula. Among the many UINs, only UIN Maulana Malik Ibrahim and UIN Sunan Kalijaga Yogyakarta have formulated the concept of systematic integration, ranging from philosophical paradigms to operational curriculum development and learning processes. While other UINs especially IAIN only have the concept of scientific integration, it is still at a philosophical level. Even some are still in the form of fragments of ideas that have not been systematically formulated, and some others do not yet have a praxis reference book that can be used as a guideline by the

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academic community, even there are UINs that are still in the process of understanding and learning the scientific integration model that will be developed.

A. THE CONCEPT OF INTEGRATION OF SCIENCE AND ISLAM IN CURRICULUM DEVEPMENT IN ISLAMIC HIGHER EDUCATION INSTITUTIONS OF INDONESIA

The Ministry of Religious Affairs of Indonesia has actually a very strong attention to the implementation of the integration of science and Islam in all Islamic higher education institutions under its auspices. This can be seen from the release of a guideline on the implementation of the integration of science and Islam through s decisions of Director of Islamic Education No. 2498 in 2019. In the guideline, the Rectors in all tIslamic higher education institutions were instructed to form a center for the study of the integration of science and to ensure the quality of the implementation of the integration of science within their institutions.

The Ministry of Religious Affairs of Indonesia has established the Standardization of the implementation of scientific integration through a series of requirements that must be done, including:

1) Islamic Higher education institution must have a unique concept of integration and scientific paradigm. Based on the results of research conducted by Nurlena et al, it is shown a mapping of scientific integration concepts based on scientific paradigms in UIN throughout Indonesia as follows:

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No	Name of universities	Scientific Paradigm	The concept of scientific integration
1	UIN Yogyakarta	Islam develops science that is universal and does not recognize the dichotomy between the sciences of *qauliyyah/hadharah al-Nash* (sciences relating to religious texts), with the sciences of *kauniyyah ijtima'iyyah/hadharah al-'ilm* (natural sciences and society), as well as with the *Hadhârah al-Falsafah* (philosophical ethical sciences).	Integration-interconnection is a universal scientific building that does not separate religion and science from the realm of religion. Therefore, scientific integration is the integration of *hadharah al-Nash*, *hadharah al-'ilm* and *hadhârah al-philosophy* carried out through two models, namely; (1) integration of interconnection in the internal area of Islamic sciences, and (2) integration of interconnection of Islamic sciences with general sciences.
2	UIN Malang	Put religion as the basis of knowledge. Al-Quran and Hadith in the development of science are positioned as sources of qauliyyah verses while the results of observations, experiments and	Scientific integration is a combination of religious and general science in one unit. The two types of knowledge originating from different sources must be studied together and simultaneously. The

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		logical reasoning are positioned as sources of kauniyyah verses. Through this position, various branches of knowledge can always be sought from the Koran and the Hadith. The metaphor used is a sturdy tree, branching, leafy, and fruitful because it is supported by strong roots. Strong roots not only serve to support the tree, but also absorb soil content for tree growth and development.	difference between the two, is that deepening knowledge comes from the Koran and Hadith the law is obligatory for every student of UIN Maulana Malik Ibrahim Malang. While deepening the knowledge that comes from humans the law must be kifâyah.
3	UIN Jakarta	Islam does not recognize the dichotomy of science, because the source of all knowledge is God. Therefore, the scientific paradigm developed is to bring science together with the truth of revelation	Scientific integration is an internal combination of religious and general science, as well as integration between religious and general science. This combination includes several 3 aspects or levels, namely; ontological integration, integration of science classification and methodological

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			integration.
4	UIN Bandung	Religion and science have developed along with the dynamics of science and human thought. Likewise science is born not only from deep reasoning of the objects of knowledge contained in God's material creation, but more importantly is God himself as the source of all sources of knowledge itself. The combination of verses *kauniyyah* with verses *qauliyyah* will give birth to a scientific paradigm that is based on revelation and rationality	Scientific integration follows the philosophy of the wheel that has 3 components, namely the axle, the spokes (alloy wheels) and tires. The three components work simultaneously in accordance with their respective functions. Therefore, scientific integration is the integration of qauliyyah verses and kauniyyah verses that include ontological, epistemological, and axiological aspects.
5	UIN Alaudin	Requires the opening of a dialogue between the sciences by making the Qur'an and al-Hadith the center of knowledge. These two sources inspire the sciences in the next layer, namely classical Islamic	Scientific integration is a fusion between Islamic religious sciences and general science and technology.

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		sciences, natural sciences, social sciences, humanities, and contemporary sciences.	

Based on the description of the concepts of scientific integration in each UIN in Indonesia above, it can be explained that substantially, the concept of integration offered by each UIN is actually the same: integrating religious and general sciences and eliminating the dichotomy between the two sciences. However, of the five UINs that carry out the ideals of scientific integration, it appears that only 2 (two) UINs have definitively formulated the concept of scientific integration and socialized to the academic community, they are UIN Sunan Kalijaga Yogyakarta and UIN Maulana Malik Ibrahim Malang.

2) Islamic higher education Istitution should have core values

Core values here are intended as a collection of basic values or principles that are believed and inspired by UIN. These basic values or principles are not only contextualized and made an inseparable part of the life of an educational institution, but also far more important than that can be used as a superior force.

With core values, Islamic universities can limit the choice of ways to realize the vision and mission of UIN integration. The choice of ways in this case is used to build the ability of UIN to be different from others and have competitiveness. This distinctive power helps UIN to develop maximum performance in a focused, directed,

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effective and highly competitive manner. The substance of core values is the core beliefs (core beliefs) of the vision-mission and choice of ways or ways to realize the ideals of UIN.

To get the core values at UIN, as Hans Gadamer believes, that true understanding is only possible, if the reader knows himself and the environment in which he lives well, melting all the elements that surround his life in an attempt to deep and thorough understanding, then understanding core values UIN must also be extracted from the same elements, starting with the introduction of Islamic tertiary institutions, general tertiary institutions, and Indonesia as a place where UIN is developed and developed. As in other organizations' core values, of course UIN's core values also have strengths, weaknesses, opportunities and challenges. Adequate understanding of all elements of core value analysis will determine the ability of UIN in formulating philosophy, paradigms, arable domains, curriculum, management systems, and desired profile outputs.

Considering the above points, the core values of UIN can be explored in Indonesian society in general, and especially Muslim societies, in addition to remaining open to the noble values contained in global society. When all sources of values are combined, a number of core values can be identified, including pluralism, leadership, respect for achievement, tolerance, equality or equality, nationalism, mutual assistance / social care, perseverance or endurance, wisdom, orderly and effective administration, focus, curiosity, objective and impartiality, religious and competitive. Each UIN can determine the choice of its core

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values in accordance with social capital and academic capital with general characteristics. Every UIN has its own core values distinction and blends them into competitive strengths and advantages.

UIN Syarif Hidayatullah Jakarta chose three core values, namely knowledge, piety, and integrity. The three core values were first conveyed in the rector's speech at the 67th Graduation Ceremony of the 2006/2007 academic year. The three core values are built on the strengthening of Islamic intellectualism through strengthening the tradition of rationalism introduced by Prof. Dr. Harun Nasution, M.A., an introduction to the cultural approach of IAIN Syarif Hidayatullah graduates as reflected in the slogan, "Islam, Yes. Islamic Party, No "; strengthening lecturer human resources through scholarship policies to take Strata 2 and Strata 3; more empirical and historical curriculum changes, and improvement of university management by adopting the quality principles of implementing ISO, BAN-PT and other quality concept providers.

The first core values are knowledge. Knowledge suggests that UIN Jakarta places knowledge achievement as a key. The output of this university is intelligent, creative and innovative scholars. To get to that level, the process becomes important. The process referred to here is the process of learning, discovery, and engagement. In order to create the expected conditions, UIN Syarif Hidayatullah Jakarta offers Islamic studies, social, political and economic studies as well as modern science and technology, including medicine in the perspective of science integration.

The second core value is piety. Piety is intended as a commitment of UIN Syarif Hidayatullah Jakarta in

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developing individual piety and social academic community. With inner and outer piety, the university academic community is trained to be an open figure and has good and broad interpersonal relations and social relations.

The third core value is integrity. Integrity is intended as a strategy of the process of building the character of the academic community who are civilized and of high moral standards. After proceeding in such a way for several years, graduates of UIN Syarif Hidayatullah are expected to emerge and be born as intellectuals who have the depth and breadth of knowledge and have a personality with integrity, broad and deep knowledge.

UIN Sunan Kalijaga Yogyakarta formulates its core values as the symbolic name of the Science Integration Spiders Network, which is the relationship structure of Islamic religious sciences and other sciences together with their scientific methodology. UIN Yogyakarta summarizes it with three main keys: integrative-interconnected, dedicative-innovative, and inclusive-continuous improvement. Integrative-interconnective core values are interpreted as "integrated systems in academic development, management, student affairs, cooperation, and entrepreneurship." Dedicated-innovative core values are formulated as "Being dedicative, trustworthy, pro-quality, thinking and moving actively, creatively, intelligently, intelligently, smartly, and innovative; not just work regularly and be diligent." Finally, the core values of inclusive-continuous improvement are formulated as "being open, accountable, and committed to change and sustainability."

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UIN Maulana Malik Ibrahim Malang does not formulate core values separately, but is embedded in the vision and programs it develops, such as spirituality, morality, and science, art and technology. The core values of "spirituality" are meant as beliefs that are instilled in students and other academic community on the importance of living and understanding the meaning of life in which is extracted from Islamic teachings and treasures. The core values of "akhlak karimah" are intended as a noble example that must be possessed by every UIN Malang academic community. Finally, the core values of "science, art and technology" are intended as a commitment of the UIN Malang academic community to master and appreciate science, art and technology based on Islam.

For the three core values above, UIN Malang develops a systemic and structured policy of mastering Arabic and English through the campus system and life with a boarding campus system for new students. Students intensively study the two languages under the guidance of senior students and qualified lecturers, both from the lecturers themselves or from overseas universities that are presented through a collaboration scheme or HR assistance.

3) Curriculum which is compiled must begin to include and pay attention to the integration of science starting from the planning and regulation of graduate learning outcomes, study materials, processes, and assessments that are used as guidelines for the implementation of study programs.

In the guideline for the implementation of science integration, made by the Indonesian Ministry of Religious affairs, all islamic higher education institutions are expected to have a curriculum that is formulated with due

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regard to aspects and dimensions of science integration, starting from planning.

Muslims became scholars, and those who studied other sciences became scholars. With this output character, Islamic higher education institutions are expected to be able to produce godly graduates. To ensure the achievement of such graduate products, the study material matrix is designed and constructed with due regard to competencies, field groups and branches of science along with the possible interactions and potential incisions they cause. In addition, the integration curriculum is formulated with regard to the determination of the subjects, both courses which must be arranged separately one subject with another subject (separated curriculum), or correlated curriculum and set forth in the Semester Credit System (SKS). Fourth, the integrative curriculum structure is prepared by taking into account the structure or logic of science/expertise adopted as a prerequisite for expertise, and paying attention to some integration courses offered in the early years, as a basis for the development of subsequent courses (serial and parallel system applications). This is done with due regard to knowledge and is applied through the RPS planning system. RPS or other terms set and developed by lecturers independently or together in a group of expertise in a field of science and / or technology in a study program.

Based on the results of research conducted by Nurlena et al, it is shown a mapping of scientific policy in preparing curriculum in UIN throughout Indonesia as follows:

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POLICIES FOR IMPLEMENTATION OF INTEGRATION OF INTELLIGENCE IN CURRICULUM PREPARATION

No	Names of Universities	Policy
1	UIN Yogya	The curriculum was developed based on the integrative-interconnected paradigm which refers to the combination of the sciences of *qauliyyah/hadharah al-Nash* (sciences relating to religious texts), *kauniyyah ijtima'iyyah/ hadharah al-'ilm* sciences (natural sciences and society), with *hadharah al-falsafah* (ethical-philosophical sciences).
2	UIN Malang	The curriculum was developed by paying attention to four strengths, namely: spiritual depth, moral grandeur, breadth of knowledge, and maturity. The leadership of UIN initiated an integration-based curriculum, which is generally divided into five groups, namely Personality Development Courses (MPK), Scientific and Skills Courses (MKK), Work Skills Courses (MKB), Work Behavior Courses (MPB), and Social Life Courses (MKK), Work Skills Courses (MKB), Work Behavior Courses (MPB), and Social Life Courses (MKK), Work Skills Courses (MKB), Work Behavior Subjects (MPB), and Subjects of Social Life/Social Work (MBB)
3	UIN Jakarta	There was no operational policy formulation of the leadership of UIN Jakarta in implementing scientific integration in the curriculum.

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| 4 | UIN Bandung | The curriculum at UIN Bandung is focused on the subject centered design with three variants, namely the subject design (subject design or field of study), the details of the study (design disciplines), and the correlated curriculum |
| 5 | UIN Makasar | There are two important policies carried out by the leadership of UIN Alauddin Makassar in implementing scientific integration in the curriculum; First, the curriculum is adaptive to market needs, up to date on the development of science and technology and accommodating to the development of student personality; Second, the curriculum is arranged in accordance with the framework of scientific integration and rests on the competence of study programs |

STRATEGIES FOR IMPLEMENTATION OF INTEGRATION OF INTELLIGENCE IN CURRICULUM PREPARATION

No	Names of Universities	Strategies
1	UIN Yogya	• Lecturer Training on Application of Curriculum Integration in Syllabus and SAP. • Integrated Curriculum Alignment • Establishment of curriculum development directorate • Coaching new lecturers to develop integrative-interconnected competencies • Making integrative-interconnective

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		syllabus and SAP development templates
2	UIN Malang	• Make Ma'had Ali • Creating Special Arabic Language Development Program (PKPBA). Creating a Special English Language Development Program (PKPBI). • Cultivating the writing of integrated textbooks for lecturers. • Recruitment of general lecturers who memorized the Koran • Integrated Curriculum Workshop • Establishment of the Qur'an and Science Study Institution (LKQS) • Establishment of a Quality Assurance Office (KJM). • Curriculum review and syllabus for integrating religious sciences and general sciences
3	UIN Jakarta	• Establishment of Development and Quality Assurance Institutions • Establishment of Academic Directorate • Curriculum review
4	UIN Bandung	Pembentukan Buku Pedoman Penyusunan Kurikulum Terintegrasi
5	UIN Makasar	• Curriculum review and syllabus for integrating religious sciences and general sciences • Incorporate religious values into the curriculum and syllabus used at public faculties. • Encourage all lecturers to conduct research on the integration of Islam, science, technology, and art at least 50% per year.

