Malaysia Education Blueprint 2015-2025

(Higher Education)

Addressing current and future challenges in Malaysian higher education

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15 Disember 2016, Dewan Budaya USM

Challenges of the 21st Century

- The world is changing and the demands on higher education is changing.
- To be relevant we have to accept that change is inevitable

Accelerating PACE of CHANGE due to DIGITAL age

Changing shape of knowledge

Value of education

ASEAN economic community

GLOBAL Economic crisis

GLOBAL Competition due to GLOBALIZATION

Impact of the challenges

- Despite the ability to obtain the lectures free via internet, people still crave for the learning experience.
  - Total on-line learning may not be the answer
- Students today need to work while obtaining a degree
  - Education today need to move from structured to flexible education
  - The requirement of “bermastautin” need to be reviewed by senate

Future of Higher Education

Flexible education

Multi entries (including APEL)
Multi exits (student's choice)
Multi disciplines
Multi lingual
Multi modes
Multi institutions
Multi degrees

Flexible education

Collegiality

Commonality

Future of Higher Education

Flexible educatio

Multi entries (including A
Multi exits (student's choi
Multi disciplines
Multi lingual
Multi modes
Multi institutions
Multi degrees

Collegiality and commonality

Sharing of Talents
Sharing of resources
Sharing of data
Joint degrees
Double degrees
Dual Degrees

IHL Public and IHL Public

IHL Public and IHL Private

LOCAL TO GLOBAL

ation

ty

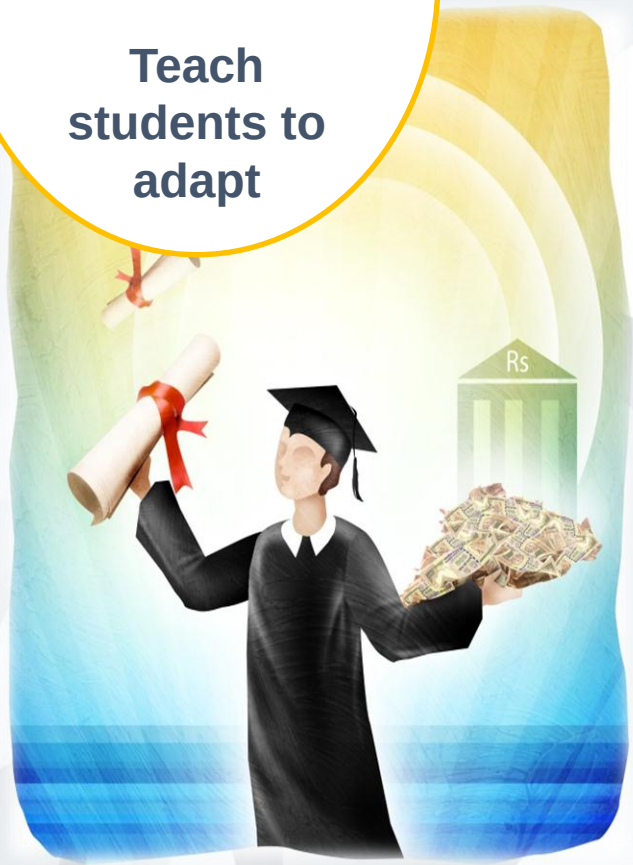
onality

Impact of the 21st century challenges

- Employers today no longer require degrees to hire.
- SKILLS are more important
- The job market needs have changed.
- Degrees offered must show value add.
- Can we value-add by offering double degrees, joint degrees, 2 years in local university and 2 years elsewhere
- 35% of jobs today will no longer exist 20 years from now. The degree should teach the students to be able to **ADAPT** in the future.

Degrees offered must show value add

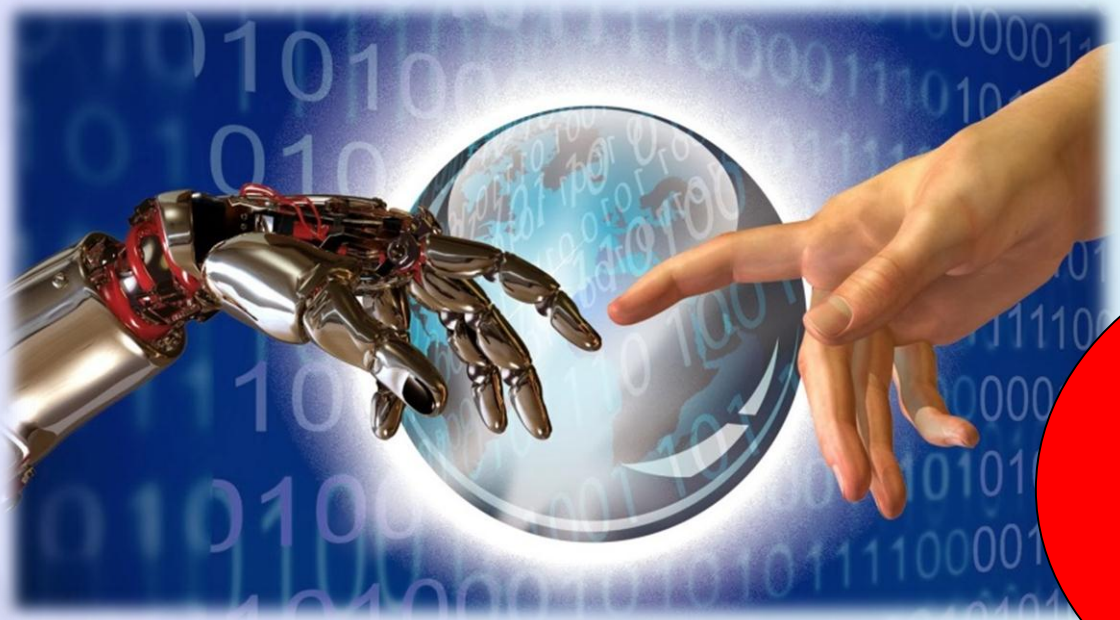
Teach students to adapt




Enter into the
4th Industrial
Revolution...
SOARING
UPWARDS
MALAYSIAN HIGHER EDUCATION
GET
PREPARED
NOW!

Convergence of technology

- 4th industrial revolution
  - Fusion of technologies that blur the lines between physical, digital and biological spheres.
  - It evolves at exponential rate rather than linear and is a disruptive at every industry in every country



The interface between man and machine

science & tech

February 28, 2016 thesundaypost

3-D printers may soon be making parts for ill hearts

By Emily Sohn

IN THE cardiac operating room of the future, a surgeon may repair your damaged heart with personalized parts made to fit your precise anatomy - bypassing donor lists and immune-suppressing drugs.

It sounds far-fetched, but in some ways this future is already here. Doctors use 3-D-printed models of organs and tumours regularly to educate patients and plan surgeries.

Some printed body parts have even made their way into human bodies as dental implants, prosthetics, skull and facial reconstructions, and more. Researchers are also working to print out cells, blood vessels and other living tissues, and experimental studies have created, among other parts, knee cartilage, bones and an artificial ear.

As costs decrease and discoveries accelerate, experts predict that 3-D printers will become routine tools for heart care, too. Optimistic scientists envision customised patches or even full-fledged beating hearts, ready to be implanted, an exact fit for the patient's body.

"I really think the 3-D jet printer is transformative," says Daniel Jones, chief of minimally invasive surgical services at Harvard Medical School in Boston. "It's going to change the way doctors talk to patients, how they plan surgeries and how they do surgeries. The sky is the limit in terms of applications."

In cardiology, 3-D models are, for now, proving most useful as educational tools. Like fingerprints, every person's heart is unique, and every heart problem plays out in its own way, says Paul Iaizzo, associate director of the Institute for Engineering in Medicine at the University of Minnesota in Minneapolis. With help from detailed replicas, surgeons can plan more accurately and reduce procedure times.

3D bioprinting of an artery at Carnegie Mellon University College of Engineering; experts predict that 3-D printers will become routine tools for heart care. — Photo courtesy of Carnegie Mellon University College of Engineering

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In the last year, Iaizzo says, his team has printed models of 17 children's hearts with congenital deformations that required surgical repair. A young child's heart can be as small as a walnut, so the team prints each heart four or five times larger than normal. The surgeons can then study the models, show parents what needs to be done and discuss risks. They usually print out an extra heart for patients to take home. "One of the most critical parts is discussing the whole thing with the family," Iaizzo says. "It's powerful and comforting for parents to really understand what the problem is."

When Harvard Medical School cardiac anaesthesiologist and echocardiographer Feroze Mahmood began printing full-size replicas of patients' damaged mitral valves, he gained a new appreciation for the complexity of the structure, particularly a Pringles-shaped region called the annulus that was impossible to visualise with two-dimensional images. Insights gained from handling printed valves have helped him and colleagues understand why a common treatment works for some patients but not others. He has now used the technology hundreds of times.

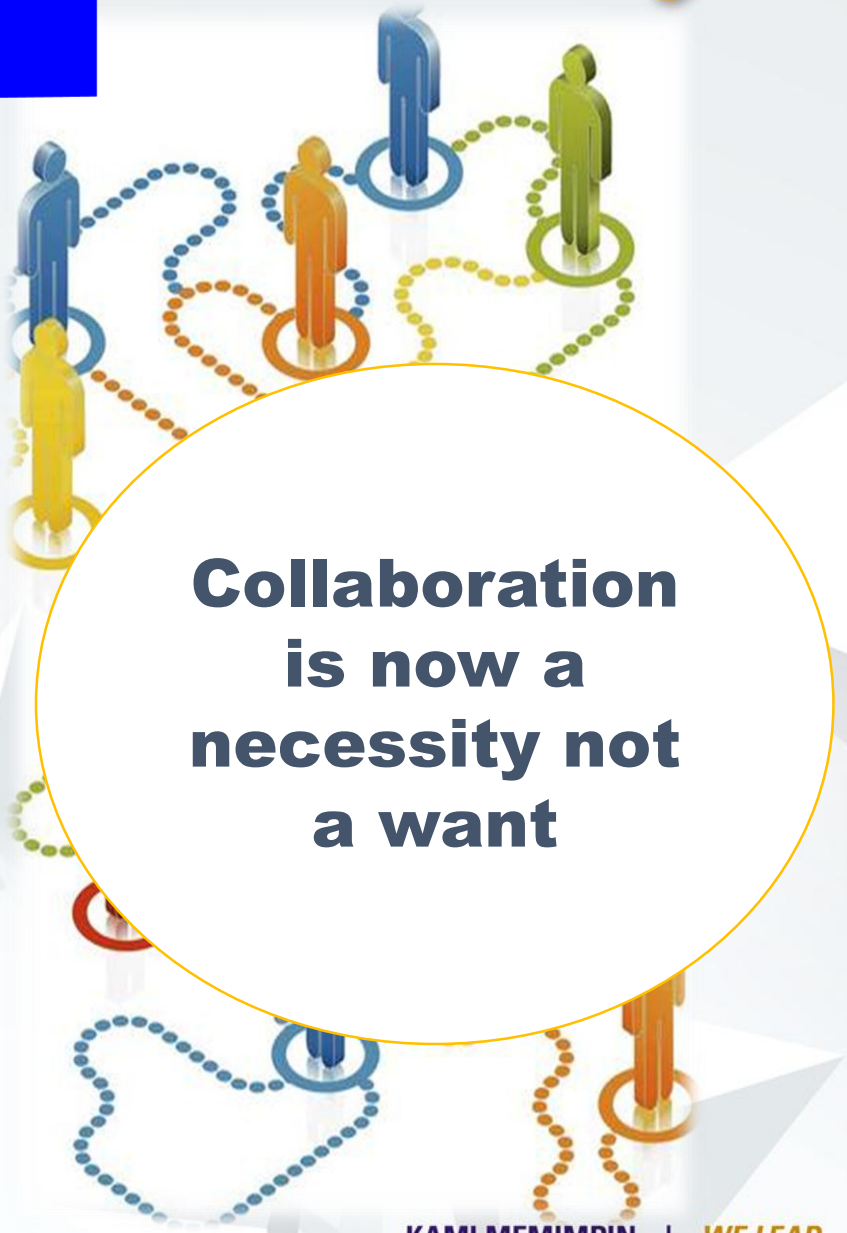
"For most people, it is an 'aha' moment," says Mahmood, who is researching the possibility of printing patient-specific valve parts that would be safe to use in surgeries. "What I foresee is that . . . we will be 3-D printing everything we operate on before surgery. Instruments, grafts and materials will all be customised and will be printed on-site."

