

Nurturing Future Muslim Leaders and Nobel Laureates: A Permata Insan Endeavour JPM –KPT- USIM



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On behalf of
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INTRODUCTION

- The Nobel Prize is the ultimate recognition of cultural and/or scientific excellence. It is the most prestigious award available and it is in 6 categories :
 - Chemistry
 - Physics
 - Physiology or Medicine
 - Economic sciences
 - Literature
 - Peace
- The prize is worth USD 1.2 million (RM 4.08 million)

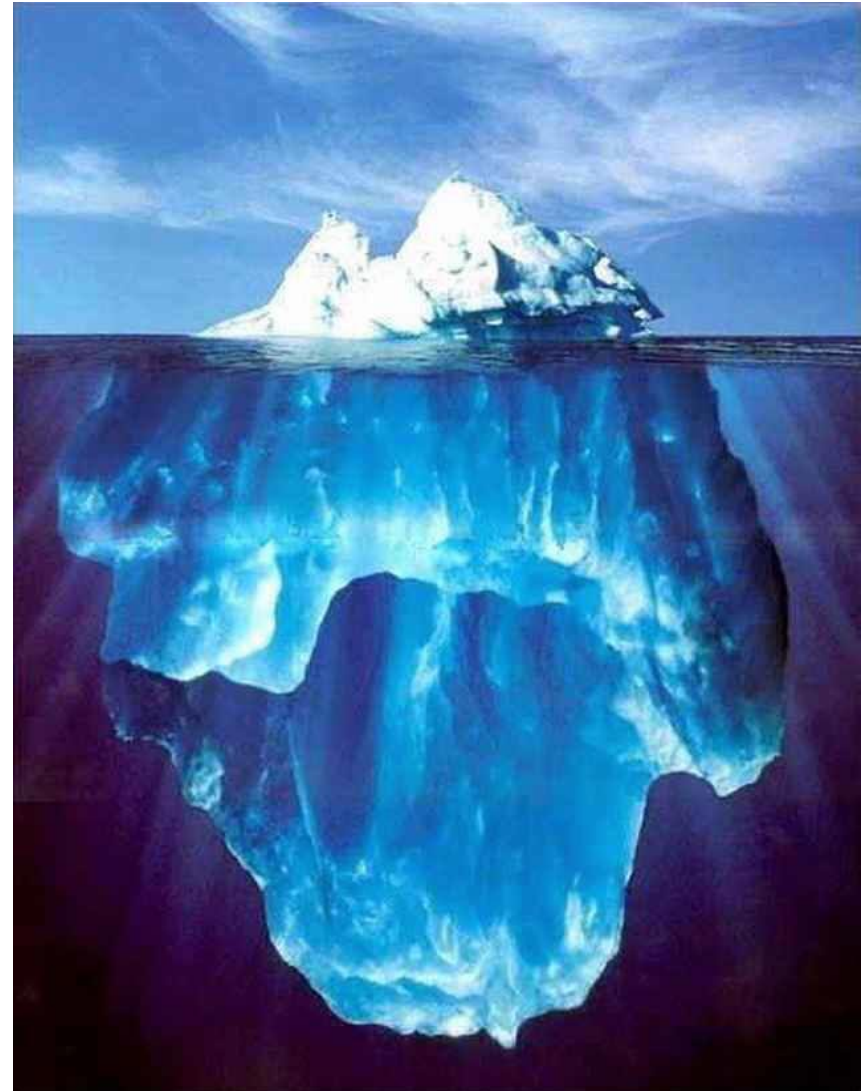


Gerak Pintar Nobel, KPT



INTRODUCTION

- To strive towards excellence in science in the country, Tun Mahathir had challenged the Malaysian scientific community to produce a Nobel Laureate by 2020.
- The challenge is not just about winning the Nobel Prize (tip of the iceberg)
- The movement towards Nobel laureate essentially will impinge on the scientific approach, mindset of Malaysians, educational curriculum, political will and research ecosystems of Malaysia.