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		• Research on scientific studies conducted by lecturers • The general faculty should try to incorporate religious values. • Publish the scientific work of educative staff, strived to be published internationally, a minimum of 10 pieces per year

POLICIES FOR IMPLEMENTATION OF INTEGRATION OF STUDENTS 'LEARNING PROCESS

No	Names of Universities	Policy
1	UIN Yogya	The learning process is the operationalization of a syllabus formulated in the learning guidelines that refers to the integration-interconnection paradigm that combines the sciences of *ijtima'iyyah kauniyyah/ hadharah al-'ilm* (natural and social sciences), with *the hadharah al-falsafah* (sciences) ethical-philosophical science).
2	UIN Malang	The learning process refers to an integration-based curriculum that is based on the vision, mission, goals and paradigm of the knowledge tree set at UIN Maliki Malang. In addition, the leadership of the University monitors and evaluates the implementation of scientific integration to the development of the curriculum and the learning process, which is known as the university's chase after the faculty.
3	UIN Jakarta	There is no operational formula of the leadership of UIN Jakarta regarding the implementation of scientific integration in

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No		
		the learning process. During this time, each lecturer in each Faculty made individual creativity and innovation in implementing scientific integration in the learning process
4	UIN Bandung	The learning process is a space for lecturers to innovate in the learning process. The leadership gives full autonomy and authority to lecturers in the learning process while still referring to the vision, mission, goals and paradigm of scientific integration developed.
5	UIN Makasar	Not all policies have been implemented in the implementation of scientific integration in the learning process. There is only general policy to support the ongoing integrative learning process. For example, a) Knowledge transfer is supported by research results; b) Revitalization of Fiqh Education; c) The availability of Learning Process (PP) facilities in each Department/Study Program according to the needs and ideal standards; e) The availability of standard books for lecturers and students; and f) Standard Daras books are available.

STRATEGIES FOR IMPLEMENTATION OF INTEGRATION OF STUDENTS 'LEARNING PROCESS

No	Names of Universities	Strategies
1	UIN Yogya	a. Lecturer Training on the Application of Scientific Integration in the Learning Process. b. Workshop on integrative-interconnected learning strategies.

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		c. Lecturer selection system that emphasizes the balance of religious and general competence. d. Making a template for developing integrative interconnective Semester Lecture Program Activities (RPKPS)
2	UIN Malang	a. Each year the University pays for undergraduate 3 (doctoral) education for 40 UIN lecturers b. Compiling textbooks that refer to the scientific integration paradigm as outlined in the tree of knowledge. c. Develop integrated RPS. d. Cultivating integrated thesis writing.
3	UIN Jakarta	There was no strategy for implementing scientific integration in the learning process because besides there was no written documentation, also at this time each Faculty at UIN Jakarta developed a model of scientific integration based on creativity and ijtihad of each Faculty leader.
4	UIN Bandung	Cultivating integrated lecturer research. Writing integrated textbooks. Collaborative SAP Compilation. Making class schedules based on lecturer competence so integration is implemented. Evaluate the learning process together.
5	UIN Makasar	Compiling textbook packages that contain scientific integration between general sciences and Islamic sciences

Substantively, all five State Islamic Universities (UIN) have the same concept of scientific integration and have the same goal, namely to eliminate the scientific dichotomy

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between religious and secular sciences. But in the context of using its nomenclature, 2 UINs use the term integration-interconnection, while the other 3 UINs use the term scientific integration. In addition, if classified there are 3 grades in seeing the concept of scientific integration in UIN throughout Indonesia, namely: First Grade is owned by UIN Maulana Malik Ibrahim and UIN Sunan Kalijaga Yogyakarta. Both UINs have formulated the concept of systematic integration, starting from the philosophical paradigm to the operational curriculum development and learning process. Second Grade, owned by UIN Sunan Gunung Djati Bandung and UIN Syarif Hidayatullah Jakarta. Both UINs have the concept of scientific integration, but they are still in the form of pastiche, have not been formulated operationally and so far do not have operational reference books that can be used as guidelines by the academic community. G r a d C e t i g a, owned by UIN Alauddin Makassar. This UIN is still in the process of understanding and studying the scientific integration model that will be developed.

Meanwhile, strategies for applying the concept of scientific integration at five State Islamic Universities (UIN) in Indonesia are also very diverse, ranging from the formulation of concepts, socialization, to the application in the field. All UIN have formulated the concept of scientific integration, although there are variations on the clarity and firmness of the concept of scientific integration itself. While in the context of socialization, three UIN (UIN Yogyakarta, UIN Malang and UIN Makassar) have tried to socialize through media seminars, workshops, training and print media (profiles, prospectuses, brochures, and so on). Whereas in the context of implementing the concept of integration, currently only 2 UIN

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(UIN Yogyakarta and UIN Malang) have tried to apply the concept of scientific integration into curriculum development, learning processes and academic culture, while the other 4 UINs have not followed up on the concept of scientific integration into a more operational-implementative level, both in curriculum development, learning and in academic culture.

In the application of scientific integration in the preparation and development of curriculum in 5 UIN environment in Indonesia in general it has not been done systematically and continuously. The concept of scientific integration still stops at the normative-philosophical level and is still looking for forms of application that are appropriate to each UIN. Nevertheless, UIN Malang and UIN Yogyakarta have tried to apply the concept of scientific integration in the development of syllabi, SAP, learning processes and academic culture. While UIN Jakarta, UIN Bandung, and Makassar UIN still stop at the normative-philosophical level and have not been followed up in a more operational-implementative form.

Furthermore, the application of scientific integration in the learning process has not yet been seen to fully refer to the integrative-interconnected scientific paradigm. This is indicated by the lack of policies, strategies and implementation of scientific integration in the learning process. Of the five UINs in Indonesia, only UIN Maulana Malik Ibrahim, Malang and UIN Sunan Kalijaga Yogyakarta have attempted to implement this scientific integration in the learning process, for example by fostering and training lecturers to have an integrative competence and also the university conducts coaching as well as educating lecturers to the level. higher education (strata 3) to support the

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implementation of scientific integration in the learning process.

4) Islamic Higher Education Institutions must guarantee the implementation of scientific integration in the Three Dhama High School

Practically, the integration of knowledge in the context of UIN can be realized within the scope of the university's Tri Dharma, which includes three domains:

a. Education and learning,

In the curriculum, there must be a number of core courses that are philosophically designed to provide basic knowledge or a kind of general introduction to all students in all majors about the traditions and treasures of Islamic science. In this context, a number of courses can be determined that can be used as core courses that have a clear and solid epistemological and ontological foundation. As an example, courses can be offered: "Introduction to Islamic History," "History of Science and Civilization in Islam," "Epistemology and Classification of Science in Islam," "Introduction to the History of Thought in Islam (Philosophy, Theology and Sufism)," " Introduction to the Science of the Qur'an and Hadith, "" Introduction to Islamic Jurisprudence ", and so on.

In addition, learning aspects of Islamic science should use a methodology or approach that is more comprehensive and integralistic, because students are taught within the framework of learning other fields that have been considered "foreign" from Islam, such as art, architecture, natural science , medicine and social sciences. In the history of Islamic science, these fields are an integral part of Islamic

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civilization. In addition, traditional fields of Islamic knowledge are also taught in a more critical, open, historical and contextual manner. The contextual intent here is relevant, compatible, and applicable to the needs of modern society with all its complexities.

In summary, the curriculum is based on the principles of science integration formulated in this guideline. The most important goal of the curriculum is to produce alumni who also have integrative personalities, for example being able to display the figure of 'ulama' (or judges) in a broader sense, as represented by the figures of prominent Muslim scientists in Islamic history. The curriculum structure is directed at developing competencies according to the level of education and designed effectively to meet the development needs of science and technology, the needs of graduate users and to support the integration of knowledge according to the vision of each university. In addition, the curriculum is comprehensive, competitive, flexible and adaptive in adapting the progress of science and technology that shows its integration with the principles of the prosecution of science in Islam.

b. Research

In the field of research, the paradigm of the integration of science can inspire researchers in at least two things: First, interpreting Islam as a way of life such as good intentions, trust and holding the principle of objectively maintaining the truth; second, methodologically open to provide application space for multidisciplinary, interdisciplinary, transdisciplinary approaches and relevant relevant approaches.

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Each researcher must master how to integrate science in research methodologies that are appropriate to the field of science, the object of research, and the level of complexity and depth of research. Researchers must also have a scientific perspective in integrating the sciences of glory and other sciences. If this method cannot be carried out by a researcher in integrating a science in the research construct, then it requires the formation of a collaborative team in research, so that the strengths of one field can be integrated with weaknesses in other fields.

The results of the research are directed at the development of religion, science, technology and art in an integrative manner and in line with Islamic values and scientific principles that are objective, critical, and dynamic. Student research results must be directed to the fulfillment of graduate learning outcomes that are integrated with science. Scientific work in the form of reports, articles in journals and books must contain a discussion of the relevance of the topic of scientific work with the principle of integration of science. The material in applied research must be oriented to research outcomes in the form of innovation and the development of science and technology that is beneficial to society and the business / industrial world.

c. Community service.

The science integration paradigm can be implemented in programs in the field of community service. The main objectives of community service programs are: (1) increasing religious awareness, which has been a mission and distinction of PTKIN before becoming UIN; and (2) improving the quality and standard of living of the

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community in various aspects: social, economic, cultural and political. Community service programs should also aim to build a synergistic relationship between universities and the community. At the same time, the results of community service activities are expected to provide feedback to university managers in the framework of designing and organizing more relevant and efficient education, learning and research activities for the community. Based on the paradigm of the integration of knowledge, each UIN is required to apply an approach that is responsive to problems in society such as an approach that involves several scientific disciplines in community service programs.

In addition to the above objectives, one of PTKIN's prophetic missions in the context of developing Muslim communities in Indonesia is to plant and spread an inclusive, moderate, tolerant and progressive understanding of Islam. Therefore, PTKIN's community service programs in the field of religious should be directed to develop an understanding and attitude of diversity that is inclusive, tolerant and progressive. This is becoming increasingly important today given the phenomenon of exposure and interest of some Indonesian Muslims to new ideas and practices in Islam originating from other parts of the Islamic world outside the archipelago. The problem is, among those religious understandings and practices there are those that show symptoms of extremism and radicalism that tend to show sensibility and incompatibility with the cultural roots and religious traditions of Indonesian people.

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B. THE CONCEPT OF INTEGRATION OF SCIENCE AND ISLAM IN CURRICULUM DEVEPMENT IN ISLAMIC HIGHER EDUCATION INSTITUTIONS OF MALAYSIA

There are actually some universities which focus on the concept of integration of science and Islam. One of them is USIM. USIM decided models and levels as follows:

USIM's Model of Integration of Naqli and Aqli Knowledge

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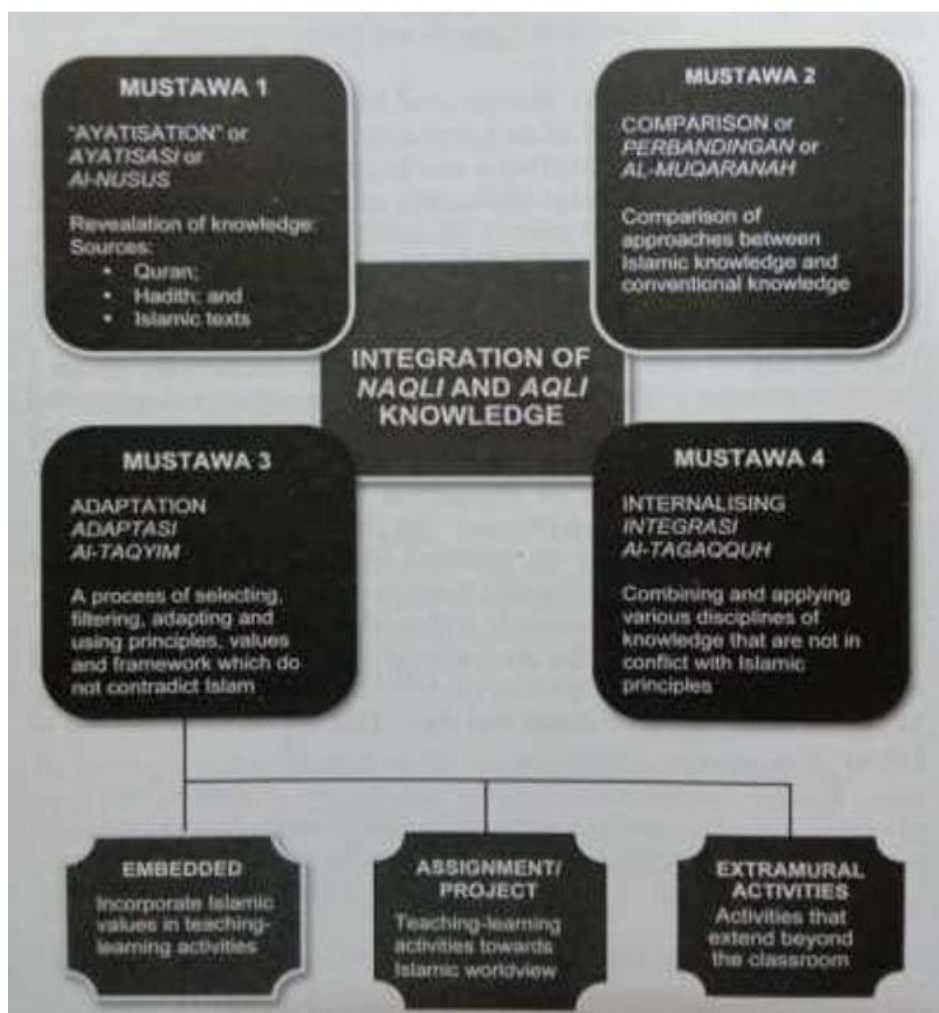
a. Mustawa 1 (M1): *al-nushush* (ayatization). Ayatization comes from the word verse, meaning here the taking of texts from sources of the Koran, hadith, interpretation, Islamic manuscripts and so on that are relevant to scientific findings or theories. "Ayatisation is also considered as a process of relating, interpreting the Qur'anic verses and hadith that describe the science phenomenon."