— Washington Post

We are no longer talking about working in silo disciplines. This is the era of data analytics , robotics and automation

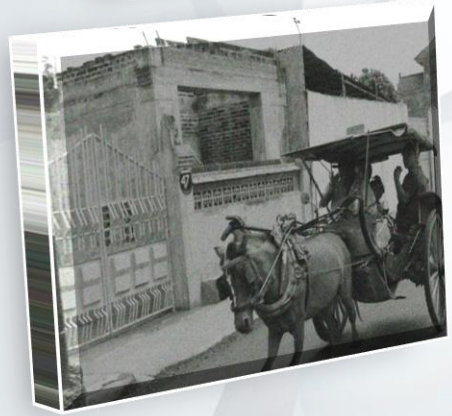
The changing shape of knowledge

- There is a need now for the *melting* of the disciplines.
- People are no longer confined into silo disciplines.
- There is a need to connect the dots and provide solutions to real life problems.
- The question now is how can we of different disciplines **collaborate /work together** to solve the problem.
- Its no longer about how each discipline can provide the solution.



Collaboration is now a necessity not a want

Reality check: The REVOLUTION of TECHNOLOGY



Big DIFFERENCE right?

With regard to how we teach students ..

>70 years ago

Today

NOTHING has CHANGED

UNIVERSITI SAINS MALAYSIA

APEX

SOARING UPWARDS
MALAYSIAN HIGHER EDUCATION

THE TRANSFORMATION OF HIGHER EDUCATION SYSTEM MUST HAPPEN!!

Kami Memimpin | *We Lead*

www.usm.my


The world is changing and
the demands on higher education is changing.
To be relevant we have to accept
that change is inevitable
If you ignore change you will be ignored
Change is the new word for the brave

The world has progressed,
And now we need people who think

Innovatively

CREATIVELY

Independently

CRITICALLY

Connect

We need problem solvers

THE MALAYSIAN HIGHER EDUCATION SCENARIO

Malaysian Higher Education Profile

SOARING UPWARDS
MALAYSIAN HIGHER EDUCATION

79,122 ACADEMICS
(PhD 17,882) (23%)
Public IHLs 32,866 (PhD 12,166)
Private IHLs 36,185 (PhD 5,670)
Polytechnics 7,256 (PhD 43)
Community Colleges 2,815 (PhD 3)

20 Public Univ
5 Research Univ
4 MTUN (TVET)
11 Comprehensive Universities
15 HiCOEs

Enrollment (1,149,162)
Public IHLs (540 638) *as of Oct 2015
Private IHLs (493 926) * as of Dec 2015
Polytechnics (96 069) *as of Oct 2015
Community Colleges (18 529) * as of Dec 2015

International students
Undergraduate –94,307
Post-graduate – 30,777
TOTAL – 125,084
*as of June 2016
Internat School 28,244
TOTAL 153,328

RM 7.8 billion/year market

20 Public IHLs (17 Autonomy)
497 Private IHLs
- **401 Private Colleges**
- **96 Private University/ Uni. College *as of August 2016**

34 Polytechnics
94 Community Colleges

Education Malaysia Office Abroad
- EM Washington
- EM Los Angeles
- EM Chicago
- EM UK&Eire
- EM Jordan
- EM Egypt
- EM New Zealand
- EM Australia
- EM Indonesia
- MEPC Dubai
- MEPC Beijing
- MEPC Ho Chi Minh
- MEPC Jakarta

13 Education Malaysia Offices

Research Programmes
Total Allocation RM370 million (as of Jan 2016)

- Research Universities –RM 200 mil
- Fundamental Grants – RM 150 mil
- HICoE – RM 20 mil

NATIONAL HIGHER EDUCATION STRATEGIC PLAN (2007-2020)

Higher Education has come a long way.....

2007 -2010

2011 -2020

1. In 2007, Ministry launched PSPTN strategic policy that contains overview on strategies to drive institutions of higher learning in the country towards achieving world-class status by 2020.

2. This document outlined seven (7) strategic thrusts such as follows:
   - **i. Widening of access and increasing equity**
   - **ii. Improving the quality of teaching and learning**
   - **iii. Enhancing research and innovation**
   - **iv. Strengthening of higher education institutions**
   - **v. Intensifying internationalisation**
   - **vi. Enculturation of lifelong learning**
   - **vii. Reinforcing delivery systems of the Ministry**

Achievements of PSPTN

Private education

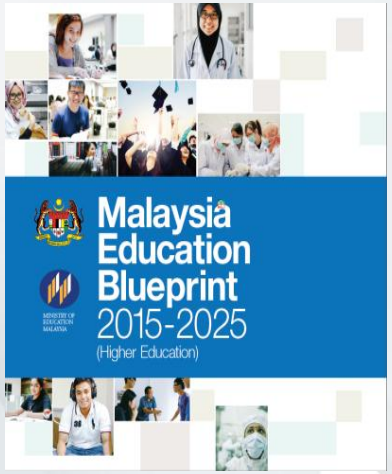
Branch campuses in Malaysia

Mobility of students

Mobility of staff

Breakthroughs in Technology

Research Universities



To provide the best education for Malaysia's future generation, the Malaysia Higher Education system *must evolve*, both *in response to global trends* as well as *in preparation for further disruptions*.

Both public and private higher education need to harmonize and work together towards nation building

CHALLENGE: RE-DESIGN HIGHER EDUCATION

MALAYSIANS DESERVE
THE BEST EDUCATION SYSTEM
THE COUNTRY CAN OFFER

YB Dato' Seri Idris Jusoh
Minister of Higher Education

MEETING THE CHALLENGE

Re-design the Malaysian education landscape to prepare for Malaysia's future generation by DESIGN and no longer by CHANCE

Before we re-design, ask what kind of future generation do we want?

- We want to create learned, values-based talent (that is entrepreneurial, knowledgeable, balanced) yet relevant to meet 21st century challenges.
- Balanced between character and knowledge.
- We believe that education is about humanising the student.
- We want our education system to move from the word human capital to human being (talent).
- In short we want to bring back soul to the Malaysian education system

The Blueprint must address all the challenges and concerns identified by stakeholders

PRELIMINARY

We are responsible to the quadruple helix

Challenges and concerns

Shifts that address challenges and concerns

Innovation Ecosystem: PPRN, AIN, CREST

Holistic, Entrepreneurial & Balanced Graduates: Mata Pelajaran Umum, YSS, Entrepreneurial and experiential education

Empowered Governance

Holistic, Entrepreneurial & Balanced Graduates

Minimal focus on unity and values

Graduates lack communication skills

Graduates lack 21st Century Skills

HLIs lack autonomy

Insufficient R&D outputs

Challenges facing higher education

Lack of access to Higher Education, insufficient support for EFA and ESD (Education for All and Education for Sustainable Development)

Poor performance on rankings

Lack of industry-academia collaboration

Lack of financial sustainability

Low return on investment

Higher Learning Talent Excellence, Innovation Eco-system, Global Prominence

Quality TVET Graduates, Innovation Ecosystem

Financial Sustainability

Globalised Online Learning, Nation of Life-long Learners

END GAME FOR MALAYSIAN HIGHER EDUCATION

How can we achieve this??

RESPECTED

REFERRED

RELEVANT

THERE IS A NEED TO FOCUS ON HIGHER EDUCATION.

New Ministry for higher education since July, 2015

VISION

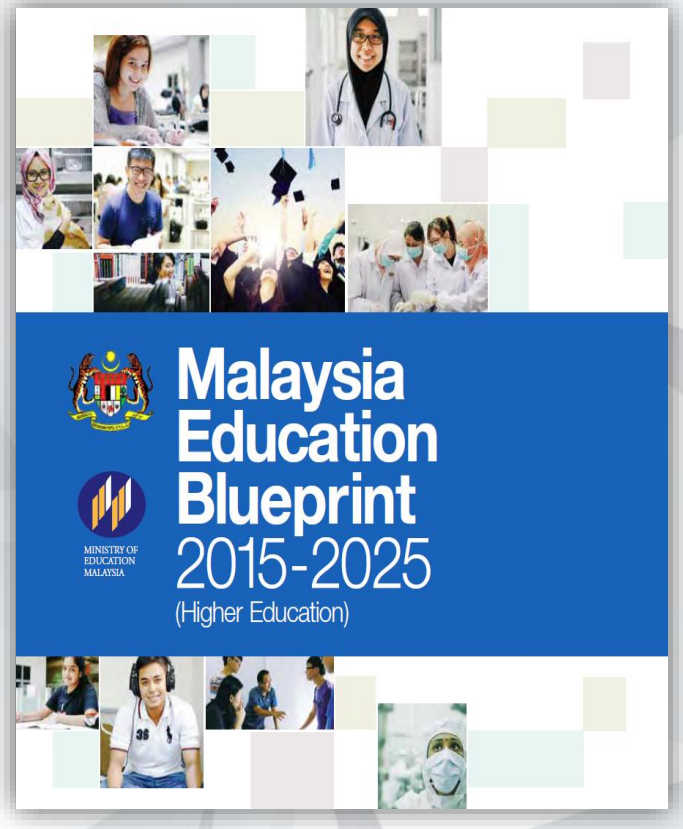
Malaysia as an International Higher Education Hub by 2020

RE-DESIGN HIGHER EDUCATION FOR A SUSTAINABLE TOMORROW

Learn
Un-Learn
Re-Learn
Co- Learn

SEAMLESS...

From Pre-school to Tertiary Education



Launched in April, 2015

MALAYSIA EDUCATION BLUEPRINT 2015-2025 (HIGHER EDUCATION)

SOARING UPWARDS
MALAYSIAN HIGHER EDUCATION

The Malaysia Education Blueprint 2015-2025 (Higher Education) will be centered on 10 Shifts

Started work in March 2013

Launched by PM on 7 April 2015

All Malaysians

- 14 chapter writing teams
- 20 lead authors
- 42 writing team members

10 SHIFTS TO SUPPORT THE ATTAINMENT OF SYSTEM AND STUDENT ASPIRATION

COMPARING MALAYSIA EDUCATION BLUEPRINT (HIGHER EDUCATION (2015-2025) AND PSPTN

10
Shifts

CURRENT BLUEPRINT

- **Shift 1:** Holistic Entrepreneurial and Balanced Graduates
- **Shift 2**: Higher Learning Talent Excellence
- **Shift 3**: Nation of Lifelong Learners
- **Shift 4**: Quality TVET Graduates
- **Shift 5**: Financial Sustainability
- **Shift 6**: Empowered Governance
- **Shift 7**: Innovation Ecosystem
- **Shift 8**: Global Prominence
- **Shift 9**: Globalised Online Learning
- **Shift 10**: Transformed Higher Education Delivery