To accelerate the economy of a country: Creation of World Class Educational hub

| Sector | Multiplier |
|---------------------------------|-------------|
| Education | 0.94 |
| Retail trade | |
| Accommodation and food services | |
| Dairy cattle | |
| Iron and steel | 0.83 |
| Textile products | |
| Electronics | |
| Air and space transport | 0.77 |
| Petroleum and coal products | 0.47 |

RU's help to brand Malaysia as a WC Educational hub

Having a Nobel Laureate from Malaysia would accelerate the country as a WC educational hub

Best multiplier effect is EDUCATION

Data source: Access Economics, The Australian Education Sector and the economic contribution of International students, report from CPET, April 2009

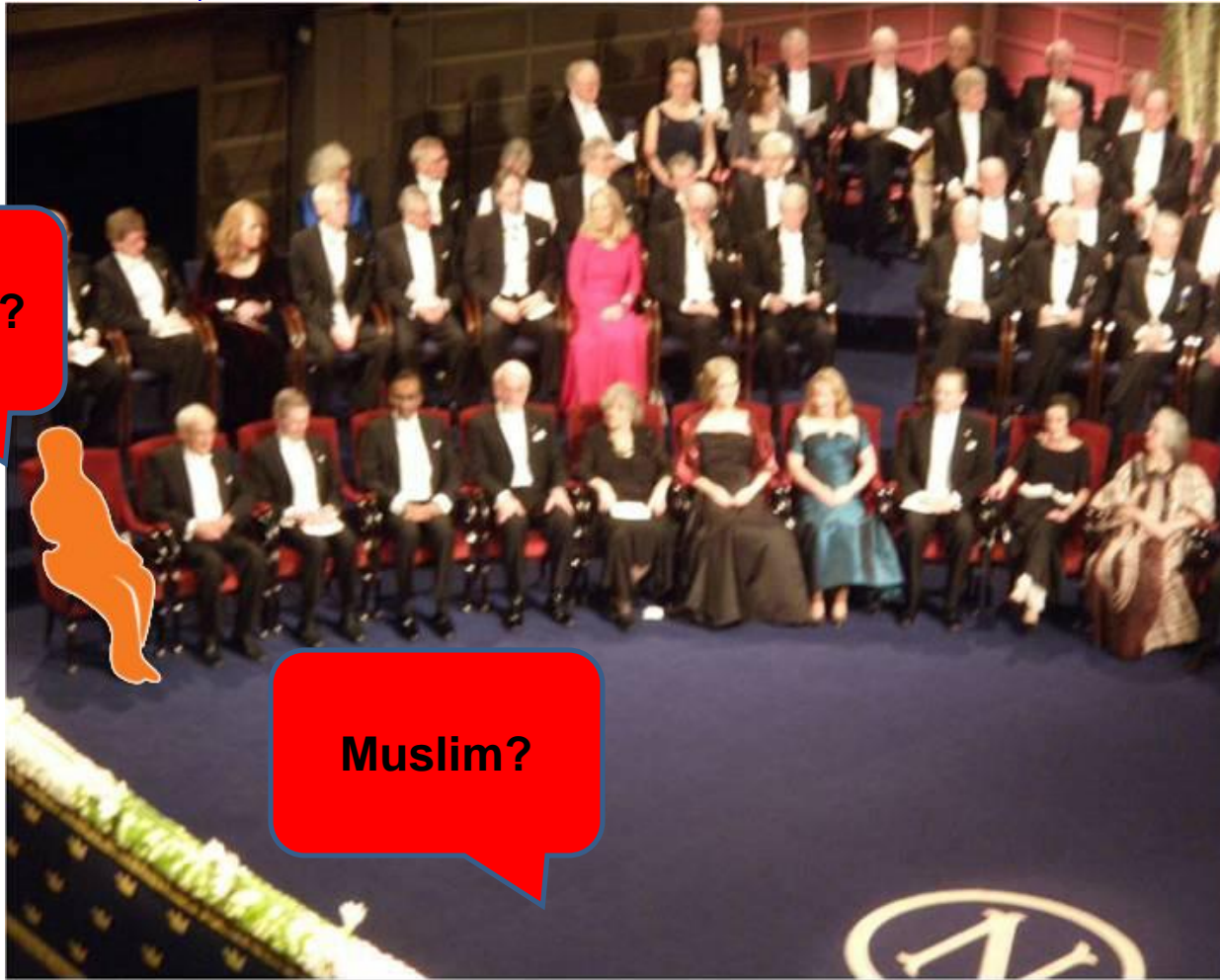


ACCEPTING THE NOBEL CHALLENGE



- In 2011, MOHE as part of its PSPTN agenda of creating a WC educational hub, accepted the Nobel challenge.
- Among its strategies include:
 - Championed fundamental research in the country
 - Formed the Gerak Pintar Nobel Task force as a think tank.
 - Moved towards attaining Nobel laureate by design and not by chance.
 - It was agreed that instead of changing the entire education system, why not start with the RUs to champion the Nobel Endeavour and given RM 100 million in 2013 to start.
 - **Need to identify the gifted as feeder to the RUs**

Nobel Prize Ceremony, Stockholm, Sweden. Dec 10, 2009



Malaysian?

Muslim?



NOBELSTIFTELSEN
The Nobel Foundation

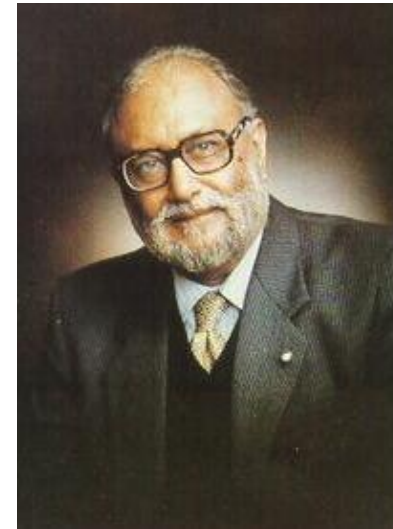