Although many criticize, that integration at this level or model is the easiest to be accepted by common people. Because, the arguments of the qur 'aniyah more easily referred directly to the results of modern inventions. An example of integration at this level is the Word of God about human creation in Sura al-'Aqaq: 2 and al-Mukminun: 12-14 related to the study of anatomy and embryology.

b. Mustawa 2 (M2): *al-muqaranah* (comparative), which is the application of integration through comparisons that include the science of naqli (i.e. Islamic perspective) with aqli science (i.e. conventional perspective) and vice versa. There are differences and similarities between Islamic and conventional knowledge. Every lecturer who is responsible for certain subjects must explore these differences and similarities from an Islamic worldview perspective.

c. Mustawa 3 (M3): *al-taqyim* (adaptation). Adaptation is the process of choosing, filtering, adapting, and accepting values and frameworks that do not conflict with Islam. Various activities can be designed to direct students to adapt to the environment. This is also to strengthen responsibilities and relationships with the community. The

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adaptation process can be approached from three interrelated dimensions, namely: (1) designing activities to embed the values; (2) providing relevant assignments or projects; and (3) organizing extramural activities.[54]

d. Mustawa 4 (M4): *al-tafaqquh* (integration).[55] This refers to the integration and application of various disciplines to deliver a holistic curriculum. This is the culmination of the goal of education, which is to produce "adabic" or good person.

Integration of naqli and aqli knowledge as in the philosophy of USIM is based on the model that is developed according to the level (mustawa) of integration. The concept of mustawa in this context is not merely hierarchical in nature (simple to complex) but also can be considered as categorical or processes or approach.

However, to facilitate its implementation, each subject or course within the curriculum structure is given the codes above (M1, M2, M3, or M4) which illustrate that certain subjects will be integrated with the first model or others.

Implementation Strategy

In general, in order to realize the university's vision of being a leader in integrating naqli and aqli science, USIM undertook several strategies as follows:

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[54]Integration (dentis) pp. 55-56

[55]M.Saudi. 2014. *Integration of Naqli and Aqli: Faculty Science and Technology*, Bandar Baru Nilai: USIM.

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a. Formulate the concept of integration of science

b. Translate or apply concepts in the learning curriculum. This is done by incorporating Islamic principles and values in the material or subject of modern sciences such as engineering, mathematics, and medicine.

c. Involving experts and scholars in both the religious sciences and science to collaborate on scientific projects such as research and writing so that an exchange of knowledge takes place between them

d. Providing opportunities for students from different faculties to carry out joint scientific activities such as intensive discussions with certain topics which are then reviewed from different perspectives or disciplines

e. Compile textbooks including manuals for implementing integration in each faculty and study program.

f. Complementing learning facilities, such as libraries, classes, create an academic climate.

g. Establishment of a center or institution that specifically handles integration issues. The institute is the Naqli and Aqli Science Integration Center (PIINA). This step is in our opinion quite significant and illustrates the seriousness of USIM in realizing its vision of integration.

In more detail, USIM's efforts in realizing integration on campus will be presented in a separate section after this.

Efforts to Integrate Naqli and Aqli Sciences and their Results in the Quran and Sunnah Study Faculties

1. Integration of Naqli and Aqli Sciences

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The integration of naqli and aqli science in the Quran and Sunnah Study Faculties (FPQS) is in line with the ideas of the USIM, which oversees the Quran and Sunnah Study Faculties. Even in line with the change in KUIM (Kolij Universiti Islam Malaysia) to USIM. That was stated by USIM's Naib Chancellor in the introduction to the book ""*15 Tahun Mengemudi Integrasi Naqli dan Aqli*": *"Alhamdulillah, thank to God, this year USIM reached 15 years of its establishment. Re-call the history of the establishment of the KUIM where the desire for the the building the university is in harmony with the manifestation of the Kingdom to give birth to an authoritative and capable Islamic leader who can preserve the interests of the State and the Muslim community fully."*[56]

Apart from this the university is eager to make Malaysia as the main model of Islamic countries in the world, it also became a center of educational excellence by using the local curriculum to ensure the integrity of Islam in the State in order to realize the formation of new Islamic civilization. For 12 years (2000-2012), USIM put its hopes to become a referral university. In 2013, USIM demonstrated its recognition as a university with the latest advancements in the integration of Naqli and Aqli science in national rankings. Onwards, by 2016 USIM will continue to take steps towards strengthening the Naqli and Aqli science agenda to become a referral center in the overseas ranks

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[56]Yusoff, *15 Tahun Mengemudi Integrasi Naqli dan Aqli... Ibid.*, p. iii.

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and so on, becoming a referral center in the world ranking by 2025."[57]

In connection with the desires and ideals above, the Study of Quran and Sunnah as part of the Universiti Sains Islam Malaysia made various efforts. The efforts made by FPQS in integrating Naqli and Aqli knowledge are as follows:

1. Opening study programs that directly integrate Naqli and Aqli studies. In the framework of the integration of Naqli and Aqli knowledge, FPQS formed a Study Program that greatly led to the formation of such integration. This faculty consists of three study programs, namely:

   a. Recitation of the Quran and Sunnah

   b. Study the Quran with Multimedia

   c. Recitation of Sunnah by Handling Information

   The lectures of these three study programs are fully carried out at the Universiti Sains Islam Malaysia (USIM) campus, except Recitation of the Quran and Sunnah study program. This study program, in addition to being held at the USIM campus, is also held at Darul Quran Malaysian Islamic Progress Position (JAKIM).[58]

2. Integration in research. The faculties and universities strongly encourage lecturers to conduct research that is not only in the field of Naqli and Aqli studies but also

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[57]Yusoff, *15 Tahun Mengemudi Integrasi Naqli dan Aqli Ibid.,* p. 11.

[58]Brosur Fakulti Pengajian Quran dan Sunnah.

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unites science experts with religious experts in one research team. Such an effort is very possible to happen mutually transform science, so that it can accelerate the integration of naqli and aqli science in general at Universitas Sains Islam Malaysia.

3. Workshop for lecturers. This was intended in order to provide lecturers with an understanding of USIM's philosophy regarding the integration of naqli and aqli science. The lecturers of the Universiti Sains Islam Malaysia (USIM) have a strong concern and concern for the integration of naqli and aqli science. Even .not only, those who have non-Islamic educational background want to study Islam again, even though they are already professors. Thus, *"The lecturers who have no Islamic studies background expect USIM to establish a diploma-level Islamic study institution for them, and the lecturers are willing to pay for the diploma course themselves. The university also has reserved that next year the diploma program will be opened."*[59]

4. Teaching team of aqli and naqli science lecturers. This is mainly done in learning the aqli sciences at FPQS. It said "In learning courses related to multimedia in the Quran recitation and multimedia Study Program, we form teaching by asking related lecturers from the Faculty of Science and Technology to teach together with the Study Program lecturers."[60]

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[59]Interview with Mohd Azman Bin Hashim, Islamic Science Institute Director of USIM at August 26, 2019 at USIM building.

[60]Interview with Mohd Azman Bin Hashim, Islamic Science Institute Director of USIM at August 26, 2019 and

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5. Providing special funds for the integration of Naqli and Aqli sciences research. To accelerate the implementation of the integration of naqli and aqli science, USIM provides special funding for research related to integration issues. *"The university provides a special fund for the integration of naqli and aqli science research."*[61]

6. The lecturers are required to carry out integrated learning Naqli and Aqli in the classroom. Lecturers who do not agree with the integration of naqli and aqli science cannot be accepted as lecturers at USIM. Even non-Muslim lecturers are required to do this integration in learning. In fact, the willingness to integrate the knowledge of naqli and aqli in learning is a requirement for the admission of a teaching staff to teach at USIM. The lecturers follow and carry out learning in an integrated manner in accordance with the expectations and conditions set by the university. As an example it can be stated here the results of observations of the implementation of learning in class with one of the FPQS lecturers, namely:

Course: Teaching the Koran in the Age of ICT

Subject: Tathawwurat Kitabah al-Quran wa Dhaftihi wa Marahil Tadwin al-Hadith `Abr al-Qurun

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strengthened by Mohd Anuar Bin Mamat, Deputy Director, Quality Assurance,Policy and Centre of Excellence, at the same time and place.

[61]Interviewed with Widus Sempo, Senior Lecturer, Faculty of Quran and Sunnah at August 26, 2019 at USIM building.

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The lecturer came into the class and gave a greeting, then opened the learning with a tasyji` (motivation) song, which illustrates the beauty and glory of Islam in the past, entitled "did you forget". Then the lecturer apersepsi and review the subject of the previous week, and motivate students who cannot answer it to always ask God to open their hearts to gain knowledge and master the lessons learned. The lecturer explained the development of writing and maintaining the Koran and Hadith in the ICT era, which of course are no longer the same as the writing of the Koran in the Prophet and his companions. that is because ICT is so important in the writing and maintenance of the Koran and Hadith. In fact, he also explained that ICT not only helps in the writing and maintenance of the Qur'an and Sunnah, but also can be used as scientific evidence that the revelations that the Prophet received came from God, both the Qur'an and the Hadith. The lecturer anologizes the acceptance of the revelation with facts and daily reality on the mobile phone. A mobile phone created by humans can receive messages from someone far away, even though they have never met. Certainly the Prophet Muhammad, for example, was more able to receive these messages from Allah, because Allah had already determined them to be His Prophets and Apostles.[62]

7. Conducting an evaluation of the implementation of integrated learning. The integration of naqli and aqli

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[62]Interview with Mohd Azman Bin Hashim, Islamic Science Institute Director of USIM at August 26, 2019 at USIM building.

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science is not only done in learning, but also in conducting evaluations. The questions in the exam contain matters relating to the integration of Naqli and Aqli, especially those related to the subjects being tested.[63]

8. Conduct seminars on the integration of Naqli and Naqli knowledge. The seminar was not only held in the country but also in various countries, so that USIM or FPQS in particular was quickly recognized internationally as a university that was concerned in integrating Naqli and Aqli science. Thus the ideals of USIM so *that "to become a higher education institution as a reference in the field of integrating Naqli and Aqli knowledge in the ranks of overseas and the world"*[64] will be easily achieved.

9. Lecturers are advised to continue their education to a higher level in contrast to the original scientific field. This was done to accelerate the integration of Naqli and Aqli knowledge by lecturers. With this policy, many lecturers at USIM are not linear in their scientific fields.

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[63]Interview with Mohd Azman Bin Hashim, Islamic Science Institute Director of USIM at August 26, 2019 at USIM building and strengthened by Mohd Faszly Bin Rahim, Senior Lecturer at Islamic Science Institute, at the same time and place.

[64]Interview with Mohd Azman Bin Hashim, Islamic Science Institute Director of USIM at August 26, 2019 at USIM building.

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However, the impact is that the lecturers can integrate the naqli and aqli.

10. Double degree. USIM recommends that students take two study programs in the same school year especially in the areas of Islamic studies and social science or exact sciences. This double degree is an effort to accelerate the realization of the integration of Naqal and Aqal sciences, especially among students and alumni.