PSPTN

Widening of access and increasing equity

Improving the quality of teaching and learning

Enculturation of lifelong learning

- **Enhancing research and innovation**
- **Intensifying internationalisation**

Reinforcing delivery systems of the Ministry

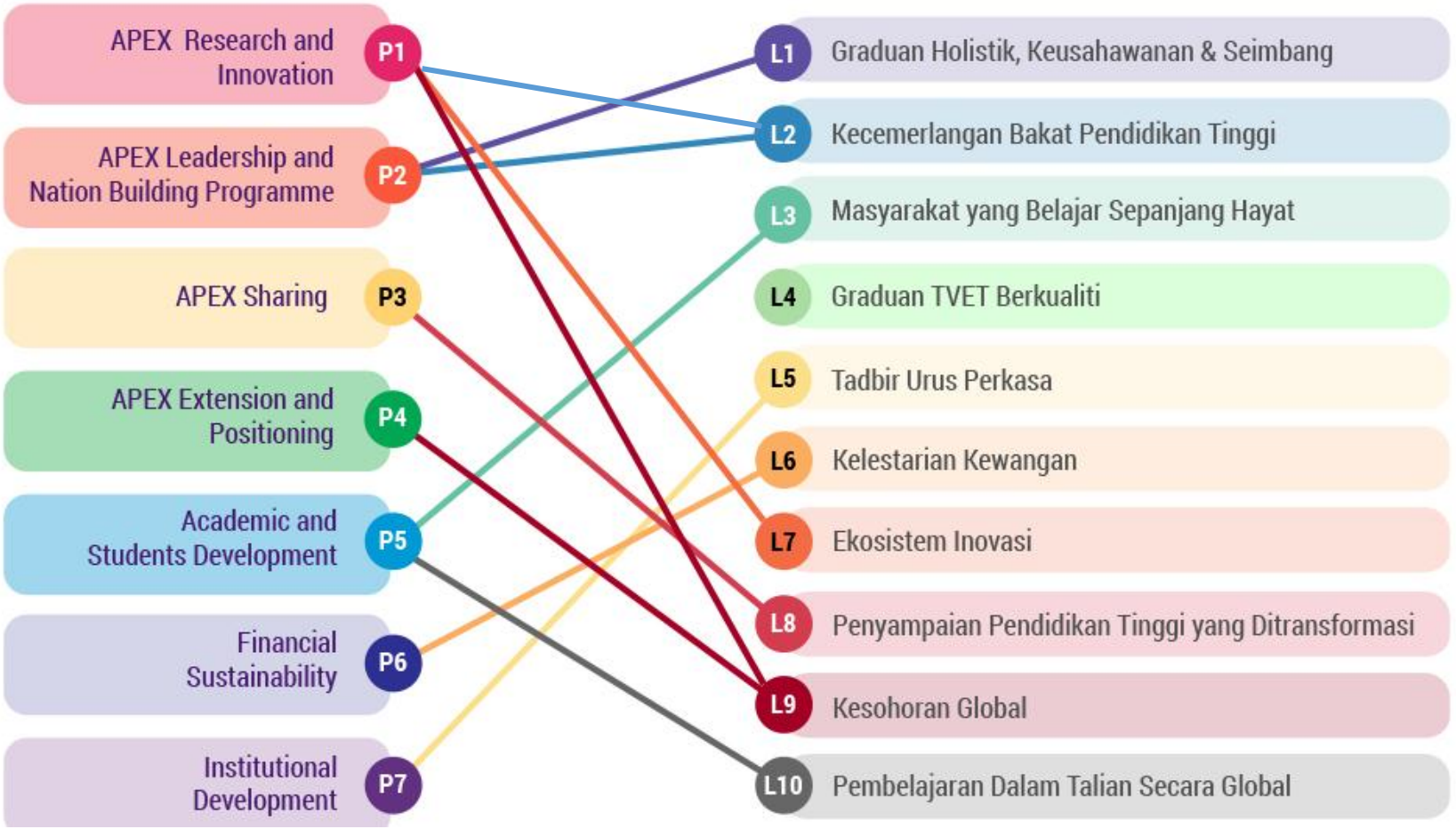
APEX

Mentransformasi Pengajian Tinggi
untuk Kelestarian Hari Esok

PELAN PEMBANGUNAN PENDIDIKAN MALAYSIA

Pelan Pembangunan Pendidikan Malaysia 2015-2025 (Pendidikan Tinggi)

Transformasi Pendidikan Tinggi
untuk Kecemerlangan



www.usm.my

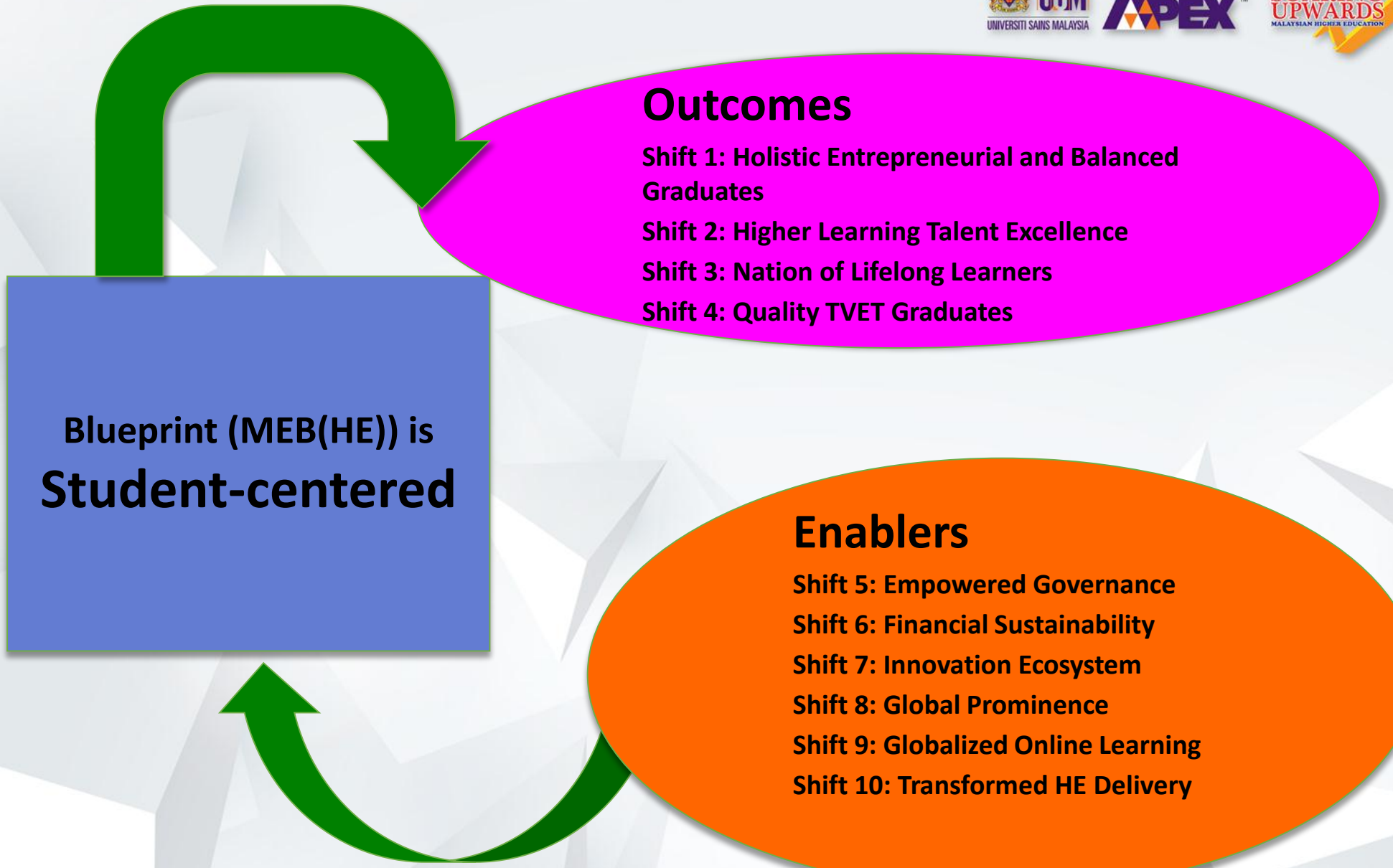
SUMMARY
PPPM (PT) INITIATIVES : APEX PROGRAMS

53.5%
in-line with PPPM (PT)

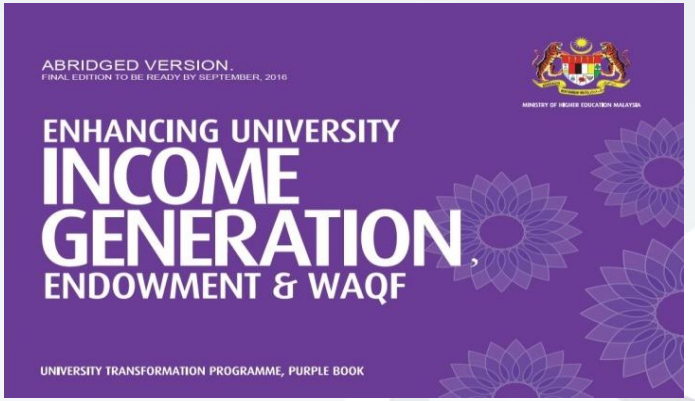
21.1%
need to be Re-defined

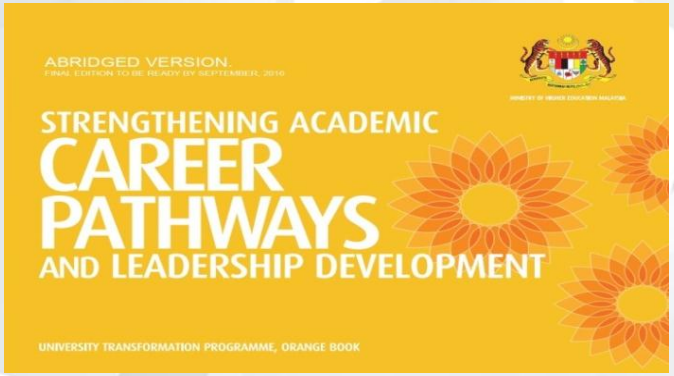
25.4%
out of scope

1.4 %	DONE
35.2 %	ABOVE 75%
16.9 %	50 % - 75%
21.1 %	NEW INITIATIVE (25% - 50%)
25.4 %	LESS 25% (OUT OF SCOPE)

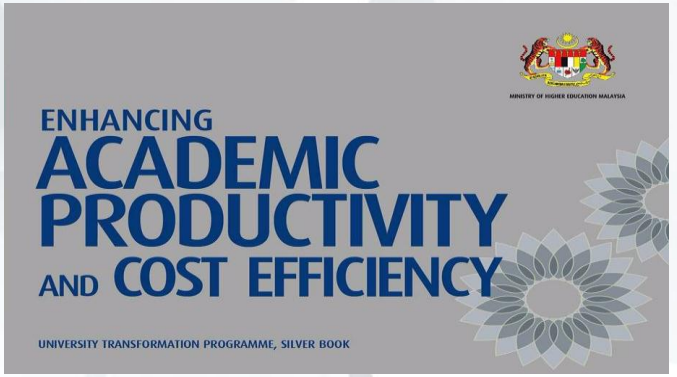

Outcomes
Shift 1: Holistic Entrepreneurial and Balanced Graduates
Shift 2: Higher Learning Talent Excellence
Shift 3: Nation of Lifelong Learners
Shift 4: Quality TVET Graduates
Blueprint (MEB(HE)) is
Student-centered
Enablers
Shift 5: Empowered Governance
Shift 6: Financial Sustainability
Shift 7: Innovation Ecosystem
Shift 8: Global Prominence
Shift 9: Globalized Online Learning
Shift 10: Transformed HE Delivery

PLAYBOOKS





UniTP
University Transformation Programme



SHIFT 1
Moving Holistic, Entrepreneurial And Balanced Graduates

SHIFT 1

1 2 3 4 5 6 7 8 9 10

Creation of Learned values-driven talent

HOLISTIC, ENTREPRENEURIAL AND BALANCED GRADUATES

Integrated CGPA

- Assessment of all the 8 domains of learnings in the form of spiderweb
- Transcript that indicated the outcome of all the 8 domains of learning.

Entrepreneurial Mindset

- **Embedded in the curriculum/stand alone.**
- **Both for UG and PG**

Experiential Learning/service learning

- Alternate periods of academic study with periods of work experience (2U+2I)