Aspects and Outcomes of Integration of Naqli and Naqli Sciences in the Quran and Sunnah Recitation Faculty

There are two aspects of the integration of Naqli and Aqli knowledge that are carried out in FPQS; First, the aspects of Naqli and Aqli science interaction in the curriculum. The curriculum of each study program under the Study of the Quran and Sunnah does not only contain Naqli studies but also contains courses related to aqli sciences. For example, this can be seen in the courses offered in the Quran Study Program and Multimedia, which are as follows:

The Structure of Curriculum of Naqli and Naqli Science Integration on Teaching of Quran And Mutimedia at Teaching of The Quran and Sunnah Facculty at Universiti Sains Islam Malaysia

NAQLI COURSES	STATUS	AQLI COURSES	STATUS
Tamadun Islam dan Asia	WU	Hubungan Etnik	WU

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Akhlak dan Tasawuf	WU	Bahasa Arab I, II, dan III	WU
Akidah Islam	WU	Bahasa Inggris I, II, dan III	WU
Fiqih Ibadah dan munkahat	WU	Prinsip Pengurusan perniagaan	WU
Pengajian Halaqah	WF	Ko-Kurikulum	WU
Sirah Rasul	WF	Pemikiran kratif dan Penyelesaian Masalah	WU
Ulumul Qur'an	WF	Keusahawanan	WF
Ulumul Hadits	WF	Metodologi Penyelidikan	WF
Dapt Rasm al-Qur'an & Fawasil	WP	Latihan Industri	WF
Sikap Orientalis terhadap al-Qur'an dan Sunnah	WP	Pengenalan KepadaSains Komputer	WF
Aplikasi Braile dalam Pengajian	WP	Bahasa Inggris untuk keperluan	WF

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Qur'an dan Sunnah		Akademik	
Kajian al-Qur'an dan al-Sunnah di era ICT	WP	Prinsip amalan komunikasi Da'wah	WF
Qiraat Amali I & II	WP	Interaksi Insan dan Komputer	WP
I'jaz Qur'an	WP	Grafik Web I & II	WP
Tafsir I & II	WP	Pengaturcaraan Web I & II	WP
Tafsir Ayat Ahkam	WP	Multimedia Internet	WP
Projek Ilmiah	WP	Pengaturcaraan Berorientasikan Objek	WP
Metodologi Pengjaran Qur'an dan Tahfiz	EP	Sistem pengurusan pangkalan data Multimedia	WP
Tarannum	EP	Teknologi Mutimedia dan Aplikasi I & II	EP
Hadist Ahkam	EP	Rangkainan dan Pentadbiran System	EP

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Ilmu Tajwid	EP	Dapatan Semula Maklumat	EP
Ushul al-Fiqh I	EP	Perkhidmatan dan Kemudahan	EP
Tafsir Ilmi	EP	Pengurusan Strategik Sistem Maklumat	EP
Sunnah, Bid'ah dan Khurafat	EP	Prinsip dan amalan Pemasaran	EP
Takhrij Hadits	EP	Kelakauan Pengguna	EP
Hadith II	EP	Statistik; Teori dan Gunaan	EP[65]

The table above illustrates, that the addition of social science or exact sciences courses according to FPQS or USIM is a manifestation of the integration of Naqal and Aqal sciences. This kind of integration is the lowest form of integration, it can't even be called a real integration. Because, the two sciences have not combined in a

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[65]Yusoff, *15 Tahun Mengemudi Integrasi Naqli dan Aqli…. Ibid.,* p.44.

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framework of thinking in a scientific field[66]. However, the format of USIM or FPQS, in particular, regarding the integration of Naqal and Aqal sciences is not only at the level of adding social and exact sciences courses. It also manifests in another form as seen in the following explanation.

Second, the integration aspects of Naqal and Aqal knowledge in learning. This can be seen in the study programs owned by FPQS. Integration has been seen in the name of study programs which are supervised by the Faculty of Quran and Sunnah Studies such as the Study of Quran and Multimedia Studies and the Study of Sunnah Studies and Management of Information. Here you can see two fields of science that are integrated into one study program. Aqli science courses are integrated with naqli science courses, so they become a study program. With this combination, students are expected to master and appreciate these two disciplines, Naqli and Aqli. As illustrated in the objectives of the Koran Study Study and Multimedia, namely:

- Producing graduates who have skills in both Quran and Multimedia in an integrated manner to produce professional and ethical human beings

- Give added value to graduates in the field of Islamic studies in exploring integration between the Quran and multimedia lectures

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[66]Kadar M. Yusuf. 2013. *Tafsir Tarbawi; Pesan-pesan Alquran tentang Pendidikan.* Jakarta: Amzah, p. 22.

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- Provide graduates who are competitive in the field of Koran study to meet the needs of the industry

- Realizing the mission of the Malaysian Islamic Science university to become a university that deals in solving community and Islamic issues.[67]

In the learning aspect of FPQS, it seems that it has also implemented the integration of Naqal and Aqal sciences. This can be seen in one of the syllabus courses taught at the Study Program of the Study of the Quran and Sunnah, the Mawdu`i Tafsir course. The syllabus is as follows: [68]

NO	AL-MABHATH	AL-MAWDU`
1	Al-Mabhath al-Awwal	Al-Madkhal ila Tafsir al-Mawdu`i
2	Al-Mabhath al-Thani	Al-Khutuwat al-Marhaliyah fi al-Tafsir al-Mawdu`iy wa Qawa`id Manhajiyyah libahthihi
3	Al-Mabhath al-Thalith	`Ilm al-Munasabah wa Tafsir al-Mawdu`i
4	Al-Mabhath al-Rabi`	Al-Jahl min Khilal al-Ayat al-Qur"aniyyah
5	Al-Mabhath al-Khamis	Al-Jahl wa al-Jahilun fi al-Siyaqi al-Qur"aniy
6	Al-Mabhath al-Sadis	Sighah al-Mubalaghah wa al-Masdar al-Sima`i fi al-Siyaq al-Qur"aniy
7	Al-Mabhath al-Sabi`	Jahiliyah fi al-Siyaq al-Qur"aniy
8	Al-Mabhath al-Thamin	Al-Shura fi al-Qur"ani al-Karim
9	Al-Mabhath al-Tas`	Amr al-Rasul bi Mushawarah al-Muslimin
10	Al-Mabhath al-`Ashir	Waqa`i min al-Shura fi Qasas al-Qur"an
11	Al-Mabhath al-Hadi `Ashar	Al-Dirasah al-Tatbiqiyyah fi Tafsir al-Mawdu`i li Surah al-Mulk

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[67]Yusoff, *15 Tahun Mengemudi Integrasi Naqli dan Aqli….Ibid.*, p.42.

[68]Muhammad Khairul Nizam Zainan. *Integrasi Ilmu Naqli dan Aqli; Perspektif Fakulti Pengajian Quran dan Sunnah... Ibid.*, p. 83.

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These are the topics discussed in the course Maudu`i Tafsir, which the lecturers call the integration of Naqli and Aqli science, so that it is included in his article entitled "Integration of Naqli and Aqli Sciences in the Subjects of Maudu`i Interpretation; a study of Verses 17-19 of Surah al-Mulk ". The lecturer of this course explained, the aspects of aqli contained in the paragraph discussed. The verse is:

In interpreting this verse, the lecturer will associate the conversation about birds in verse 19 above with the findings and views of natural science as aqal science. She said:

"There are various types of bird species and each has its own special features and strengths that are very different from humans. For example, a bird is able to move its flap so that 70 pulses for a moment, fly at a speed of 100 kilometers per hour, appropriate and agile when moving in high or low places, has the sharpness of vision when looking for prey and wise in defending themselves from enemy threats."[69]

He further elaborates on the interpretation of this verse from the perspective of aqal science:

"Apart from that, birds also have a strong memory that is the ability to return to their original place after flying thousands of kilometers. They do not need any help from modern electronic equipment, such as radar, GPS and so on. This is a visible difference from a rational human being who do not have that

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[69]Interview with Widus Sempo (Senior Lecturer, Faculty of Quran and Sunnah at August 26, 2019 at USIM building.

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*ability. There are half the birds that try to keep food in their beak
for a long time and release it to feed their children. "*[70]

The data above illustrates, that not all subjects are integrated with aqal, which is integrated only a few subjects, including the interpretation of Surah al-Mulk verses 17-19. The aqli knowledge contained in the verse is only seen in the interpretation of birds, which have many abilities that Allah bestows on them. This explanation is quoted from Harun Yahya in his book Al-Tasmim fi al-Tabi`at. Whereas the main conversation in the verse is the ability of the bird does not fall down as evidence of the greatness and power of God, as illustrated in the fragment of the verse la yumsikuhunna illa al-rahman (no one can hold it except Allah, the Most Gracious). The discussion of aqli in this verse, according to the author, should be emphasized on the attraction (gratification force) of the earth. God created the force applies to all objects and creatures including humans, and God created a natural law on birds that can fend off the attraction so that birds do not fall down. That is, it is fitting in interpreting the verse associated with scientific theories about natural law regarding the style of gratification.

The integration of knowledge in learning in FPQS can not only be seen in the subjects and conversations in the classroom in a course, it is also stated in the learning design

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[70] Interview with Mohd Azman Bin Hashim, Islamic Science Institute Director of USIM at August 26, 2019 at USIM building and strengthened by Mohd Faszly Bin Rahim, Senior Lecturer at Islamic Science Institute, at the same time and place.

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about mustawa (level of integration) to be achieved in accordance with the subject being taught.

EXAMPLES OF MAIN TOPIC MATERIALS TAFSIR I
AND ITS INTEGRATED LEVEL WITH AQLI SCIENCE

No	Topics	Naqli and Aqli Integration			
		M1	M2	M3	M4
1	Introduction and Courses Synopsis		√		
2	Al-Tafsir Mawdu`i: An Introduction		√		
3	Method of Writing the Maudlu'i Interpretation		√		
4	Ilmu Munasabah			√	
5	Al-Jahl in the Qur'an			√	
6	Al-Syura in the Qur'an			√	
7	The Miracle of God's Creation in Verse al-Mulk			√	

The table above illustrates that from the seven subjects discussed in this course, only the last three subjects can be integrated with aqal science. And the integration of the three subjects is only in Mustawa 3 (M3), namely taqyim (adaptation). According to the author, integration can still be done on other mustawa rankings, especially mustawa 1 and 4 (M1 and M4). But it is necessary to redefine the mustawa 1, not tansis but al-nusus.

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In addition to the two aspects above, the integration of Naqli and Aqli knowledge can be seen in the co-curriculum, which is given to students in each semester including a code of ethics of student association which is actually arranged based on Islamic values or ethics. This can be seen in the dress code and the association between the FPQS academic community in particular, and USIM in general. Students studying at USIM, from any faculty, whether Islamic studies faculties or not, obey the code of ethics and rules of bermu`amalah on the USIM campus, including the code of ethics in dress. There were no complaints from students regarding the code of ethics, and every unit in USIM, including the safety section (security guard) participated in the enforcement of the code. The code of ethics in dressing not only regulates clothes when attending the learning process but also regulates how to dress in the dormitory (place of residence) and when exercising.

Those are some of the efforts and aspects of integration carried out at USIM's FPQS. Efforts to integrate naqli and aqli science in several of the aspects above have an impact on increasing participation and genuine attention from various parties at Universiti Sains Islam Malaysia, both institutions and indi√viduals. The expectations and attention brought the expected results. These impacts or results can be seen in two ways. First, some of the work of the lecturers. The lecturers were enthusiastic in conducting studies related to the integration of Naqli and Aqli science. The studies on the integration of Naqli and Aqli science gave birth to various writings of lecturers. Among the

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writings of FPQS lecturers relating to the integration of Naqli and Aqli science are as follows:

SERIES OF LECTURERS' WRITING TEACHING OF QURAN AND SUNNAH FAKULTI UNIVERSITI SAINS ISLAM MALAYSIA RELATING TO INTEGRATION OF NAQLI AND AQLI SCIENCE

No	Writers	Themes	Journal	Year
1	Dr. Mohd Khairul Nizam & Zainan Nazri	Integration of Multicultural Society, Islamic Perspective	Knowledge, Culture and Society	2015
2	Dr. Kabiru Goje	The Preventive Medicine I The Light Prophet Tradition: Analytical Study Food and Drink	Ma'alim al-Qur'an wa al-Sunnah	2013
3	Dr. Muhammad Akhiruddin bin Ibrahim	The Eviden7ces of Scientific Mirac Les in The Holy Qur'an	Ilahiyyat Studies: A Journal on Islamic and Religious St Sudies	2013
4	Prof. Media. Dr.	The Use of Forbidden	Middle-East Journal	2013[71]

[71]Yusoff, *15 Tahun Mengemudi Integrasi Naqli dan Aqli....* *Ibid.*, p. 77-89

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	Muhammad Mustaqim bin Muhammad Zarif	Material in Medic0ina Prodct; an Islamic Perspective	Scientific Research	

Those are some examples of lecturers' writing Teaching of Quran and Sunnah Fakulti Universiti Sains Islam Malaysia Related to Integration of Naqli and Aqli Science. In addition to articles, published in journals, the work of USIM lecturers relating to the integration of naqli and aqli science is also published in the form of books such as "Secrets of Siwak in the Sunnah and Science about teeth". And there are many other works, which of course may not all be mentioned in the list above. These writings are a manifestation of the expected impact, influence, or results through the earnest efforts that have been made, both by the faculty and the university. The lecturers are guided and given training or workshops by various institutions, especially by the PIINA (Naqli and Aqli Science Integration Center), which is an institution deliberately formed by the university that has a special task to make various programs or activities to accelerate the realization of the integration of Naqli science and Aqli

Second, the impact and results of the integration of Naqli and Aqli knowledge were also seen in students, both those who were studying at USIM and those who had graduated. Like those who have graduated, the results can be seen in the personalities and occupations that are occupied. With the integration of Naqli and Aqli

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personality, they draw on Islamic and religious figures, and they can work in non-religious institutions even though they have graduated from the Quran and Sunnah Study Faculties. Because, when they study in FPQS they are equipped with social science or exact sciences integrally with Islamic sciences.

The impact or the result of the integration of Naqli and Aqli knowledge on students who are still studying at USIM can be seen and proven through the work they make related to the field of science they pursue. FPQS said that the impact of applying the integration of naqli and aqli on the ranking of the USIM Quran and Sunnah Studies Faculty can be seen in the various awards that were won in competitions and expos. The award was in the form of gold, silver and bronze medals. Among the works that won the match were works related to the integration of Naqli and Aqli.

Efforts to Integrate Naqli and Aqli Sciences in the Faculty of Science and Technology

a. Integration in the Curriculum

The curriculum is a fundamental guideline in the teaching and learning process. Therefore, curriculum is placed at the heart of education. If the curriculum is designed to be systematic and comprehensive and integrated, the educational outcomes will be able to achieve its objectives.