CEO Faculty Programme

Job Seeker → Job Creator

Future Students

SOARING UPWARDS
MALAYSIAN HIGHER EDUCATION

VALUES DRIVEN

LEARNED

MULTI DISICPLINARY

ENTREPRENEURIAL

MULTI LINGUAL

JOB CREATORS

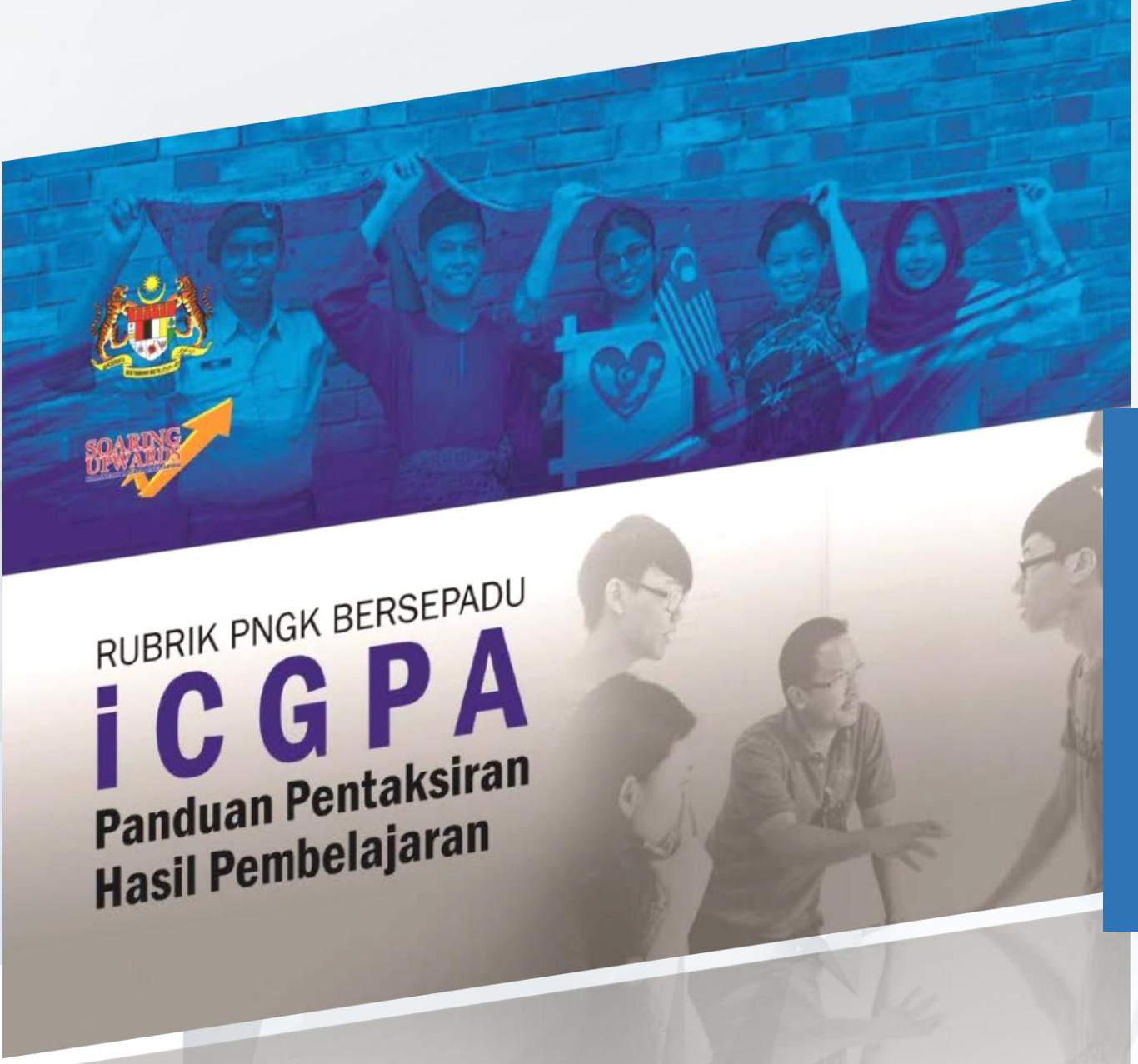
HOW do you measure the values and the intangibles like leadership, entrepreneurial, communication skills, social skills etc

Balanced between knowledge and character

iCGPA

Holistic Graduates: Integrated Cumulative Grade Point Average Transcript: academic CGPA and iCGPA

Measures academic and intangibles



USM has MyCSD
Need to align to iCGPA
To date 111,573 involved

RUBRIK PNGK BERSEPADU

iCGPA

Panduan Pentaksiran Hasil Pembelajaran

Future Students

LEARNED, VALUES DRIVEN

MULTI DISICPLINARY

MULTI LINGUAL

INDUSTRY RELEVANT

ENTREPRENEURIAL

JOB CREATORS

INDUSTRY-RELEVANT

2U2i

3U1i

APEL–c

CEO Faculty

Enhance relevancy and employability

2U2i

UPM
UNIVERSITI PUTRA MALAYSIA
BERILMU BERBAKTI

YEAR 1 & 2
UNIVERSITY

YEAR 3 & 4
INDUSTRY (AGRICULTURE)

UNIVERSITI MALAYSIA KELANTAN

YEAR 1 & 2
UNIVERSITY

YEAR 3
INDUSTRY

YEAR 4
START-UP BUSINESS

CEO @ FACULTY PROGRAM

Enhance academia-Industry relationship

CEOs to teach students about they each made it to the top corporate ladder.. for free (30 hrs)
64 CEOs selected

Future Students

VALUES DRIVEN

MULTI DISICPLINARY

MULTI LINGUAL

LEARNED

ENTREPRENEURIAL

JOB CREATORS

Entrepreneurial mindset

Entrepreneurial

- Pelan Tindakan Keusahawanan IPT 2016-2020 (UG and PG)

"Entrepreneurial Action Plan for IHLs 2016-2020 (UG and PG)"

Enhance relevancy and employability

Pengukuhan ekosistem keusahawanan

Peningkatan kompetensi kumpulan *enablers*

Pemantapan hubungan akademia - industri

MEMBANGUN GRADUAN BERCIRI KEUSAHAWANAN UNGGUL

STRATEGI A :
MEMBANGUNKAN KURIKULUM HOLISTIK DAN BERSEPADU

STRATEGI B :
MENGUKUHKAN SISTEM SOKONGAN PEMBELAJARAN

INISIATIF 1

Melaksanakan Amalan Pendidikan Berimpak Tinggi (HIEP) dengan menerapkan elemen keusahawanan merentasi kurikulum dan bidang pengajian.

INISIATIF 2

Melaksanakan rangka kerja penjana pekerjaan *(job creator framework)*

INISIATIF 3

Menambahbaik ekosistem yang menyokong aktiviti keusahawanan pelajar

INISIATIF 4

Memperkukuhkan kompetensi tenaga pengajar/pembimbing keusahawanan

SASARAN

100%
pelajar IPT mendapat pendedahan kepada budaya dan atribut keusahawanan

5%
Pelajar yang bergraduat menjadikan keusahawanan sebagai kerjaya

15%
Pelajar IPT terlibat dengan aktiviti perniagaan semasa dalam pengajian

1500
Tenaga pengajar mempunyai kepakaran keusahawanan

SOARING UPWARDS
MALAYSIAN HIGHER EDUCATION

SOARING UPWARDS
MALAYSIAN HIGHER EDUCATION

Pengukuhan ekosistem keusahawanan

Peningkatan kompetensi kumpulan *enablers*

Pemantapan hubungan akademia - industri

MEMBANGUN GRADUAN BERCIRI KEUSAHAWANAN UNGGUL

STRATEGI A :
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Melaksanakan Amalan Pendidikan Berimpak Tinggi (HIEP) dengan menerapkan elemen keusahawanan merentasi kurikulum dan bidang pengajian.

INISIATIF 2
Melaksanakan rangka kerja penjana pekerjaan *(job creator framework)*

INISIATIF 3
Menambahbaik ekosistem yang

INISIATIF 4
Memperkukuhkan kompetensi tenaga

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Pelajar IPT terlibat dengan aktiviti perniagaan semasa dalam pengajian

1500
Tenaga pengajar mempunyai kepakaran keusahawanan

END GAME:
JOB SEEKERS to JOB CREATORS

Experiential learning and service learning

Volunteerism: YSS

(YAYASAN SUKARELAWAN SISWA / STUDENT VOLUNTEERS FOUNDATION)

Enhancing student participation in volunteerism is a key Ministry goal
Community engagement

Opportunities for proactive learning , on-site projects and study abroad via mobility programms

Reaching Out Towards The 'Bottom Billions'

- *Orang Asli Programmes*
- *Programmes with Orphans*
- *Programmes with Disabled, Elderly Citizens*
- *International Mission with Aid Agencies (eg. MERCY,*
  - *Yayasan Salam)*
  - *Turkey, Aceh, Iran, Bangladesh*
- *Community projects involving cleft lips and palate surgery in rural Malaysia, Riau Indonesia, and Bangladesh*

USM Community engagement

UNIVERSITI SAINS MALAYSIA

APEX™

SOARING UPWARDS
MALAYSIAN HIGHER EDUCATION

GLOBAL ISSUES

FOR COMMUNITY ENGAGEMENT

UNIVERSITI SAINS MALAYSIA

APUCEN
Asia-Pacific University-Community Engagement Network

FIJI ISLAND

- The University of The South Pacific, Fiji Island

CAMBODIA

- Royal University of Law and Economics, Cambodia

PHILIPPINES

- Ateneo De manila University, Philippines
- San Pedro College, Philippines

MALAYSIA

- Universiti Sains Malaysia
- Universiti Putra Malaysia
- Universiti Malaysia Pahang
- Universiti Sultan Zainal Abidin
- Universiti Malaysia Kelantan
- Universiti Pendidian Sultan Idris
- Universiti Malaysia Terengganu
- Universiti Teknologi Malaysia
- Universiti Malaysia Perlis
- Universiti Utara Malaysia
- Universiti Sains Islam Malaysia
- Universiti Tun Hussein Onn Malaysia
- Universiti Malaysia Sabah
- Universiti Malaysia Sarawak
- Universiti Teknologi MARA
- Universiti Teknikal Malaysia Melaka
- Universiti Tenaga Nasional
- Universiti Pertahanan Nasional Malaysia

THAILAND

- Thammasat University, Thailand
- Suratthani Rajabhat University, Thailand
- Walailak University, Thailand
- Mae Fah Luang University, Thailand
- Chiang Mai University, Thailand
- Mahidol University, Thailand

INDIA

- St. Ann's College of Education(Autonomous), Mangalore South India
- Salesian College Sonada/Siliguri, Bengal India

AUSTRALIA

- Australian College of Applied Psychology, Australia
- The University of Queensland, Australia

CHINA

- Hong Kong Institute of Education, China

PAKISTAN

- Abdus Salam School of Mathematical Sciences, Lahore-Pakistan
- University of The Punjab, Pakistan

INDONESIA

- Universitas Brawijaya, Indonesia
- Universitas Pendidikan Indonesia
- State University of Malang, Indonesia
- Lambung Mangkurat University, Indonesia
- Universitas Negeri Medan, Indonesia
- Universitas Negeri Surabaya, Indonesia (UNESA)
- Universitas Islam Negeri Sultan Syarif Kasim Riau, Indonesia
- Universitas Islam Negeri Riau, Indonesia

APUCEN was launched on 13th July, 2011.

19 countries and 86 institutions

Summary of innovations and strategies

VALUES DRIVEN

MULTI DISICPLINARY

MULTI LINGUAL

LEARNED

ENTREPRENEURIAL

JOB CREATORS

Flexible education
MOOCS
On Line Learning
Experiential learning
Volunteerism
Enhance academia-industry
2U2i
3U1i
APEL –c
CEO Faculty
Measure values in education
iCGPA
Internationalization
Transnational Education (branch campuses)
Foreign students
Commonality and collegiality

Balanced between knowledge and character

SOARING UPWARDS
MALAYSIAN HIGHER EDUCATION

TALENT EXCELLENCE

Four Career Pathways

I **Educators**

II **Researchers**

III **Leaders**

IV **Practitioners**

- 4 track career path for retired scholars

10 SHIFT 3

1 2 3 4 5 6 7 8 9 10

Nation of Lifelong Learners

Innovation: We value your experience. Credit transfer on your experience.. APEL-C
No quota on the intake via APEL in the universities

5 7 13 16 18 PSH

Wider adoption of APEL

National credit bank/ system

Increased support/ assistance for LLL

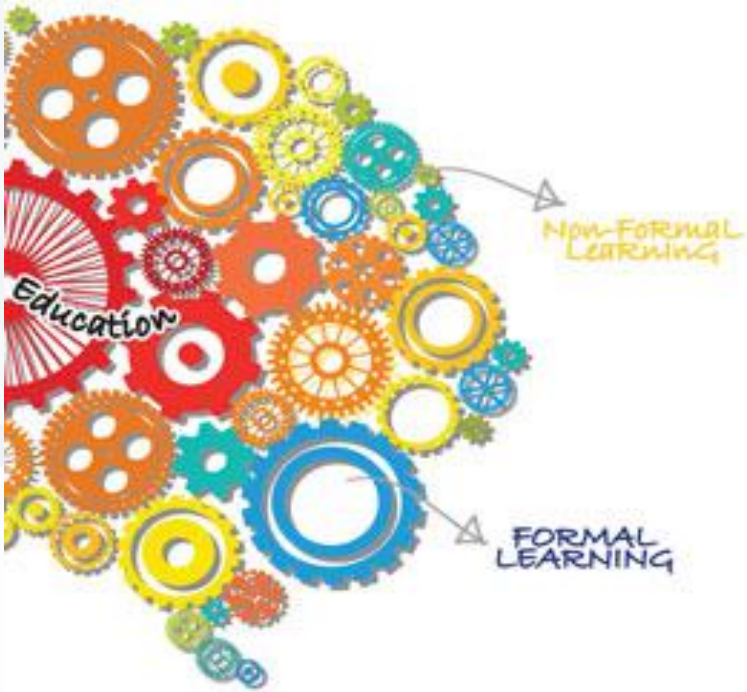
LEARNING NEVER STOPS

APEL

ACCREDITATION OF PRIOR EXPERIENTIAL LEARNING

MQA

GUIDELINES TO GOOD PRACTICES : ACCREDITATION OF PRIOR EXPERIENTIAL LEARNING FOR CREDIT AWARD [APEL (C)]



SHIFT 4: Quality TVET Graduates

1 2 3 **4** 5 6 7 8 9 10

Increase capacity, quality and levels

Industry-led curriculum

New Collaborative Models

Increase enrolment 2.5X

Enrolment 2012 **250K**

Enrolment 2025 **650K**

Malaysian Technical University Network

MTUN

UTHM UTeM Universiti Malaysia PAHANG UMAP

SHIFT 4: Quality TVET Graduates

1 2 3 **4** 5 6 7 8 9 10

Increase capacity, quality and levels

Enrolment 2012 **250K**

Malaysian Technical University Network

MTUN

UTHM UTeM Universiti Malaysia PAHANG UMAP

Industry-led curriculum

New Collaborative Models

Increase enrolment 2.5X

2025 **650K**

TVET is a premier lane in Malaysia. Students can now choose academic lane vs TVET lane

Preparing skills for the High Tech Industry and for a High Income Nation

Shift 5 :
Financial Sustainability

‘Govt to adjust budget if global oil prices stay low’

‘NEW NORMAL’: Finance Ministry to decide if or when it will be revised, says Wahid

KUALA LUMPUR

Minister in the Prime Minister’s Department ***Datuk Seri Abdul Wahid Omar*** *(left) delivering his speech* ***‘Economic Outlook: The Way Forward’*** *at University Technology Malaysia yesterday.*

THE government will make an adjustment to the 2016 Budget if the drop in global crude oil price continues.

“Firstly, we have to establish whether this (the price) is a ‘new normal’ average for next year. There’s a lot of discussion at the moment. We will get to the matter in January,” said Minister in the Prime Minister’s Department Datuk Seri Abdul Wahid Omar.

“If this is the new normal, then adjustments will have to be made accordingly. But I don’t think the oil price is about the economics — supply demand, cost of production, and geopolitics,” Wahid added.

He, however, said it was up to the Finance Ministry to determine if or when the budget was to be revised.

The Brent crude oil is hovering at US$37 (RM160.20) a barrel, while the United States benchmark West Texas Intermediate is moving at US$35 a barrel.

Wahid said he believed that the price of oil would not be at such a low level for a long period.

“There will come a time when it moves up. The revenue for oil price must be higher than cost of production because if it’s lower than cost production, then some oil fields will have to shut its operations,” he told a press conference after delivering a talk on “Economic Outlook: The Way Forward”, here, yesterday.

On whether Malaysia will be able to meet its target of lowering its fiscal deficit to 3.2 per cent of gross domestic product, Wahid said the average oil price up to September was above the revised crude oil price assumption of US$55 a barrel.

He said Malaysia’s fundamentals remained strong as the country had diversified resources, export markets and income streams from other industries besides oil and gas.

“As the economy continues to grow, I think there are little reasons for people to make unexpected moves. We will continue to embrace proactive policies,” he added.

Wahid said the ringgit was expected to average at 4.20 against US dollar despite the 25-basis point interest rate hike by the US Federal Reserve on Wednesday.

He said the hike in interest rate had been long anticipated in terms of timing and quantum and the increase of 0.25 per cent was within the expectation of most analysts.

“Malaysia’s economic fundamentals are strong. It has a visible level of fiscal discipline and eloquent level of reserves to withstand external economic environment,” he said.

In light of this, he said the country would continue to remain focused on the domestic economy to ensure the country was shielded from global volatility.

On whether Malaysia would adjust its overnight policy rate (OPR) following the US rate hike, Wahid was non-committal and said it was up to Bank Negara Malaysia to adjust the policy rate.

“The OPR, which is at 3.25 per cent, remains accommodative to the economy and supportive for investments,” he said.

- Our public universities are too dependent on the government.
- Subsidy is 95% to 100%
- There is now a need for the public universities to start to become entrepreneurial and generate income up to 30%.
- Govt will still subsidise up to 70%. You cannot teach the students to be entrepreneurial when the lecturers themselves have no idea how to be one.
- Private universities have no subsidy from the government. They learn to be independent and they teach independence to the students as well.

Shift 6 : Empowered Governance

- Playbook : Enhancing University Board Governance and Effectiveness
- Separation of powers between Board of governance, University Top management and Senate
- Management of University Holdings
- 17 Universities have so far been given autonomy

All administrators need to read and understand

SHIFT 7 : Innovation ecosystem

Moving R-D-C and the innovation ecosystem

2007: Initiation of Research Universities project.
Five universities were chosen to spur the nation's research, development, & innovation.

UNIVERSITY OF MALAYA

UNIVERSITI SAINS MALAYSIA

APEX™

UNIVERSITI KEBANGSAAN MALAYSIA
National University of Malaysia

UPM
UNIVERSITI PUTRA MALAYSIA
BERILMU BERBAKTI

UTM
UNIVERSITI TEKNOLOGI MALAYSIA

To be the engine of growth for the nation
Anchor universities to attract the best talent : Local and overseas
To move up in the rankings; 2 univ in Top 100 by 2025

Research Prominence

Universities world-wide with RU status

University	RU Status
Seoul National University	**1995**
National University of Singapore	**1980**
Nanyang Technological University	**1991**
Korea Advanced Institute of Science & Technology	**1971**
Pohang University of Science & Technology	**1986**
Chulalongkorn University	**1962**
Mahidol University	**1999**
Malaysia	**2006**

When did the world start their RUs?

First to achieve

INTERNATIONAL EDUCATION HUBS IN ASIA

HONG KONG

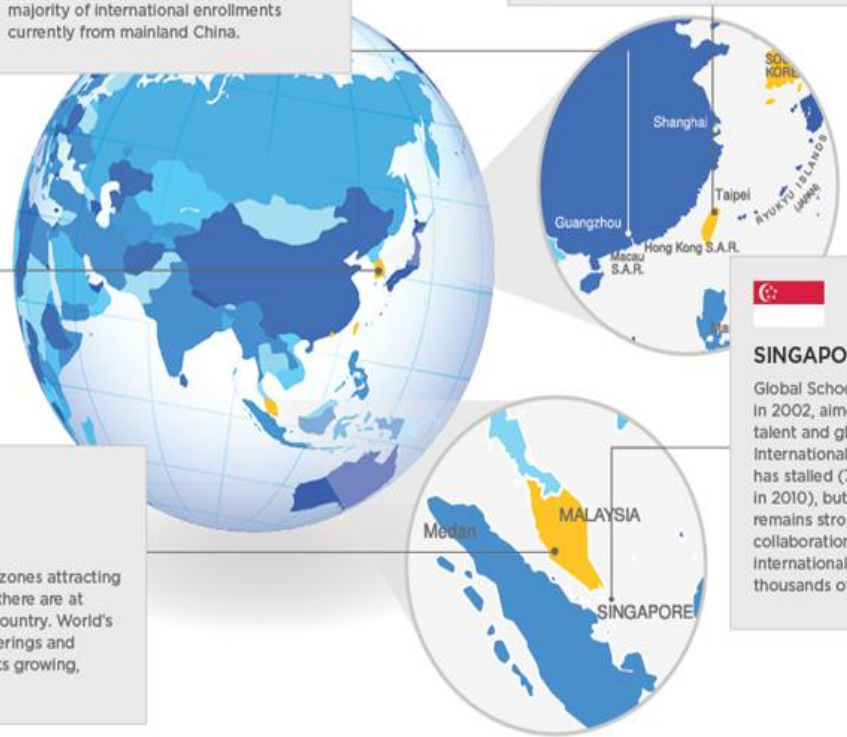
Plans announced in 2008 to develop as regional education hub. Promoting itself as 'gateway' to China, with world-class institutions, English-language instruction and over 1,000 TNE offerings. Vast majority of international enrollments currently from mainland China.

TAIWAN

Plans announced in 2011 to develop nation as a regional education hub. Targeting Chinese speaking students and educators from neighboring SE Asian nations. Strong international enrollment growth, from 58,000 in 2011 to 92,500 in 2014.

SOUTH KOREA

Two new purpose-built education hub projects currently under development. Incheon Global Campus has attracted 4 IBCs in last three years. Jeju Gobal Education City will be focused more on international secondary schools and language learning.



SINGAPORE

Global Schoolhouse initiative launched in 2002, aimed at bringing in global talent and global institutions. International enrollment growth has stalled (75,000 in 2014; 90,000 in 2010), but internationalization remains strong: 11 IBCs, departmental collaborations with prestigious international partner institutions, thousands of TNE offerings.

MALAYSIA

Two purpose-built higher education zones attracting international campuses. In addition, there are at least 7 standalone IBCs around the country. World's biggest market for TNE program offerings and enrollments. International enrollments growing, standing at 90,000 in 2012.

IBC = International Brach Campus
TNE = Transnational Education

World Education Services, 2015
International Education Hubs in Asia, wes.org/kre

WES World Education Services

What's our attraction?

1. **World's biggest market for transnational education**
2. **Anchor Universities (individual universities in the rankings);**
3. **Quality education system in the country yet affordable**
4. **Value for education/education with emphasis on values (4th industrial revolution)**

11 International Universities in Malaysia

SHIFT 8 : Global Prominence

Moving Internationalisation

Creating a conducive environment for students away from home

Malaysia: An International Education Hub

12

- Most preferred Internationa; Education destination (UNESCO)

153,328

- International Students in Malaysia(universities + schools) as of 30 June 2016

RM15.6 billion/year

- Projected Contribution to economy by 2020 (currently RM7.9 billion/ year)

Target : 250,000 by 2025

CHALLENGES TO INCREASE NUMBER OF FOREIGN STUDENTS

CHALLENGES

- Increase enrolment of international students to 160,000 by 2016 and 250,000 by 2025
- Increase number of students participating in mobility programmes
- Strengthening Malaysia's Education brand



Education MALAYSIA

MOBILITY PROGRAMS

373 programs
OUTBOUND MOBILITY

Inbound

1. Korea
2. Indonesia
3. Japan
4. China
5. Thailand
6. Turkey
7. Germany
8. Australia
9. USA
10. Brunei

MOBILITY PROGRAMS 2015

28 COUNTRIES

Credit Transfer

407 programs
INBOUND MOBILITY

Non-credit Transfer

ENHANCING MOBILITY PROGRAMMES: UNLOCKING OF POLICIES

- Passes for mobility programmes are to be applied DIRECTLY to Immigration Department of Malaysia as of Oct 1, 2016
- For less than 3 months, social visit passes will be issued
- For 3-12 months, student pass for mobility (new) will be issued. This will allow for credit transfer to take place.