The process of integrating Naqli and Aqli at the Faculty of Science and Technology, involved various parties. The concept of Naqli and Aqli integration

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applied in the curriculum at the USIM Faculty of Science and Technology, is elaborated into four Mustawa, this is as conveyed by the Dean of the Faculty of Science and Technology, USIM, Dr. Madihah Mohammad Saudi, as follows:

"In terms of curriculum, maybe it will be said what is curriculum ?. if we look at the book, we have a curriculum at USIM, we use 4 mustawa. ... valuable of an integration, how to integrate it in the curriculum. First, Mustawa in terms of using verses of the Koran (ayatization). Second is the comparison, third is a adaptation which 4 is integration, so what are the scientific faculties? Each program In 2014, 30/100 have integrated at least in their fields, have integrated in the field of Naqli 4 Mustawa in 6 programs, six different programs, if you look at the book, we have in-person approach."[72]

The four Mustawa described by the Saudis above, basically the Naqli component is inserted into the Aqli sciences based on Science and Technology. The affirmation of this Naqli definition is contained in the Naqli integration manual.[73] The Naqli concept applied to the Faculty of Science and Technology is as follows:

• Mustawa (M1) - *Al-Nusus* (Ayatization) - refers to the basic sources of Islamic teachings of the Quran, Hadith, and Scriptures were venerated turath.

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[72]Madihah Mohammad Saudi, The result of interview with Dr. Madiha M. Saudi, September 2019.

[73]Madihah Mohammad Saudi. 2015. *Integration of Naqli dan Aqli: Faculty Science and Technology*, 1 ed. Bandar Baru Nilai: USIM, p. 35.

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- Mustawa (M2) - *Al-muqaranah* (Comparative) - refers to the differences and similarities between Islamic knowledge approach and conventional knowledge.

- Mustawa (M3) - *Al-Taqyim* (Adaptation) is the process of selecting, refining, adapting and adopting any framework of values and principles that do not conflict with Islam.

- Mustawa (M4) - *Al-Tafaqquh* (Integration) combines and applies various disciplines knowledges that produces a holistic curriculum.[74]

Mustawa 1, namely al-Nusus, refers to the basic sources of Islam, the basic sources referred to here are the Quran and the Hadith of the Prophet Muhammad SAW and turats islamiyah. This process emphasizes the paragraphs of phenomena that arise in the field of science. The verse referred to here is "Mustawa from the point of view of using the verses of the Koran (ayatization)".[75] As for Mustawa 2 al-Muqaranah (Comparative), which is to compare between two different sources, both in terms of differences or similarities from the approach of Islamic knowledge and conventional approaches. One of the application of mustawa dua al-Muqaranah is the probability course as explained by the chairman of the Financial Mathematics Program, Dr. Nurul Sima Mohammad Syariff, "... again, one probability is the same, we make a comparison,

[74]Saudi, *Integration of Naqli dan Aqli: Faculty Science and Technology… Ibid.,* p. 23.

[75]Saudi, *Integration of Naqli dan Aqli: Faculty Science and Technology… Ibid.*

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between the conventional one and the Islamic one has a probability concept."[76]

Integration in Mustawa 2 is relatively easier because what is done is only to compare between Islamic science and conventional science.[77] Although Mustawa 2 is quite easy to apply in the curriculum, but not all subjects apply it. Mustawa 3, al-Taqyim (Adaptation), is a process of selection, reverse processing, adaptation and adoption of all values frameworks that are not in conflict with Islam. Mustawa 3 emphasizes more on ethics or values that do not conflict with Islamic values. Mustawa is also the most widely applied in the computer field. This is important so students can distinguish between what is good and what is bad. Dr. Masdiha Mohd Saudi stated that:

"… dalam bidang komputer, kami banyak pilih mustawa 3, dari segi ethics dan profesionalism. Sebab kalau antara cara kita mengukur ialah kita tidak meniru, dari segi baik, that we use expertise untuk mana yang eloklah, kalau tidak jadi hacker lah yang merusakan sistem. Itu dari segi atiklah, nilai-nilai murnilah. Benda tu dia ada dua cara penilai, penilaian formal dan informal. Secara tidak formal ni, maksudnya actually

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[76]The result of Interview with Dr. Nurul Sima Mohamad Shariff, September 2019.

[77]Interview with Mohd Azman Bin Hashim, Islamic Science Institute Director of USIM at August 26, 2019 at USIM building and strengthened by Mohd Faszly Bin Rahim, Senior Lecturer at Islamic Science Institute, at the same time and place.

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memaklumkan secara formal, tak jadilah secara informal lah."[78]

Furthermore, for Mustawa 4, *Al-Tafaqquh* (Integration) has reached the stage of combination and application of various disciplines that produce a holistic curriculum. Between the Four Mustawa are different between study programs, even between courses. As an example explained by the Saudis above, basically the Naqli component is inserted into the Aqli sciences based on Science and Technology. The affirmation of this Naqli definition is contained in the Naqli integration manual.

"Kalau tengok muka surat, (ni asm ehh), muka surat 54, so ini adalah cara kaidah integrasi naqli dan Aqli lah, dalam kurikulum 4 mustawa, annusyus, almuqaranah, Attakwim, dan Attafaquh. Kalau tengok setiap program, kalau tengok muka surat 57. Kita tengok ada 4 mustawa, Ini bagi program food biotechnology. Ada yang mengintegrasikan Mustawa 1, ada yang mengintegrasikan mustawa 3, dan yang Elearning dari segi fleksibel, dan macam mana dari segi blended learning, usim menghasratkan sekurang-kurang 30% pengajaran secara blended learning, sebab kita ingin memastikan pensyarah up to the technolgy. Dan memudahkan pensyarah supaya jam pertemuan tidak terlalu banyak."

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[78]Interview with Widus Sempo (Senior Lecturer, Faculty of Quran and Sunnah at August 26, 2019 at USIM building.

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a. Integration in Learning

Integration in learning can be seen from the integration found in the learning components. The learning component consists of at least learning objectives, learning materials, learning methods, learning media and learning evaluation.

1) Integration of Learning Objectives. Learning Objectives or instructional objectives are the goals to be achieved from each learning activity.
2) Integration in Learning Materials
3) Integration of Learning Methods
4) Integration in Learning Media
5) Integration in Learning Evaluation

b. Integration in Research

One reason for the establishment of the Faculty of Science and Technology was the need to produce Muslim science and technology experts.[79] It is also contained in USIM's FST mission, *"To be a source of reference for the experts to the country's development through science and technology knowledge transference that is aligned with Islamic elements and traditions."* [80]Therefore, USIM must conduct research that can integrate between Islam and; science and technology.

The USIM FST has sought to integrate Naqli and Aqli in research or scientific publications. One

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[79]Saudi, *Integration of Naqli dan Aqli: Faculty Science and Technology… Ibid.*, p. 25.

[80]Saudi, *Integration of Naqli dan Aqli: Faculty Science and Technology… Ibid.*, p. 25-26.

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published article entitled "A new Model for Trojan Detection using Inspired Learning Machine by al-Qurqan Verse" shows that the integration of Naqli and Aqli is not only on Mustawa 1.

The application of Mustawa 2 (comparison) in research can be seen from the article titled "Financial Performance of Malaysian Founders of Islamic Banks Versus Conventional Banks". In this article, a comparison between conventional and Islamic banks is presented. Whereas in the article entitled "Promoting Islamic Ethics on Privacy in Digital Social Networks for User Data Protection and Trust" published in the Ulum Islamiyyah Journal, the application of Mustawa 3 can be seen (adaptation).

In addition to research conducted by USIM FSTs and researchers, research related to the integration of Naqli and Aqli was also carried out at the baccalaureate level (BSc) to level (Ph.D.). One published article entitled "A new Model for Trojan Detection using Inspired Learning Machine by al-Qurqan Verse" shows that the integration of Naqli and Aqli is not only on Mustawa 1.[81]

The application of Mustawa 2 (comparison) in research can be seen from the article titled "Financial Performance of Malaysian Founders of Islamic Banks

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[81]Madihah Mohd Saudi, Areej Mustafa Abuzaid, dan Masrur Ibrahim, "A new Model for Trojan Detection using Machine Learning Inspired by al-Qurqan Verse," *Ulum Islamiyyah*, 13, no. 2, 2014: 129–42.

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Versus Conventional Banks". In this article, a comparison between conventional and Islamic banks is presented.[82] Whereas in the article entitled "Promoting Islamic Ethics on Privacy in Digital Social Networks for User Data Protection and Trust" published in the Ulum Islamiyyah Journal can be seen the application of Mustawa 3 namely (adaptation).[83]

From those explanation above, it can be concluded that as an Islamic university that is concerned with the integration of naqli and aqli science, the Malaysian Islamic University of Science (USIM) has succeeded in formulating the concept of integration that it wants to apply at the University. The university does not agree with the term Islamization of science, as it is used by many groups. Because, for him the knowledge belongs to God and comes from Him. So it is not worth mentioning Islamization, which according to him is an integration that is a combination of naqal knowledge, obtained from the word of God, with aqal knowledge, which is obtained through the study of nature, or all of his creations. The combination was carried out reciprocally, namely explaining the naqal sciences

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[82]Rosnia Masruki et al., "Financial Performance of Malaysian Islamic Banks Versus Conventional Banks," *Journal of Business and Policy Research* 6, no. 2, 2011: 67–79.

[83]Norita Md Norwawi et al., "Promoting Islamic Ethics on Privacy in Digital Social Network For User Data Protection and Trust," *Ulum Islamiyyah* 13, 2014.

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using theories or aqal science views and explaining aqal sciences based on the views of naqal sciences.

In the context of the integration of naqal and aqal science, USIM established a special institution to take care and realize the integration of naqal and aqal science, which is named the Naqal and Aqal Science Integration Center (PIINA). This institution has various programs related to the integration of naqal and aqal sciences. Among these are a workshop and seminar for lecturers on the integration of naqli and aqli science. In fact, the aqal sciences lecturers, in the workshop, were not only given matters relating to the concept of integration of science but were also presented with Islamic knowledge that is in contact with science or the aqal sciences, such as learning for lecturers about maqashid al-Shari`ah. By providing this material, the aqal sciences lecturers can analyze or explain the scientific fields they teach based on an Islamic perspective.

In the context of the integration of naqal and aqal science, USIM has formulated four levels which they call mustawa, namely:

a. *Mustawa 1: al-Tanshish* (ayatisation)

b. *Mustawa 2: al-Muqaranah* (comparison)

c. *Mustawa 3: al-Taqyim* (adaptation)

d. *Mustawa 4: al-Tafaqquh* (integration)

The lecturers are required to integrate their learning. They were even asked to state the mustawa in the learning plan (RPS), which they briefed as M1,

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M2, M3, and M4. Lecturers are asked to include the level that is relevant to the mustawa-mustawa, on each subject.

Although USIM has succeeded in formulating the integration model of naqal and aqal science, it has even been implemented in learning, but there are differences between faculties in understanding the mustawa-mustawa, especially mustawa 1 and mustawa 4. In the Faculty of Science and Technology and the Faculty of Quran and Sunnah Study, Mustawa 1 interpreted as a verse or tansis, which of course can mean to impose the meaning of a verse in accordance with aqli science. Likewise Mustawa 4, tafaqquh which means integration. While the Faculty of Pergigian calls mustawa 1 as al-nusus, not tansis, of course there is no coercion of meaning to the verses of the Koran. Likewise Mustawa 4, the Faculty interprets tafaqquh to internalization.

To realize its vision and mission in integrating naqal and aqal science, USIM made various efforts. Among these efforts are (1) Opening a study program that directly integrates Naqli and Aqli studies, (2) Integration in research, (3) Workshop for lecturers, (4) Teaching team for aqli and naqli science lecturers, (5) Providing special funding for Naqli and Aqli science integration research, (6) requiring lecturers to carry out integrated learning between Naqli and Aqli in the classroom, (7) Conducting seminars on the integration of Naqli and Naqli science, (8) Lecturers are encouraged to continue their education to a higher level different from the different the original scientific

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field, and (9) Double degree, USIM recommends that students take two study programs.

There are two aspects of USIM's attention in implementing the integration of naqli and aqli science, namely curriculum and implementation of learning in the classroom. With the efforts and hard work of each unit at USIM, the Naqli and Aqli science integration program was successfully realized. This can be seen from the work produced by both students and lecturers

C. THE CONCEPT OF INTEGRATION OF SCIENCE AND ISLAM IN CURRICULUM DEVEPMENT IN ISLAMIC HIGHER EDUCATION INSTITUTIONS OF BRUNEI

As is it mentioned before that the implementation of the Integrated Education System in Brunei Darussalam was a response to the call to solve the Muslim dilemma of the dual system of education. But, it is regrettable that this beautiful and worthwhile effort was implemented in Brunei Darussalam for only two years, from January 3, 2004, to December 2005. There are five main issues and challenges which cause the implementation of the Integrated Education System in Brunei Darussalam stop in Descember 2005. Some of them are:

a) *Lack of knowledge on the issue of dualism of education.*

The statistical results reveal that among the 114 respondents, more than half of the teachers do not know or have not heard about the issue of dualism in education. The percentages related to these findings are 70.2 percent (80 of the total of 114

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teachers), compared to 29.8 percent (34), respectively. This proves that although the issue of dualism in education is currently a significant topic of discussion within Muslim societies, Bruneian educationists are lag behind in realizing this issue, ostensibly because they have not been exposed to the matter.

b) *Misunderstanding and incorrect perceptions regarding the aims and curriculum structure of the system.*

The chief aims of the Integrated Education System are to solve the problem of dualism in education; inculcate Islamic elements across the curriculum; and provide a holistic education that addresses the physical, spiritual and emotional needs of learners through the delivery of both revealed and acquired knowledge. Unfortunately, as the questionnaire findings revealed, only one teacher answered in a manner that was close to the expected meaning on the aims of the Integrated Education System as stipulated by the MOE, which is to bring into students with a well-rounded personality with sufficient revealed and acquired knowledge. Another respondent stated that apart from the integration of religious and general knowledge, this system was also intended to implement Islamic elements in school subjects and activities. Another statement from a respondent regarding enriching Islamic knowledge emphasized gathering both religious and acquired knowledge, strengthening faith and religious practices, and learning the Arabic language and Jawi script.