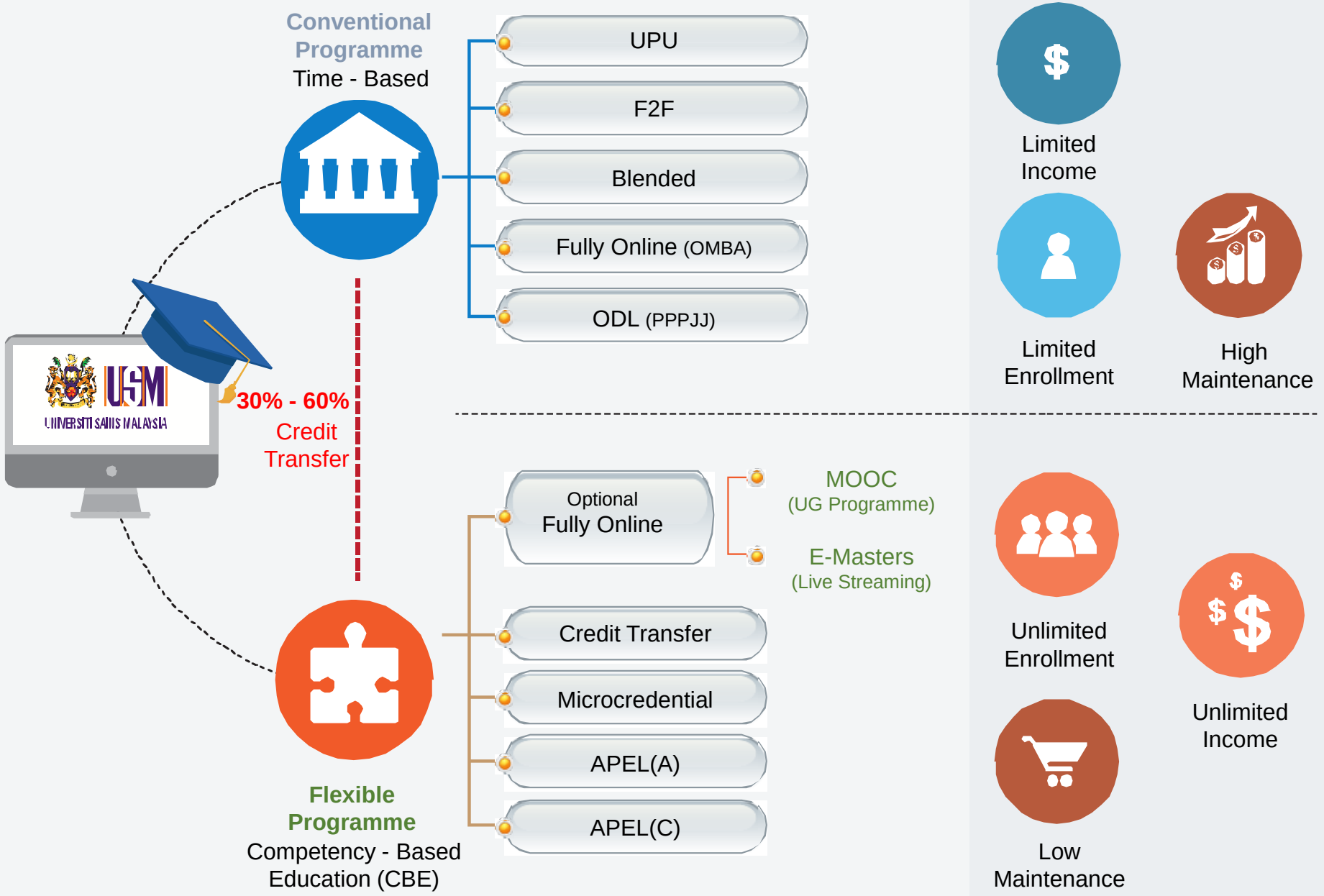
ENHANCING MALAYSIA'S CURRENT PROCEDURES

- International students for degree programmes are allowed to apply for student pass directly to EMGS effective 1 Oct, 2016
- International student pass will be issued for the duration of study as specified by the HLIs
- Employment pass will be extended to international graduates in critical and high technology areas for a period not exceeding 2 years

Shift 9: Globalised online learning:

Rethinking Teaching Redesigning learning

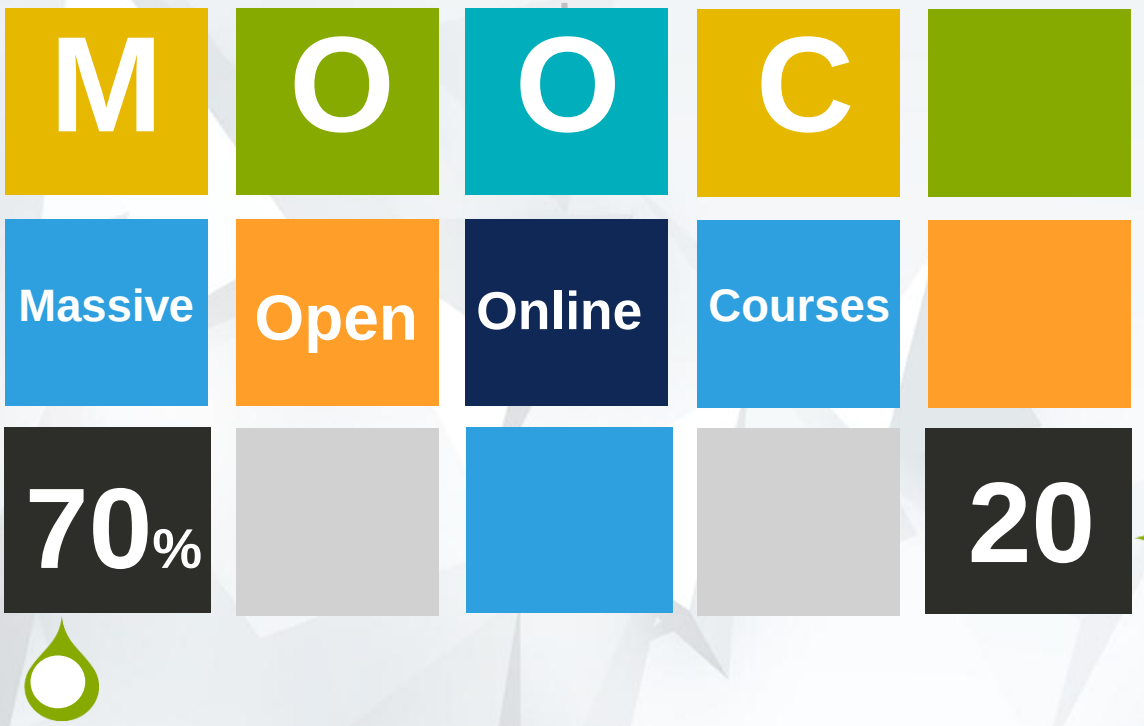
MOVE TOWARDS FLEXIBLE EDUCATION



DELIVERABLES

Globalised Online Learning

To enhance accessibility to Higher Education and promote life long learning



SEP 2014

MOOC@Malaysia was launched.

Four compulsory courses taken by first year students from 20 public universities

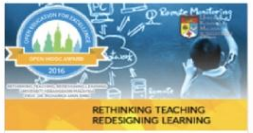
MOOCs in niche areas.

Courses using Blended Learning up to 70%

Globalised Online Learning

Explore over 63 Courses, Learn with 137,946 students

MALAYSIA MOOC
MASSIVE OPEN ONLINE COURSES



Mohamed Amin Embi

Rethinking Teaching; Redesigning Learning

The problem with today's education is that most educators are still teaching the way they were taught in the past....

3,105 Students

MOOC-IIUM

Bahasa Arab Komunikasi

The course provides basic Arabic communication skills with an emphasis on the four main skills namely....

514 Students

On now

Free to learn

FIND OUT MORE

PUTRAMOOC

Tamadun Islam dan Tamadun Asia (TITAS)

Kursus Tamadun Islam dan Tamadun Asia (TITAS) ini memfokus kepada peranan ilmu ketamadunan dalam...

48,530 Students

UITM MOOC

ENGLISH FOR ACADEMIC READING

This course is a review of fundamental reading skills necessary for understanding academic texts at...

698 Students

On now

Free to learn

FIND OUT MORE

UTM MOOC

WEB BASED MULTIMEDIA DEVELOPMENT

Course Synopsis This course is aimed at those students wishing to produce innovative web-based multimedia...

1,031 Students

UTeM MOOC

Mandarin 1

Mandarin 1 is an on-line Mandarin language course designed for learners who do not have prior knowledge in...

1,185 Students

Lahsasna

Introduction to Islamic Finance (Shari'ah)

Introduction to Islamic Finance (Shari'ah) This course focuses on the Islamic financial transactions which...

504 Students

Mushtak Al-Atabi

Kuala Lumpur Global Technopreneurship Challenge

It is widely accepted that entrepreneurial skills and behaviours are among the key survival skills for t...

236 Students

UNIMAS-MOOC

Multimedia Technology and Design

This Multimedia Technology and Design MOOC course is brought to you proudly by the Faculty of Computer...

1,406 Students

Gamification: Fun, Engaging, Communicative

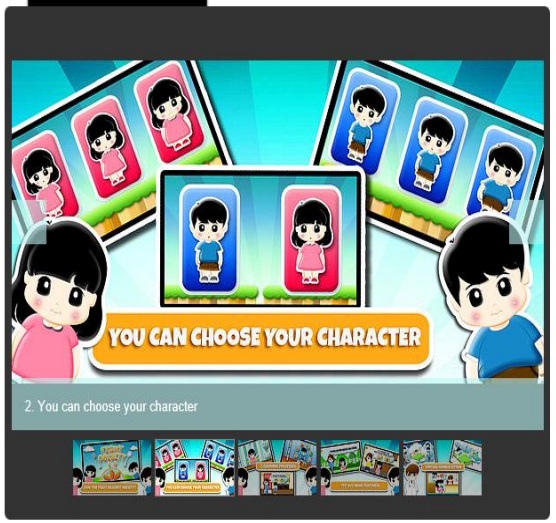
About Fight Obesity 2.0

Fight Obesity 2.0 is the first mobile game that is designed through the cooperation between medical professionals with the game developers for children to understand the concept of obesity.

After playing through three game levels, children will able to differentiate between the normal weight, overweight with obesity, understand the importances of the healthy life style and the consequences which will be caused by the obesity.

If the children fail to complete the game levels, a virtual pediatrician will conduct a consultation with them.

Screenshots

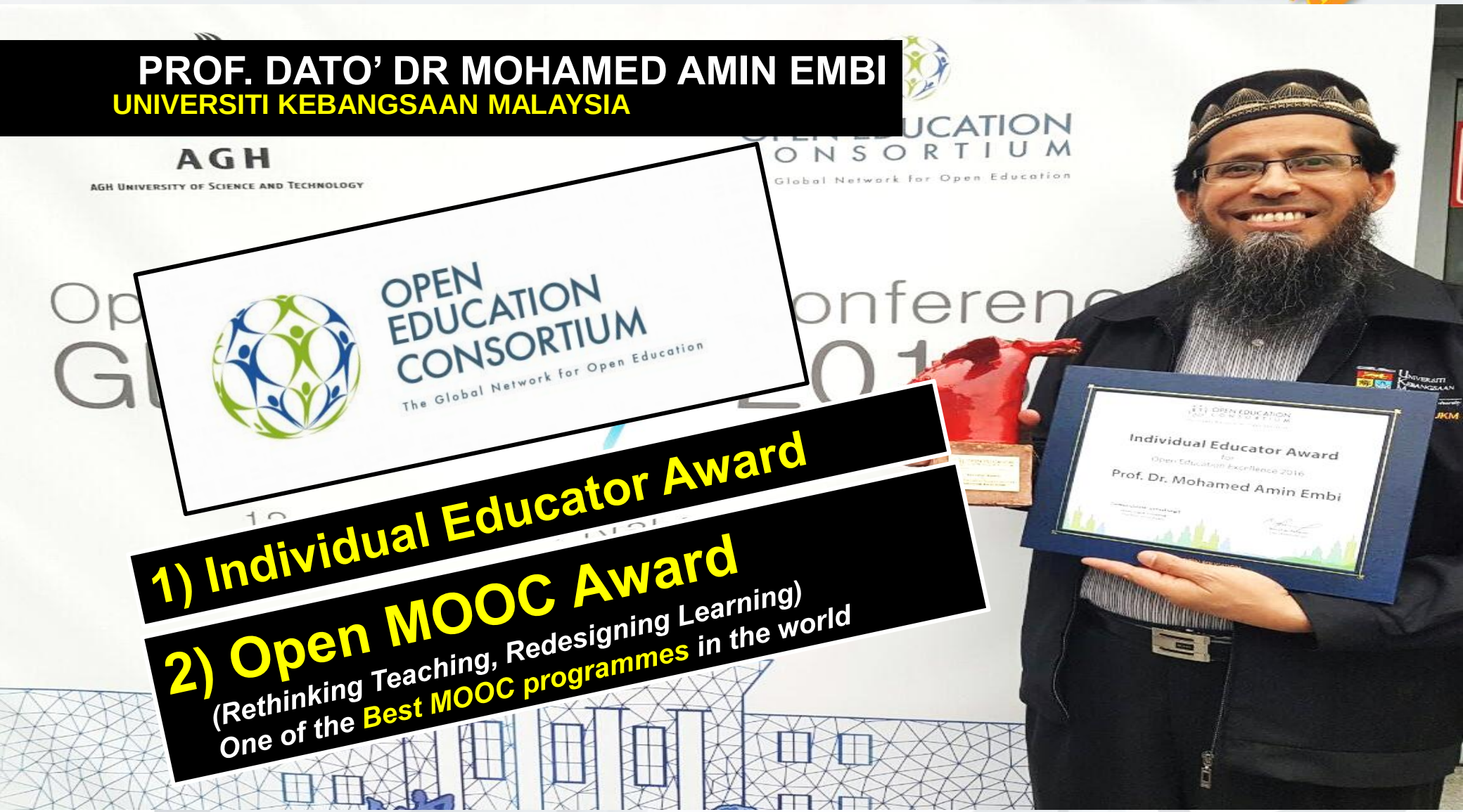


Teaching & Learning: Gamified

Subjects = Video Games

PROF. DATO' DR MOHAMED AMIN EMBI

UNIVERSITI KEBANGSAAN MALAYSIA



1) Individual Educator Award

2) Open MOOC Award

(Rethinking Teaching, Redesigning Learning)
One of the **Best MOOC programmes** in the world

We are building on our

Success Stories

MALAYSIAN HIGHER EDUCATION TODAY

SOARING UPWARDS
MALAYSIAN HIGHER EDUCATION

ASIA RANKINGS

Malaysian universities are making their mark in Asia

In 2016, UM ranked 27th in Asia, marking their third consecutive rise in the rankings, from 29th in 2015 and 32nd in 2014. UPM on the other hand jumped an astounding 17 places from 66th to be ranked 49th in Asia – the first time it cracked Asia's top 50. In total, 10 Malaysian universities are ranked within Asia's top 200, including two private universities, namely Universiti Teknologi Petronas and Taylor's University.

QS UNIVERSITY RANKINGS ASIA 2016

	UNIVERSITY	2015	2016
TOP 50	UNIVERSITI MALAYA	29	↑ 27
TOP 50	UNIVERSITI PUTRA MALAYSIA	66	↑ 49
TOP 100	UNIVERSITI SAINS MALAYSIA	49	↓ 51
TOP 100	UNIVERSITI KEBANGSAAN MALAYSIA	56	↑ 55
TOP 100	UNIVERSITI TEKNOLOGI MALAYSIA	61	↓ 63
	UNIVERSITI TEKNOLOGI PETRONAS	151	↑ 127
	UNIVERSITI UTARA MALAYSIA	191	↑ 137
	INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA	151	= 151
	TAYLOR'S UNIVERSITY	201	↑ 179
	UNIVERSITI TEKNOLOGI MARA	201	↑ 181

Top 50 under 50 years old

***Rising Stars** of the*
Higher Education World

Top 50 universities under 50 years old

QS WORLD UNIVERSITY RANKINGS
TOP 50 UNDER 50
2016/2017

UNIVERSITY	RANK
UNIVERSITI PUTRA MALAYSIA	17
UNIVERSITI TEKNOLOGI MALAYSIA	25
UNIVERSITI KEBANGSAAN MALAYSIA	26
UNIVERSITI SAINS MALAYSIA	33

Selling point

Malaysian & International Universities Compared

TOP 100

1 Massachusetts Institute of Technology (MIT)
6 University of Oxford
12 National University of Singapore (NUS)
13 Nanyang Technological University (NTU)
65 Monash University
75 The University of Nottingham

OUR AIM
By 2025:
2 universities in Top 100

TOP 150

133 Universiti Malaya
135 Kyushu University
140 Cardiff University
157 University of Liverpool
168 Newcastle University
175 University of Reading
189 King Fahd University of Petroleum & Minerals
214 Georgetown University
221 Université Paris-Sorbonne (Paris IV)
228 Victoria University of Wellington
249 National University of Ireland, Galway
252 Chulalongkorn University
252 RMIT University

TOP 300

270 Universiti Putra Malaysia
276 Queensland University of Technology (QUT)
288 University of South Australia
288 Universiti Teknologi Malaysia
291 University of Ottawa
296 University of California, Santa Cruz

Top 1% in the world

301-500

302 Universiti Kebangsaan Malaysia
306 Curtin University
313 Indian Institute of Technology Kharagpur (IIT-KGP)
325 Universitas Indonesia
327 Heriot Watt University
330 Universiti Sains Malaysia
363 George Washington University
393 Qatar University
401 Bandung Institute of Technology (ITB)

QS WORLD UNIVERSITY RANKINGS 2016/2017

Achievements

Subject / Faculty:

For the first time in history, three subjects offered by our public universities were ranked in the world's top 50.

TOP 50

SUBJECT	2015	2016
DEVELOPMENT STUDIES	32	30
ENGINEERING (ELECTRICAL & ELECTRONIC)	51-100	37
ENGINEERING (CHEMICAL)	51-100	46

TOP 50 & TOP 100 IN THE WORLD

UNIVERSITY OF MALAYA
The Leader in Research & Innovation

Development Studies - 30th *TOP 50
Engineering - Electrical & Electronic - 37th *TOP 50

Architecture / Built Environment
Computer Science & Information Systems
Education
Engineering - Chemical
Engineering - Mechanical, Aeronautical & Manufacturing
English Language & Literature
Linguistics

UNIVERSITI SAINS MALAYSIA

9 subjects in top 100

Engineering – Chemical – 46th TOP 50

Architecture / Built Environment
Computer Science & Information Systems
Development Studies
Education
Engineering - Electrical & Electronic
Engineering - Mechanical, Aeronautical & Manufacturing
Environmental Sciences
Pharmacy & Pharmacology

UNIVERSITI KEBANGSAAN MALAYSIA
National University of Malaysia

Architecture / Built Environment
Education
Engineering - Chemical
Social Policy & Administration

UTM
UNIVERSITI TEKNOLOGI MALAYSIA

Architecture / Built Environment
Engineering - Chemical
Engineering - Electrical & Electronic

UPM
UNIVERSITI PUTRA MALAYSIA

Agriculture & Forestry

QS WORLD UNIVERSITY RANKINGS® by subject

BY FACULTY RANKINGS

QS WORLD UNIVERSITY RANKINGS by faculty

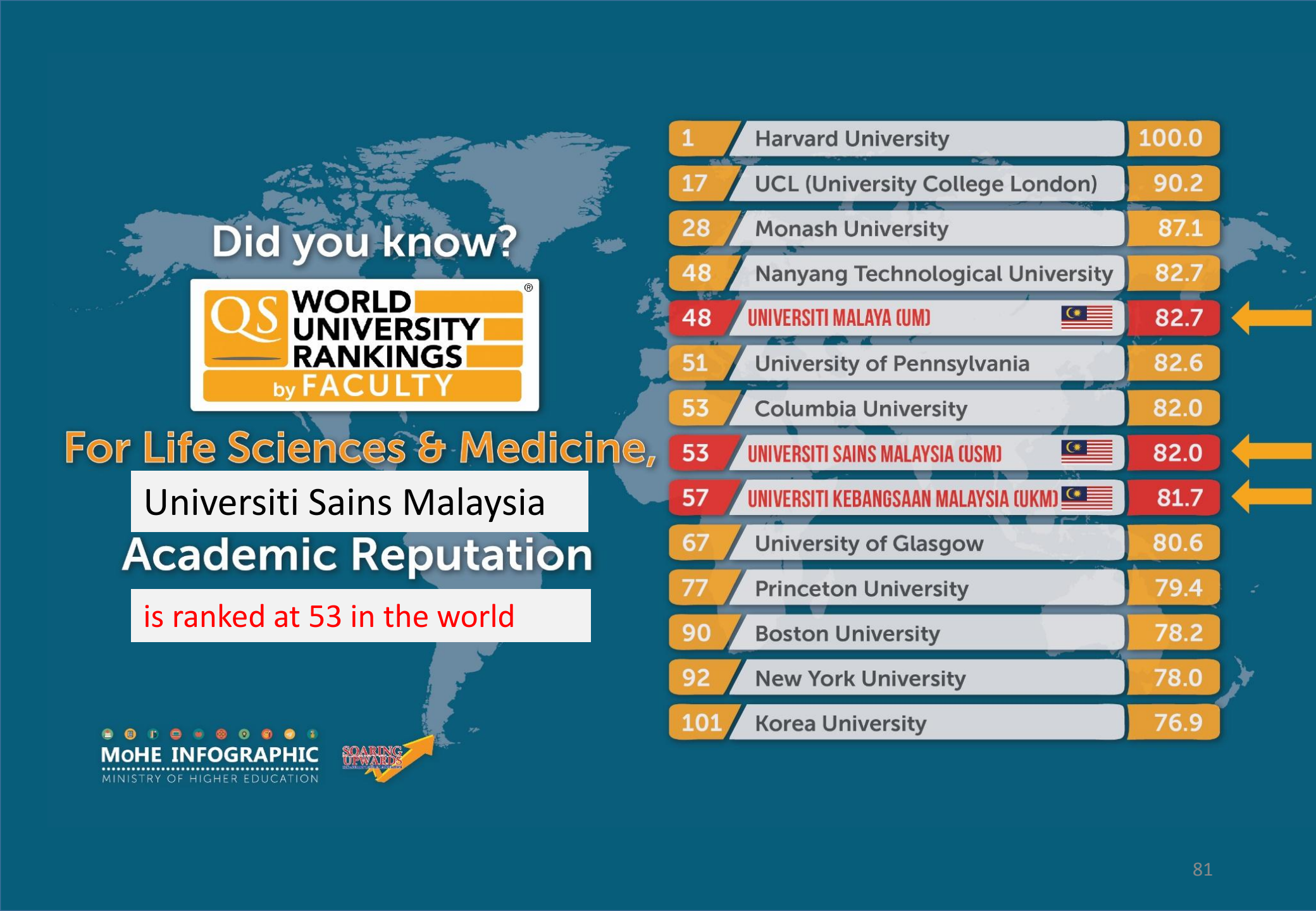
Faculty excellence among the Top 100 in the world

SOCIAL SCIENCES & MANAGEMENT

UNIVERSITY	2014	2015	
UNIVERSITY OF MALAYA	123	69	TOP 100
USM APEX	161	89	TOP 100
UPM	232	152	
Universiti Kebangsaan Malaysia	196	161	
UTM	283	211	
Universiti Teknologi MARA	350	327	

ENGINEERING & TECHNOLOGY

UNIVERSITY	2014	2015	
UNIVERSITY OF MALAYA	83	54	TOP 100
USM APEX	122	85	TOP 100
UTM	134	100	TOP 100
UPM	161	133	
Universiti Kebangsaan Malaysia	186	149	
Universiti Teknologi PETRONAS	335	288	


Did you know?
QS WORLD UNIVERSITY RANKINGS by FACULTY
For Life Sciences & Medicine,
Universiti Sains Malaysia
Academic Reputation
is ranked at 53 in the world
1 Harvard University 100.0
17 UCL (University College London) 90.2
28 Monash University 87.1
48 Nanyang Technological University 82.7
48 UNIVERSITI MALAYA (UM) 82.7
51 University of Pennsylvania 82.6
53 Columbia University 82.0
53 UNIVERSITI SAINS MALAYSIA (USM) 82.0
57 UNIVERSITI KEBANGSAAN MALAYSIA (UKM) 81.7
67 University of Glasgow 80.6
77 Princeton University 79.4
90 Boston University 78.2
92 New York University 78.0
101 Korea University 76.9
MoHE INFOGRAPHIC
MINISTRY OF HIGHER EDUCATION
SOARING UPWARDS

Malaysia's Research Landscape
Growth in Research Outputs – last 10 years

THOMSON REUTERS

Outstanding Research ACHIEVEMENTS

32

Top Research Scientist Malaysia by ASM (2010 – 2016)

10

Rising Star (2015 – 2016)

3

The Most Cited Researchers Shanghai Academic Ranking of World Universities (ARWU) - (2016)

3

The World's Most Influential Scientific Minds (2014 – 2015)

total 48

THOMSON REUTERS

MALAYSIA'S RISING STARS

Data update : 8 December 2016

Excellence in Research

Malaysia's Rising Stars Award

Lecturers & Research

CONGRATULATIONS

TOP 1% MOST GLOBALLY CITED RESEARCHERS

14 MALAYSIAN ACADEMICIANS BY THOMSON REUTERS

7 out of 14 from USM

THOMSON REUTERS

THOMSON REUTERS

THE WORLD'S MOST INFLUENTIAL SCIENTIFIC MINDS

2014

Professor Dr. Abdul Latif Ahmad
Chemical Engineering

USM Universiti Sains Malaysia
APEX

Professor Dr. Saidur Rahman
Engineering

University of Malaya

Professor Dr. Ishak Hashim
School of Mathematical Sciences
Science & Technology

Universiti Kebangsaan Malaysia
The National University of Malaysia

Professor Dr. Bassim H. Hameed
Chemical Engineering

USM Universiti Sains Malaysia
APEX

2015

Professor Dr. Wan Ramli
Engineering

Universiti Kebangsaan Malaysia
The National University of Malaysia

Professor Dr. Bassim H. Hameed
Chemical Engineering

USM Universiti Sains Malaysia
APEX

Professor Dr. Siti Kartom Kamarudin
Engineering

Universiti Kebangsaan Malaysia
The National University of Malaysia

2016

www.usm.my

NEW SUNDAY TIMES

LEARNING CURVE

USM, UTM scholars among most cited

MAJOR RECOGNITION: Success attributed to dedicated groups, world-class facilities

O.C. YEOH
ocyeoh@mst.com.my

Malaysia's most-cited research scholars (clockwise from top left) **Professor Dr Bassim H. Hameed, Professor Dr Hanafi Ismail, Professor Dr Lee Keat Teong** and **Professor Dr Ahmad Fauzi Ismail.**

FOUR academicians from two local universities have been listed among the Most Cited Researchers in the latest Shanghai Academic Ranking of World Universities 2016 by Subjects.