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Among the respondents, most were not particularly clear, and several demonstrated misunderstandings about the Integrated Education System. Most see this system only from a practical perspective, which is that of the integration of general and religious education under a single system; and the integration of two curriculums, two types of knowledge, and two types of schools under the administration of the MOE. As planned, this system considers a whole day of school as starting at 7:30 a.m. and finishing at 4:30 p.m., coupled with the inclusion of religious ducation in general schools Four respondents misunderstood or misinterpreted this system as follows:

1. Students are no longer studyin religious education.

2. The Administration of Religious Affairs falls under the administration of the MOE.

3. Religious education is limited to learning al-Quran and the Arabic language.

4. Religious education is implemented during the morning session.

One respondent stated plainly that he was unclear about the Integrated Education System. The results from this item on the survey reflect the fact that opposition and complaints related to implementation of the Integrated Education System were the result of misunderstandings about this system, especially regarding the perception that it would no longer include religious education. In

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reality, this system follows what Muslim scholars have suggested in the Muslim curriculum.

The findings indicate that most of the respondents lack knowledge and understanding of these aims. As such, the researcher posits that the dual structure of the educational system now being practised in Brunei resulted from the evolution of traditional practice of the Bruneian people of seeking religious knowledge at religious schools during afternoon sessions, whilst scientific or rational knowledge is delivered in the morning at general government schools. This practice has ultimately contributed to a misunderstanding of the system in general. When the first formal learning institution, the traditional *balai*, was established, the curriculum content provided only a variety of religious knowledge. The reason behind this was to strengthen the faith of Islam in the heart of the Bruneian people. When British residents introduced scientific knowledge in a formal manner, it was delivered separately from religious knowledge and conducted formally in a mosque in 1912. It later moved to a building used by the former monopolies office in October, 1914 (Douglas, 1915, p. 5). This marked the beginning of the delivery of two types of knowledge. Therefore, when integrated education was introduced, people tended to have the incorrect perception that religious knowledge was no longer being taught to students.

c) *Lack of infrastructure and facilities.*

To ensure the successful implementation of the Integrated Education System, certain facilities

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such as congregation halls, dining halls, taps for ablution, showers, and changing rooms-had to be provided. Unfortunately, this did not occur, which caused many problems, including discomfort and an unclean environment. To overcome this, the students had to use classrooms for prayer, which was not easy since they needed to clear all tables and chairs to acquire the space necessary for conducting prayer~. Without proper taps for ablution, the students had to use taps in the toilets, which is improper and unhygienic. Since there were very few taps available in the toilet cubicles, the students needed to queue up, which led to time constraints as they attempted to perform prayers within the time allotted. When these facilities were finally provided, the system was discontinued. This action caused the facilities to be wasted, since schools that do not run religious classes in the afternoons do not need some of these facilities.

d) *Culture and attitudes.*

One of the factors related to culture is that teachers are accustomed to working a half day. When the Integrated Education System was implemented, they had to be present for work during two sessions, morning and afternoon. This created reluctance among the teachers, which they explained gave them less time to check students' work, and the long work hours caused them stress and less rest. We are of the view that the working hours can indeed be tolerated by holding school from 9:00 a.m. until 4:30 p.m. Alternatively,

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the hours could be from 7:30 a.m. until 3:00 p.m. Nevertheless, the sudden change in working hours resulted in less cooperation from the teachers in implementing the system successfully.

Another cultural factor is related to social "trust." For ages, the Bruneian people have given their full trust to the traditional religious institutions in delivering religious knowledge. When all religious schools were suddenly administered under the general primary school system, this created anxiety and mistrust, since people believed that this system would not provide proper instruction in religious knowledge. Given the long history of the dual system, people tend to believe that religious knowledge should be delivered separately from scientific knowledge. Thus, to mitigate this problem, efforts should be made to discuss the issue of dualism in education with the public and explain it to them properly. People would then be more confident about the delivery of knowledge through a single integrated system. The survey data has shown that teachers prefer the dual system. For example, 59.4 percent (n=57) of teachers believed that the two different systems were either sufficient or very sufficient in developing a well-rounded individual who is not only knowledgeable, but who is also faithful, pious and of good moral character. In comparison, 62.3 percent (n=70) viewed the integrated approach as insufficient.

It is believed that if integrated education is implemented for a longer period, teachers and the public will slowly begin to accept the change,

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provided that the weaknesses of this system can be addressed.

e) *Insufficient acknowledgement of the implementation of the system.*

The statistical results reveal that 36.3 percent (n=41) of the teachers did not have prior knowledge about implementation of this system, compared to 63.7 percent (n=72) who had such knowledge. It is an unsatisfactory result, because we consider 36.3 percent as representing a high percentage of confusion among many of the teachers regarding the system.

For above explanation, it can be concluded that the concept of the integration of Science and Islam in Univerity of Brunei Darussalam haven't implemented well.

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Chapter IV

THE SIMILARITIES AND DIFFERENCES IN THE CONCEPTS OF INTEGRATION BETWEEN SCIENCE AND ISLAM THAT HAVE BEEN FORMULATED IN IN ISLAMIC HIGHER EDUCATION INSTITUTIONS OF INDONESIA, MALASIA AND BRUNEI

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Comparative study of several universities in three countries about the integration of science and Islam is a scientific effort to review the differences, similarities, and possible development of the ideas examined. For this reason, this scientific effort is not easy to do, because, in addition to require a deep understanding of the concept of scientific integration of each tertiary institution in a country which may vary, it also requires methodological requirements. For this reason, in this comparative study researchers use a truly simplistic approach, which is to simplify the problem and the flow of thought so that it is easy to understand. However, of course, with all my might the author will strive so that the discussion does not become superficial.

From the material exposure in chapters II and III, it can be concluded that the implementation of the integration of science and Islam in three countries; Indonesia, Malaysia and Brunei basically meet the common goal, namely the elimination of the dichotomy between the truth of revelation and the truth of science

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in the implementation of education in their respective institutions. However, this encounter does not always mean meeting. Because besides there are many similarities, the pattern of integration between the three countries also has many differences.

As for some similarities between the three countries; Indonesia, Malaysia and Brunei related to the implementation of the concept of integration of science and Islam in their Islamic higher education institutions can be seen in (1) Genealogy concept of the integration of science and Islam, (2) The same perceptions on dichotomy of sciences dan the same will to do the integration in the three countries; (3) Theoritical integration rather than practical ; (4) The polarization of Islamic scientists' competencies. The explanation of each will be explore as follows:

A. THE SIMILARITY OF THE IMPLEMENTATION OF THE INTEGRATION OF SCIENCES AND ISLAM IN INDONESIA, MALAYSIA AND BRUNEI

1) Genealogy Concept of The Integration of Science and Islam

The emergence of the concept of The Integration of Science and Islam in three countries: Indonesia, Malaysia and Brunei have shared similar historical roots. The existence of scientific integration in the three countries was born as a derivative work of the global Islamization of science accomplished by Muslims in various parts of the world. And the idea of scientific integration appeared as a response to three major situation in the Islamic world, namely: (1) The spiritual problems of modern people as an effect of dehumanization science, (2) Criticism of science, and (3) The awakening of Islam.

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The development of modern science, in addition to being a frame that gives new hope to the future of human history, but on the other hand, he also invited various criticisms because it was unable to provide a complete worldly view, and able to frame the universality of human life. The development of science and technology, which in essence, is oriented to create modern civilization that promises various advances and conveniences, at the level of application it also presents the face of humanity that it creates, namely the aridity of spirituality. All of this is basically due to the fact that from the very beginning, modern science developed on the premise of rationalism, empiricism and positivism intentionally forgot the most fundamental dimension, which sustains human progress in the future, the dimension which is based on spiritualism and religion.

Some of the views of Western immigrants contradicting the view of Islam are certainly not acceptable. Freud, for example, assumed that prayer was obsessive compulsive behavior, that religion was an illusion, belief in God as the diversion of the Oedipus Complex, that goodness and truth (commonly referred to in Freud's concept as a superego) only originated in humans and were not inherent in humans, clearly rejected outright by Islamic psychology. Similarly, the view of the Psychologist Behaviorism which views that humans are born does not bring any talent. Humans when responding to a stimulus, of course, give a very big emphasis on aspects of environmental stimulation for human development that does not appreciate the natural talent or human potential factors. The great appreciation given by this flow to

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environmental factors is considered to be very mechanistic and deterministic (leaving aside the human aspects). Meaning in of course determines the great potential of humans as *khalifatullah*. As a result, inevitably, Psychology which specifically places itself in the status of being "one source of authority" for human activity because of its enormous obsession with human psychological problems, in turn, experiences incoherence in its concepts, and is isolated from the current the main culture.

This is because modern scientists deny the importance of the dimension of spirituality, especially in interpreting the phenomenon of unique human behavior that requires special analysis of personality psychology theories based on religious spirituality. Such as religious radicalism that is rife these days, suicide bombings are popularly called martyrdom bombs, the rise of pilgrims of remembrance and *muhasabah*, and a series of other religious behaviors. Because it may be that in the theory of modern personality psychology, the behavior is a pathological expression, while in the perspective of religious spirituality it is believed to be a behavior that reflects actualization or self-realization.

Responding to the above phenomenon, various criticisms of the building of modern sciences began to roll. New ideologies and concepts began to arrive in order to present a new orientation and paradigm, namely a paradigm that not only prioritizes a physical, but also non-physical, spiritual life. Criticism of modern western science is increasingly strengthened by the presence of the euphoria of the rise of Islam by Muslim intellectuals in various countries. They campaigned for the idea of the

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need to make Islam a living system, both in personal life and in people's lives. As has been proven in history, Islam is believed to be the foundation for the birth of a new civilization that respects humanity more substantially and avoids humanity from existential destruction. The importance and urgency of efforts to present Islam as a system of life, because modern civilization which is dominated by western civilization has failed to improve the moral-spiritual aspects of humanity.

The three major trends that occur in the Islamic world above affect each other, to initiate the presence of an international scale public discussion, namely in 1978 an international symposium on science and Islam took place at riyadl university, Saudi Arabia. The following year, 1979, in England a small monumental book was published in the Muslim world, namely The Dilemma of Muslim Psychologists written by Malik B. Badri. The three major situations above inspired an international public debate which took place in 1978 in an international *International symposium on psychology and Islam* in Riyadh University, Saudi Arabia. A year later, in 1979 a monumental book was published in the UK, entitled *The Dilemma of Muslim Psychologists* written by Malik B. Badri.

International meetings and publication of the book above inspired the birth and rise of Islamization of knowledge discourse between Indonesia, Malaysia and Brunei. In Malaysia, the growing of Islamization of knowledge was in accordance with the global Islamization science movement. The Malaysian government supported the existence of Islamic psychology studies through its higher education policy at the International Islamic
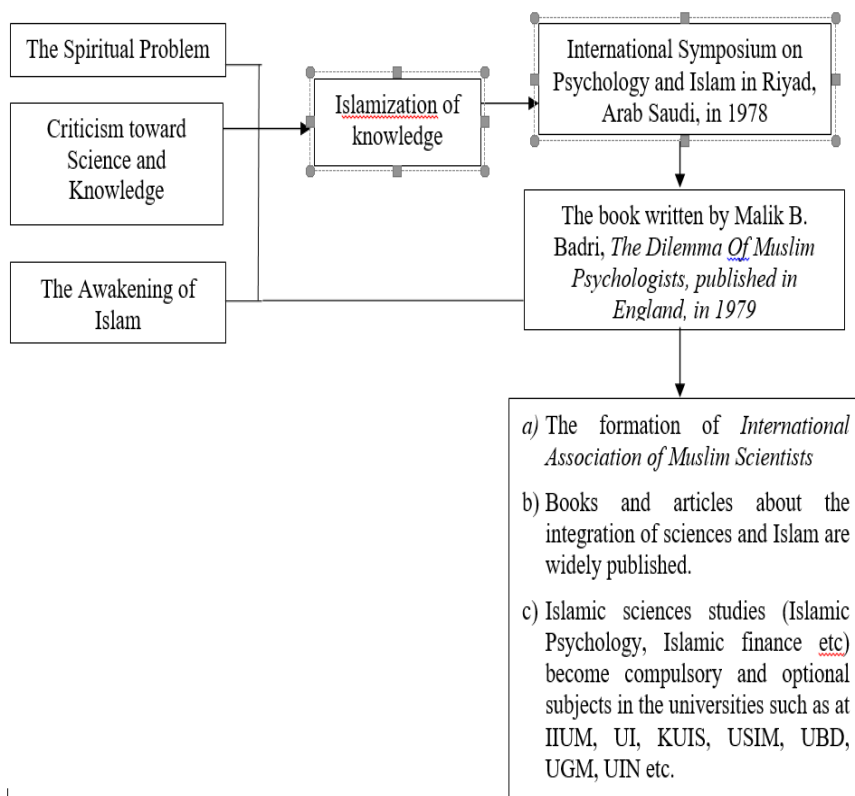
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University of Malaysia or IIUM, USIM and KUIS. They conducted national events related to this study at the International Islamic University of Malaysia (IIUM).

Meanwhile, the momentum of Islamization of kmowledge in Indonesia was initiated by the publication of a book written by Jamaladin Ancok and Fuad Nasahari Suroso entitled *Psychology Islami, Islamic Solutions on Problems of Psychology* (1994). The first National Symposium on Islamic Psychology I (UMS) was also held at the same time. The book was used to criticize Western psychology and also employed to explore the psychological, mental, and behavior aspect of the human from an Islamic perspective. Islamic discourse was further reinforced by the publication of the book written by Hanna Djumhana Bastaman in 1995 entitled *The Integration of Psychology and Islam towards Islamic Psychology*. The book was edited by a young psychologist, Fuad Nashari Suroso, who with his ability successfully integrated a separate publication about Psychology Islam into a book. Moreover, the book is widely used as reference book to enhance the development of psychological theories by future Indonesian Muslim psychologists.