Representing various fields of engineering, three of these top researchers hail from Universiti Sains Malaysia (USM), while the fourth is from Universiti Teknologi Malaysia (UTM).

USM's most cited researchers are Professor Dr Bassim H. Hameed and Professor Dr Lee Keat Teong from the USM School of Chemical Engineering, and Professor Dr Hanafi Ismail from the USM School of Materials and Mineral Resources Engineering.

UTM's deputy Vice-Chancellor (Research and Innovation) Professor Dr Ahmad Fauzi Ismail was also listed as one of the Most Cited Researchers for Chemical Engineering.

Bassim was cited as being top in the field of Chemical Engineering and Environmental Science and Engineering, Hanafi is in the field of Chemical Engineering and Lee in the field of Energy Science and Engineering.

Bassim said he was both proud and honoured to have been recognised for his research work in Chemical Engineering and Environmental Science and Engineering by the Shanghai Jiao Tong Academic World University Rankings.

Before this, he was listed by Thomson Reuters as among the World's Most Influential Scientific Minds and also the Highly Cited Researcher for 2015 and 2014 in the field of Engineering.

"I wish to express my sincere appreciation to the Ministry of Higher Education (MOHE), Ministry of Science, Technology & Innovation (MOSTI) and USM for granting me funds to make my research possible," said Bassim, who hails from Iraq.

"I also want to acknowledge the excellent works and contributions of my Postdoctoral Fellows, postgraduate students, researchers, international collaborators and the members of my Reaction Engineering & Adsorption (READ) research group who showed tremendous commitment throughout my 17 years with USM."

Giving his advice to USM's young researchers, Bassim said: "They need to be focused in conducting good research that is relevant to global issues such as environment, energy, climate change, water security etc, and avoid conducting research solely because of their personal interest.

"They should also publish their results in the top ISI-indexed journals in their fields."

Meanwhile, Hanafi said that with the available facilities at the Science and Engineering Research Centre (SERC) on USM's Engineering Campus in Nibong Tebal and the cohort of young lecturers in service there, USM hopes to produce more world-class researchers.

"The young lecturers should always be positive and persevere in their efforts. As in any situation, they need to make teaching in research as their core business and be ready to cooperate with others in their research," he said.

Lee, who is director of the USM Research Creativity and Management Office (RCMO) and director of the USM International Collaborations Office, said that it has always been his objective to share his findings with other researchers in his field around the world, with the hope that it will contribute to the advancement of science within his field of expertise.

Professor Dr Phua Kia Kien

Professor Datuk Dr Omar Osman

"To the young researchers, find a niche that you are passionate about, and work all out to develop yourself to be recognised as an expert in that niche; do not let intermediate stumbling blocks or failures discourage you," he said.

"Continue to persevere and one day you will be duly recognised by your peers."

Professor Dr Phua Kia Kien, director of the USM Institutional Development Division, called this ranking result a great accomplishment for USM as three out of four researchers from Malaysian universities who were listed came from USM.

"This is especially when the annual Academic World University Rankings (ARWU) is considered among the most prestigious in the ranking system for academics and research output," he said, adding that USM's academicians have been producing world-class impactful research that have contributed to the development of the institution and the nation.

"An outstanding achievement in the citations is essential as an acknowledgement of the efforts in research and innovation, leading to academic writings published in various journals and cited by other academicians all over the world," said USM Vice-Chancellor Professor Datuk Dr Omar Osman.

He said that explained the success of the three USM academicians being listed as Most Cited Researchers by ARWU and also in the world rankings as an acknowledgement on the achievements of the scientists and scholars in the country.

Furthermore, it could serve as a guideline as it is conducted by those utilising widely-accepted methodologies and this would be transparent and comprehensive.

"The achievements of USM in relation to the citations in research journals has so far been maintained within the past five years, to be the best in the country and among the best at the international stage," said Omar.

Ahmad Fauzi said it was a great honour to be included among the Most Cited Researchers.

"This achievement is thanks also to the concerted efforts and dedication of everyone in the Advanced Membrane Technology Research Center (AMTEC), including academic staff, students and Post-Doctoral Fellows as well as the technical personnel and our national and international collaborators," he said.

"To me, publication is one of the most impactful media for scientific and applied research outcome communication.

"It is a versatile platform for communicating ideas and scientific findings which can be potentially applied or commercialised for the benefits of communities, industries and wealth creation of countries.

"It also serves as a branding strategy in this borderless world.

"I encourage scientists and researchers to publish their high quality research findings in high impact journals.

"At the same time, state-of-the-art research approaches will ensure the R&D products to be applied or marketed in the right and short time.

"It is also important to complete the research cycle where the research is structured to start from fundamental research and progressively advanced to applied, prototyping, pilot plant, demonstration and, ultimately, commercialisation."

The ARWU International Advisory Board was established in November 2011 to provide its team with global and academic perspectives on the current practice and future projects of ARWU.

It comprises world-renowned scholars, top policy researchers and higher education leaders. The ARWU International Advisory Board Meeting is held every two years.

USM APEX

ACADEMIC RANKING OF WORLD UNIVERSITIES SINCE 2003

THE MOST CITED RESEARCHES SHANGHAI ACADEMIC RANKING OF WORLD UNIVERSITIES (ARWU)

by Elsevier 2016

Prof. Dr. Bassim H. Hameed
Chemical Engineering & Environmental Science

Prof. Dr. Hanafi Ismail
Chemical Engineering

Prof. Dr. Lee Keat Teong
Energy (Science & Engineering)

CONGRATULATIONS

RESEARCHERS	SUBJECTS	INSTITUTION
Hameed, Bassim H	Chemical Eng	USM
	Environmental Sci & Eng	
Ismail, Hanafi	Chemical Eng	USM
Ismail, Ahmad Fauzi	Chemical Eng	UTM
Lee, Keat Teong	Energy Sci & Eng	USM

kami memimpin

SHIFT 10

Transformation of higher education delivery

KPI FOR MINISTRY

- Change must begin with the ministry
- Harmonization between the public and private universities so that together we build the nation

Outcomes

QS BEST STUDENT CITIES

2013/14 & 2015/16

KUALA LUMPUR ONCE AGAIN VOTED THE MOST AFFORDABLE CITY IN THE WORLD FOR STUDENTS

Outcomes

IMPACT OF QUALITY HIGHER EDUCATION TO THE ECONOMY OF THE COUNTRY

WORLD ECONOMIC FORUM GLOBAL COMPETITIVENESS INDEX RANKING 2015/2016

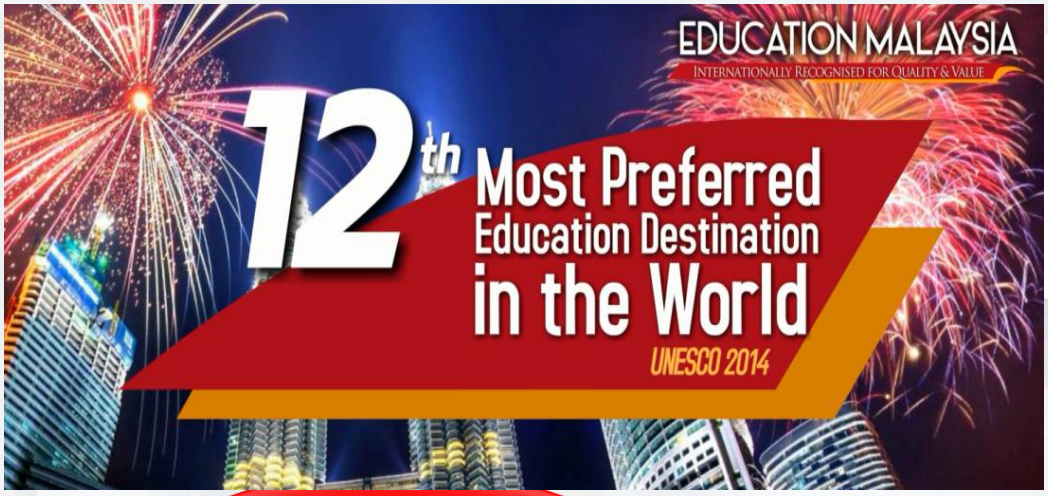
COUNTRY	RANK 2014/2015	RANK 2015/2016
SWITZERLAND	1	1
SINGAPORE	2	2
UNITED STATE	3	3
MALAYSIA	20	18
BELGIUM	18	19
AUSTRALIA	22	21
FRANCE	23	22
SAUDI ARABIA	24	25

MALAYSIA'S IMPROVEMENT FACTORS

1. TECHNOLOGICAL READINESS
2. MACROECONOMIC ENVIRONMENT
3. PRIMARY EDUCATION
4. HIGHER EDUCATION

- ENROLLMENT RATES
- QUALITY OF EDUCATION SYSTEM
- QUALITY OF MATH, SCIENCE & MANAGEMENT EDUCATION
- INTERNET ACCESS
- AVAILABILITY OF SPECIALIZED SERVICES
- STAFF TRAINING

MOVING GLOBAL PROMINENCE



We are on our way to be among the top international hub for education

KAMI MEMIMPIN | WE LEAD

CONCLUSION


APEL
LEARNING NEVER STOPS
ACCREDITATION OF PRIOR EXPERIENTIAL LEARNING
MALAYSIA MOOC
MASSIVE OPEN ONLINE COURSES
UNIVERSITI MALAYSIA KELANTAN
UPM
YEAR 1 & 2
YEAR 3
YEAR 4
YEAR 1 & 2
YEAR 3 & 4
2u2i
Work-based learning degree programmes
@ FACULTY PROGRAMME
REDESIGNING
HIGHER EDUCATION
SOARING UPWARDS
MALAYSIAN HIGHER EDUCATION
RECOGNITION
Modular Stackable
TVET
Technical & Vocational Education & Training
1. Knowledge
2. Practical Skills
3. Social Skills & Responsibility
4. Ethics & Values
5. Communication
6. Problem-solving
7. Information Management
8. Entrepreneurship
iCGPA
Holistic Graduates : Integrated Cumulative Grade Point Average
KUALA LUMPUR
MOST AFFORDABLE CITY
IN THE WORLD FOR STUDENTS
RESEARCH 594%
Growth in Research Output - last 10 years.
THOMSON REUTERS
THE WORLD'S MOST INFLUENTIAL SCIENTIFIC MINDS
2014 - 2016
Cambridge Intervarsity Debate Champion
11 International University Branches in Malaysia
TOP 1% in the World
Malaysian Research Universities
*There are approximately 30,000 universities worldwide
UNIVERSITY OF MALAYA
133rd in the World
2013 2014 2015 2016
167 151 146 133
1 Massachusetts Institute of Technology (MIT)
6 University of Oxford
12 National University of Singapore (NUS)
75 The University of Nottingham
133 Universiti Malaya
135 Kyushu University
140 Cardiff University
214 Georgetown University
252 Chulalongkorn University
252 RMIT University
270 Universiti Putra Malaysia
276 Queensland University of Technology (QUT)
288 University of South Australia
288 Universiti Teknologi Malaysia
291 University of Ottawa
296 University of California, Santa Cruz
302 Universiti Kebangsaan Malaysia
325 Universitas Indonesia
327 Heriot Watt University
330 Universiti Sains Malaysia
363 George Washington University
TOP 100 Subjects in the World
SUBJECT 2015 2016
32 30
51-100 37
51-100 46
TOP 51-100
TOP 50 UNDER 50
UNIVERSITY RANK
UNIVERSITI PUTRA MALAYSIA 17
UNIVERSITI TEKNOLOGI MALAYSIA 25
UNIVERSITI KEBANGSAAN MALAYSIA 26
UNIVERSITI SAINS MALAYSIA 33

Mentransformasikan Pendidikan Tinggi untuk Kelestarian Hari Esok

Transforming Higher Education for a Sustainable Tomorrow

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