The systematized development of the implementation of sciences and Islam in Malaysia, Brunei and Indonesia can be seen as follows:

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┌──────────────────────┐                          ┌────────────────────────────┐
│ The Spiritual Problem │                          │ International Symposium on  │
└──────────────────────┘         ┌──────────────┐  │ Psychology and Islam in Riyad,│
                                 │ Islamization of│→ │ Arab Saudi, in 1978        │
┌──────────────────────┐      → │  knowledge   │  └────────────────────────────┘
│ Criticism toward     │  →      └──────────────┘                │
│ Science and          │                                         ↓
│ Knowledge            │                          ┌────────────────────────────┐
└──────────────────────┘                          │ The book written by Malik B.│
                                                   │ Badri, The Dilemma Of Muslim│
┌──────────────────────┐                          │ Psychologists, published in │
│ The Awakening of     │  ──────────────────────→ │ England, in 1979           │
│ Islam                │                          └────────────────────────────┘
└──────────────────────┘                                         │
                                                                 ↓
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┌─────────────────────────────────────┐
│ a) The formation of *International* │
│   *Association of Muslim Scientists* │
│   │
│ b) Books and articles about the   │
│   integration of sciences and Islam are │
│   widely published.   │
│   │
│ c) Islamic sciences studies (Islamic │
│   Psychology, Islamic finance etc) │
│   become compulsory and optional   │
│   subjects in the universities such as at │
│   IIUM, UI, KUIS, USIM, UBD,   │
│   UGM, UIN etc.   │
└─────────────────────────────────────┘

2) The Same Perceptions on Dichotomy of Sciences

Various paradigm and concepts of the integration of science and Islam that are presented by various Islamic countries, including in this case Indonesia, Malaysia and Brunei, basically depart from the same desire, namely to develop a more integrative science. The dichotomy of general science and religion which has been a paradigm of scientific development is considered one of the reasons for the waning bargaining of Islamic higher education. In many cases, modern sciences are considered as an scientific entity that should be empirical–realistic and can be analyzed through objective approaches. Therefore, they

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should meet one of the characteristics of science that is objective. Consequently, the objectivity of modern sciences separate them from the religious disciplines since there are some scientists who assume that religion may cause stagnation in science.

Modern scientists try to dismantle God from the human subjective experience. Moreover, subjective-religious experience cannot be identified as scientific. In order to be considered scientific, human experience should meet a scientific standard that is logical-rational-empirical. Whereas, modern sciences require to apply scientific method as other sciences. There are three foundations of development of modern sciences (Khun, 1962). First, science should applied a universal principle. There are several general principles and theories that can be adopted as a tool for scientific purposes. For example, the study of perception, memory, and learning should be able to analyze socio-historical factors. Second, science should be based on empirical methods. Thus, science follows a rational consideration as part of logical empirical philosophy. Modern science is also committed to believe of what is truth through its methodology. In particular, by using empirical methods and especially through controlled experiments, researchers can obtain the absolute truth about the nature of the subject matter and how it relates to cause and effect factors. Third, research should be seen as a stimulus for the development or progression of science. In modern science, empirical method is used to study the human basic character. The result of the research can help people to have positive attitude. Moreover, general studies

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moved towards the establishment of neutral truth values on the various aspects of the objective world.

The influence of the three foundations of the development of the science above play a significant role in knowledge tradition. The negative impact of the application of the scientific method in turn has intensified the process of dehumanization (man as an experimental object that can be controlled). Scientific framework has a limit, and even reduces the process of analysis and synthesis of mainstream conception of the human personality. In term of the modern psychological concept, human behavior is an object of study of psychology which can only testify through visible experiments (objective-empirical) while things which are not visible (metaphysical) are considered unscientific since they cannot be observed. As a result, it is unavoidable: psychology determines itself as "a source of authority" study for human activities. It has great obsession for providing a solution to human psychological problems, but in fact it has a limited contribution for the effectiveness of more practical benefits (Nashori, 2000).

In other words, during the long period of neglect of religion in western civilization, science which was specialized in researching human behavior showed in coherence to its concepts and became alienated from the cultural mainstream (Eysenk, 1968). Science which is dominated by thoughts of mechanistic and ethical naturalism ultimately proved insufficient. Finally, the interest of people to study the subject declined.

Departing from the aforementioned phenomenon, the idea of the Islamization of science in the context of

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psychological science--as mentioned earlier by al- Attas- began its momentum. There was an opportunity to develop Islamic science since western scientists had limitations in providing solutions to the various problems and spiritual crisis of modern man. Therefore, there was a movement to integrate Islam and science. In addition, the dichotomy of science has caused inequality in the management of education, between educational institutions that manage religion and general science. In addition, the dichotomy of science also greatly influences the perspective of the community. Within the Islamic community there is a growing view that only Islamic sciences such as Fiqh, al-Quran, hadith, Sufism etc. must be studied. Meanwhile, sciences such as physics, chemistry, geography, sociology and other sciences are considered secular so they are not required to be studied. There is also the view that Islamic sciences are traditional and outdated sciences so that they are not worth studying while general sciences are a family of sciences that is in accordance with the needs of the modern world so it needs to be learned.

Wild views above are realized or not greatly affect the existence of Islamic-labeled higher education institutions that are increasingly weakening. Therefore, there needs to be a new scientific paradigm that can make Islamic higher education institutions as a center for the development of knowledge that can still be relied upon. This is where the integration of science and Islam gained momentum. The issue of the integration of science and Islam at least can re-perception the general public not to underestimate the existence of Islamic religious colleges today.

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3) Theoritical Integration Rather than Practical

A few of Islamic higher education institutions in Indonesia Malaysia and Brunei felt the same thing related to the implementation of the integration of sciences and Islam. The concept of scientific integration in those universities only stop at the level of discourse and cannot be translated into an operational-empirical form, especially going forward to curriculum development and learning.

The effort to make Islam *rahmatan lil alamin* certainly requires a long process through hard and smart work. As with other scientific discourse; Islamic Economics, Islamic Psychology, Islamic Anthropology and others, Islamic science must have a strong theoretical concept, research results that strengthen the theory, and applications that truly produce benefits to create a better life for a person or society. But the question then is, after the foundation of Islamic science has been established, scientific meetings have been held and several papers have been published, even concepts have been lectured, has Islamic science come out of these theoretical things towards an action that has a real impact? "

The above questions are very intriguing considering that the inclusion of Islam in the wake of scientific scholarship is ideally very action-oriented. Without action that results in concrete results, talking about Islamic science is of little use. In this framework, it is interesting to quote the Arabic proverb: "Knowledge that is not utilized is like a tree that does not bear fruit". Therefore, in order to be optimally useful and long-term, an action must be based on knowledge or on a mature concept. Mature actions only occur when they are based on mature thinking. Therefore,

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talking of Islamic science will be a strength if it is supported by a strong theory; and Islamic science theory only has a use value if it can be applied in various aspects of life.

Related to the issue above, Prof Siswanto (2019) as a leader of team of scientific integration in UIN Yogya said: "*The development of knowledge with the islamiclabel is still circling with abstract theoretical concepts, rather than discussing more concrete and applicable issues. In Indonesia, from 57 Islamic universities/institute, the only two of the which have tried to apply the concept of scientific integration in the development of Syllabi, RPS, learning process and academic culture, while others including UIN Bandung, Jakarta and Makasarstill stop at normative-philosophical level.*"

In line with Bastaman, Mohd Azman bin bin Hasyim, Director of Islamic Science Institute at the Universiti Sains Islam Malaysia (USIM) also agreed this condition. He identified weaknesses in the context of the application of Islamic science, according to him: "*Although all this time Islamic science is undergoing many significant developments but it has not yet reached the idealized level. The discussion of Islamic science so far has only touched the philosophical level and has not yet entered the level of its application. If this discourse stagnates in the arena of philosophical debate, it is difficult to expect practical benefits. Moreover, scientific methodology is a bridge that is able to translate philosophy into the arena of daily practice and practice, even this has not been well formulated, because only by that way can Islamic science be felt by the public at large. For this reason, the younger generation needs to be involved even more to be able to play a role in supporting the development of Islamic science, so that it can become an alternative approach in*

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the environment of modern scientists both nationally and internationally,'' he continued. This fact is strengthened by the result of Nurlena's research (2014) that, from 57 Islamic universities/institute, the only two of the which have tried to apply the concept of scientific integration in the development of Syllabi, RPS, learning process and academic culture, while others including Uin Bandung, Jakarta and Makasar still stop at normative-philosophical level.

The SOASCIS Director of Brunei Daarussalam University also felt the same thing related to the implementation of the integration of sciences and Islam integration studies in his country, Brunei. According to him: *"The concept of scientific integration only stops at the level of discourse and cannot be translated into an operational-empirical form. Instead of going forward to curriculum development and learning, the concept of Islamic integration in Brunei has only implemented for 2 years, since January 2004 till December 2005."*

From the three views above, it appears that the discussion of Islamic science studies in three countries: Malaysia, Brunei and Indonesia has indeed experienced the development of theoretical discourse, but at the level of application in contributing practical benefits has not been done much.

4) The Polarization of Islamic Scientists' Competencies

There is no doubt, that it is not an easy job in realizing a knowledge that is broadly acceptable. Neither in the case

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of the existence of Islamic science in three countries: Malaysia, Brunei and Indonesia. From the results of documentation study and brief interviews with some experts in the three countries, it was found that this difficulty occurs due to many factors, including the problem of human resources who pursue Islamic science, which unintentionally, the polarization caused by their lack of educational background.

On the one hand, those who have a general educational background represent pure scientists, generally they are very expert in their fields, mastering theories of knowledge and very experienced in their practical area, but they are lack of a strong religious knowledge base. So that, in the end, when they have a tendency to start touching, talking and exploring Islamic concepts about science, they will generally use the term Islamic science on the grounds that existing modern science is still used as a knife of analysis, but incorporated Islamic views about science. As a result, when they comment or give an assessment of the material aspects of Islam, their Islamic analysis is not exhaustive.

On the other hand, pure religious scientists such as those who have a religious educational background, but they do not have adequate scientific knowledge. This group is those who are trying to explore the classical treasures of Islam *(at-Turats al-Islami)* for the development of general science. They are not pure scientists and do not have a general educational background, but have access to Arabic literature which lies in the minds of classical Muslim scholars who intersect with science, such as Ibn Sina, al-Ghazali, Ibn Miskawaih etc. They use the term of Islamic science with the reason to take direct resources

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from the classical treasures of Islam and then contextualize it with the view of modern science. This latter group are generally graduated form campuses that have access to Arabic literature, such as IAIN / UIN / PTAIS which have this tendency. Because of their strong background studies on religious aspects, when speaking in the context of the integration of science and Islam, often the Islamic study ideas that are linked to science studies have no relevance (too normative, theoretical and less applicative). And even if there is a contribution in the scientific perspective, the analysis is not detailed and does not touch the issues raised, so that the distinction seems very rigid, partial and even far from the idealism of Islamic science.

B. THE DIFFERENCES OF THE IMPLEMENTATION OF THE INTEGRATION OF SCIENCES AND ISLAM IN INDONESIA, MALAYSIA AND BRUNEI

1) The Concepts/Metafors/Paradigms Used

The formulation of the concept of scientific integration used by Islamic higher education institution in Indonesia, Malaysia and Brunei has a variety of concepts and metaphors to facilitate the understanding of people about the scientific constructs taken. The selection of this concept, of course, departs from deep thinking and has a background in vision and mission to be achieved by an educational institution.

Various Islamic higher education institutions have transformed and opened themselves to receive general sciences. For this purpose, they are required to have their own unique scientific structures, in accordance with the

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context of their locality, and in line with the vision and mission of the institution. Likewise, various universities in Indonesia, Malaysia and Brunei have the same inevitability to formulate them.

In Indonesia, the formulation of the concept of scientific integration uses a variety of concepts and metaphors to facilitate the understanding of people about the scientific constructs taken, such as

UIN Jakarta using the paradigm of dialogical science integration from Ian G. Barbour. While UIN Malang uses the tree of knowledge as its scientific branch. The concept of integration-interconnection with spider web metaphors is held by UIN Yogyakarta, Roda Pedati or revelation guides UIN Bandung knowledge, and UIN Makasar uses "Cemara Ilmu".

The same thing happened in some universities in Malaysia which also has a unique concept of scientific integration. IIUM with Islamization and releasing of Human Knowledge, USIM through the concept of Integration of Naqli and Aqli Knowledge (INAQ), and KUIS with the concept of Integration of knowledge. The selection of this concept, of course, departs from deep thinking and has a background in vision and mission to be achieved by an educational institution. The explanation of each is as follows:

UNIVERSITIES	CONCEPTS/METAFORS/PARADIGMS USED
UIN Yogya	*Jaring Laba-laba* Integration-interconnection is a universal

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	scientific building that does not separate religion and science from the realm of religion. It is the integration of *hadharah al-Nash*, *hadharah al-'ilm* and *hadhârah falsafah* carried out through two models, namely; (1) integration of interconnection in the internal area of Islamic sciences, and (2) integration of interconnection of Islamic sciences with general sciences.
UIN Malang	*Pohon Ilmu* Scientific integration is a combination of religious and general sciences in one unit. The two types of knowledge originating from different sources must be studied together and simultaneously. The difference between the two, is that studying knowledge comes from the Koran and Hadith is obligatory while studying the knowledge that comes from humans is fardlu kifâyah.
UIN Bandung	*Roda Pedati* Scientific integration follows the philosophy of the wheel that has 3 components: the axle, the spokes (alloy wheels) and tires. The three components work simultaneously in accordance with their respective functions. Therefore, scientific integration is the integration of *qauliyyah* verses and *kauniyyah* verses that include ontological, epistemological, and

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	axiological aspects.
UIN Jakarta	There is no any concept claimed. It is because they don't think it is necessary to do it. It is already co-existence and dialogis interaction between science and Islam Islam does not recognize the dichotomy of science, because the source of all knowledge is God. Therefore, the scientific paradigm developed is to bring science together with the truth of revelation
UIN Makasar	*Cemara Ilmu* It requires the opening of a dialogue between the sciences by making the Qur'an and al-Hadith the center of knowledge. These two sources inspire the sciences in the next layer, namely classical Islamic sciences, natural sciences, social sciences, humanities, and contemporary sciences
USIM	*Integration of Naqli and Aqli Knowledge (INAQ), Tawhidic/Islamic Worldview, Trandiciplinary* Al-Qur'an is *mamba'* of knowledge. Integration of sciences means the recognition that all true knowledge is from God and all sciences should be treated with equal respect whether it is scientific or revealed.

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IIUM	*Islamization and releventization of Human Knowledge* - There are four main steps: (1) mastery of Islamic traditional sciences, (2) mastery of contemporary sciences followed by recognizing certain errors or enmity with the will of Islam, and (3) reawakening the contemporary field of science so that harmony and harmony with idealism Islam
KUIS	*Integration of knowledge* - The catalyst of knowledge tradition Esteemed to nurture graduates who can be ulama' and umara' - The goal of this university is producing Muslim professionals who live in accordance with the *'Aqidah* (faith), *Syari'ah* (law) and *al-Akhlaq al-Karimah* (good character). Knowledge is only one part of this process. The emphasis should be on helping young Muslims to acquire useful knowledge which leads to moral action and good behavior *(Husn al-Khuluq)*. - Champion in Multidiciplinary curriculum: Islamic Studies, Business studies, Islamic Banking, language and communication, ICT, multimedia, nursing and education.
UBD	*Tawhidic Perspective* as a way to develop, by means of integration, an outstanding and balanced student in terms of

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	intellectual, spiritual, emotional, social and physical development without neglecting the nation's philosophy and aspirations.

2) University's policy on Integrated Curriculum

The discussion of scientific integration in various universities should ideally be born because of the leadership policy that wants to open a dialogue space for the emergence of internal and external speakers' aspirations and contributions in formulating the concept of scientific integration in their institutions. If the leadership does not support and have any policy for that, the implementation of scientific integration will not run well. Because the formulation process takes years to be able to be practically grounded in the implementation of the curriculum, the work of the integration team must not be interrupted, despite the leadership transition. Thus, the concept of scientific integration must be formulated in line with the vision, mission and strategic plan of the institution. All of these activities must be supported by adequate budget policy politics as well. Table below explain about Universities' policy in three countries in dealing with the integration of science and Islam:

UNIVERSITIES	POLICIES OF THE IMPLEMENTATION OF INTEGRATION OF SCIENCE AND ISLAM
UIN Yogya	The curriculum was developed based on the integrative-interconnected and the learning process is the operationalization

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	of a syllabus formulated in the learning guidelines that refers to the integration-interconnection paradigm that combines the sciences of *ijtima'iyyah kauniyyah/ hadharah al-'ilm* (natural and social sciences), with the *hadharah al-falsafah* (ethical-philosophical science)
UIN Malang	- The curriculum was developed by paying attention to four strengths, namely: spiritual depth, moral grandeur, breadth of knowledge, and maturity. - UIN initiated an integration-based curriculum, which is generally divided into five groups, namely Personality Development Courses (MPK), Scientific and Skills Courses (MKK), Work Skills Courses (MKB), Work Behavior Courses (MPB), and Social Life Courses (MKK), Work Skills Courses (MKB), Work Behavior Courses (MPB), and Social Life Courses (MKK), Work Skills Courses (MKB), Work Behavior Subjects (MPB), and Subjects of Social Life/Social Work (MBB) - The learning process refers to an integration-based curriculum that is based on the vision, mission, goals and paradigm of the knowledge tree set at UIN Maliki Malang. In addition, the

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	leadership of the University monitors and evaluates the implementation of scientific integration to the development of the curriculum and the learning process
UIN Bandung	- The curriculum focused on the subject centered design with three variants, the subject design, the details of the study (design disciplines), and the correlated curriculum - UIN Bandung gives full autonomy and authority for lecturers in the learning process as long as it still refer to the vision, mission, goals and paradigm of scientific integration developed.
UIN Jakarta	- There is no operational formula of the leadership of UIN Jakarta regarding the implementation of scientific integration in the learning process. Because besides there was no written documentation, each lecturer in each Faculty developed a model of scientific integration based on creativity and ijtihad of each Faculty leader.
UIN Makasar	- There are two important policies carried out: First, the curriculum is adaptive to market needs, up to date on the development of science and technology and accommodating to the development of student personality;

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	Second, the curriculum is arranged in accordance with the framework of scientific integration and rests on the competence of study programs - There is only general policy to support the ongoing integrative learning process: a) Knowledge transfer is supported by research results; b) Revitalization of Fiqh Education; c) The availability of Learning Process (d) facilities in each Department/Study Program according to the needs and ideal standards; e) The availability of standard books for lecturers and students; and f) Standard Daras books are available.
USIM	- The establishment of Integration of Naqli and Aqli. - In every course taught, syllabus must encompass these 4 levels (mustawa): (1) *Al-Ta'sil* (Ayatization); (2) *Al-Muqaranah* (Comparison); (3) *Al-Takyif* (Adaptation); (4) *Takamul* (Integration) - Lecturers are compulsory to attend series of INAQ discourses as requirement.
IIUM	- The Establishment of Islamization Centre and ISTAC - Curriculum module is developed by the faculty (faculty has autonomy to design their curriculum based on the need of the disciplines and program)

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	- Every *kulliyah* (faculty) got Islamization expert supervising the curriculum
KUIS	- KUIS's integration more into acculturation of the ecosystem. They shape more on students' personality through university's rules and regulations. - Every program regardless of nature of discipline must undergo university core subjects: (1) *halaqah*; (2) *Quranic tajweed; (3) Hafazan and tafseer* - Lecturers must attend *Halaqah* (it's compulsory)
UBD	The implementation of scientific integration in UBD received full support from local policies, but then again faded away, until finally it could only existed for 2 years from January 2004 to December 2005.

3) Strategies Used in Implementing the Concept of Integration in to Curriculum and Learning Process

Some strategies should be arranged to ensure the integration of science and Islam implemented well. Strategies are needed in order to direct activities in accordance with what have been planned. All Islamic higher education institutions in Indonesia, Malaysia and Brunei has created such strategies in dealing with the

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implementation of the integration of science and Islam as follows:

UNIVERSITIES	STRETAGIES USED FOR THE IMPLEMENTATION OF INTEGRATION OF SCIENCE AND ISLAM
UIN Yogya	- Establishment of Curriculum Development Directorate - Lecturers' selection system that emphasizes the balance of religious and general competence. - Workshop on integrative-interconnected Curriculum and Learning strategies. - Lecturer Training on Application of Curriculum Integration in Syllabus, RPS and Learning process - Coaching new lecturers to develop integrative-interconnected competencies - QA office ensures of template for developing integrative interconnective Semester Lecture Program Activities (RPKPS)
UIN Malang	- Establishment of a Quality Assurance Office (KJM) - Make Ma'had Ali - Establishment of the Qur'an and Science Study Institution (LKQS) - Creating Arabic Language Development Program (PKPBA) and English Language Development

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	Program (PKPBI) - Recruitment of general lecturers who memorized the Koran - Integrated Curriculum Workshop - Curriculum review and syllabus for integrating religious sciences and general sciences - Compiling textbooks that refer to the scientific integration paradigm as outlined in the tree of knowledge. - Develop integrated RPS. - Cultivating integrated thesis writing.
UIN Bandung	- Composing Integrated curriculum handbook - Civilizing integrated lecturer research. - Writing integrated textbooks. - Collaborative RPS Compilation. - Making class schedules based on lecturer competence so integration is implemented. - Evaluate the learning process together.
UIN Jakarta	- Establishment of Development and Quality Assurance Institutions - Establishment of Academic Directorate Curriculum review
UIN Makasar	- Curriculum review and syllabus for integrating religious and general sciences - Incorporate religious values into the curriculum and syllabus used at public faculties. - Encourage all lecturers to conduct

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	research on the integration of Islam, science, technology, and art at least 50% per year. - Research on scientific studies conducted by lecturers - The general faculty should try to incorporate religious values. - Publish the scientific work of educative staff, strived to be published internationally, a minimum of 10 pieces per year - Compiling textbook packages that contain scientific integration between general sciences and Islamic sciences
USIM	Arabic language for non-religious academic background, philosophy of Islamic Science and Islam.
IIUM	- Non-Islamic program such as engineering, physics, chemistry etc., oblige students to take Arabic language till required standard at foundation level and Islamic worldview and Islam, knowledge and civilization subjects during the period of studies.
KUIS	5 minutes Islamic sermon for every class given by lecturer
UBD	- In 1936, religious education was included in the school curriculum as a subject called *Shar'iyyat*. The contents were limited to the *'ibadat* and *tawhid* fields

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	- Government only provided one religious teacher to teach the subject, an increased number of teachers taught Islamic religious subjects in 1937 - Government invited two religious officers from the state of Johor, Malaysia, to make a study into the effectiveness of the teaching of Islamic knowledge in Brunei's government school. - The religious teaching is allocated 3-5 times a week - In 1993, tahfiiz al-Qur'an was established by majesty Hassanah Bolkiah - 1994, PAI and al-Qur'an become subject learned in public shools - 2004, Islamic revealed knowledge was integrated into the new religious education curriculum.

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Chapter V

C O N C L U S I O N

From the explanation in previous chapters, it can be concluded that the implementation of the integration of Islam and sciences in Malaysia, Brunei and Indonesia share similar points: (1) Genealogy Concept; (2) The same perceptions on dichotomy of sciences dan the same will to do the integration in the three countries; (3) Theoritical integration rather than practical; (4) The polarization of Islamic scientists' competencies. Apart from the similarity, both countries also show differences: (1) *The concepts/metafors/paradigms used*; (2) University's policy on Integrated Curriculum; and (3) Strategies used in implementing the concept of integration in to curriculum and learning process.

The concept of Islamic psychology in three countries derives from a similar historical root. The existence of scientific integration in the three countries was born as a derivative work of the global Islamization of science accomplished by Muslims in various parts of the world. And the idea of scientific integration appeared as a response to three major situation in the Islamic world, namely: (1) The spiritual problems of modern people as an effect of dehumanization science; (2) criticism of science, and (3) the awakening of Islam.

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The concepts of the integration of science and Islam that are presented by various Islamic countries, including in this case Indonesia, Malaysia and Brunei, basically depart from the same desire, namely to develop a more integrative science. The dichotomy of general science and religion which has been a paradigm of scientific development is considered one of the reasons for the waning bargaining of Islamic higher education.

A few of Islamic higher education institutions in Indonesia Malaysia and Brunei felt the same thing related to the implementation of the integration of sciences and Islam. The concept of scientific integration in those universities only stop at the level of discourse and cannot be translated into an operational-empirical form, especially going forward to curriculum development and learning.

Another similarity is appear to be due to several factors. One of the factors is human resources, especially on the issue of polarization and dichotomy of Muslim scientists. Muslim scholars are categorized based on their educational background. There are Muslim scholars who hold a general education degree and those who hold a religious philosophical studies background. The first group are represented by mainstream scientists. Their expertise is in general studies. The second group has an ability to access Islamic classical texts, including the *Qur'an* hermeneutics, *Hadits*, etc. Those two groups do not show cooperation through dialogue and other scientific works. Therefore, Islamic science does not seem applicable in its discussion.

The formulation of the concept of scientific integration used by Islamic higher education institution in Indonesia, Malaysia and Brunei has a variety of concepts and metaphors to facilitate the understanding of people about the scientific constructs taken. The selection of this concept, of course, departs from deep thinking

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and has a background in vision and mission to be achieved by an educational institution.

The implementation of scientific integration should be supported by university's policies. If the leaders of university do not strengthen the program of the implementation on the integration of Islam and science through the policy they made, then the implementation of scientific integration will not run well. It is because all an activity must be supported by adequate budget policy politics as well, intead of mental and spiritual supports.

Some strategies should be arranged to ensure the integration of science and Islam implemented well. Strategies are needed in order to direct activities according to plans and techniques to achieve them. Fortunately, all of Islamic higher educations institutions in Indonesia, Malaysia and Brunei has created the strategies.

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It is undeniable that some Islamic higher education institutions in Indonesia have dealt with uncertainty in implementing the integration of science and Islam in more operational and practical discourse. For example, UIN Syarif Hidayatullah Jakarta, does not have a significant integration pattern for their scientific intergration discourse into empirical-implementatize areas. Moreover, UIN Makassar is struggling to find their concept of scientific integration through trials and experiments to generate Islamic Science by producing/publishing books which contain science that is associated to Islamic laws justification. Those conditions should be responded and followed up seriously. This book tries to explore the practices of how Islamic higher education institutions in Indonesia, Malaysia and Brunei implement the scientific integration discourse in more operational practice, especially in the curriculum design and development. This study provides the description of best practices from some sample universities in three countries that can be used by other Islamic institutions to improve their (curriculum?) management. In Indonesia context particularly, this attempts aim at formulating the concept of scientific integration systematically, empirically and operationally in the context of curriculum development and learning process in each institution.

Penerbit

CONFIDENT

Unggul dan Luhur