Will Malaysian
research
deliver
a Nobel
Laureate
for Malaysia?

Nobel Laureate winners for Physics, Chemistry, Medicine and/or Physiology,
Literature and Economics, 2009

Problem with current scenario



- 1.57 billion Muslims in the world
- Only 10 Nobel laureates so far; 6 in Peace, 2 in Literature and only 2 Muslim Nobel Laureates in the sciences (1 surviving –Ahmed Zewail)
- 79 Nobel laureates among the Jews with only 13 million population



Abdus Salam
(Pakistan)
1979 Nobel
Prize in
Physics



Ahmed
Zewail
(Egyptian-
American)
1999 Nobel
prize in
Chemistry

Accepting the challenge for Muslim Nobel Laureate : Universiti Sains Islam Malaysia



Pioneering Islamic Science*Spearheading knowledge

USIM's calling to create:

- ***Muslim Nobel Laureates and future Muslim leaders in S&T but with a difference.***
- ***They are future leaders with Al-Abrar personality (Noble) who are innovative and capable of integrating revealed knowledge (Naqli) and human knowledge (Aqli) in their work and daily life.***



Para pelajar PERMATA Insan didedahkan dengan ilmu sains ketika mengikuti pembelajaran di Bengkel Al-Quran dan Astronomi.

Aligning with PERMATA National Projects to find the gifted

- PERMATA National Pioneer Project is driven by the Prime Minister's wife, Her **Excellency Datin Paduka Seri Rosmah Mansor**.
- The projects are based on the concept that every child born should be given the opportunity to get the best start to life.
- PERMATA aims at nurturing the gifted in among Malaysian children

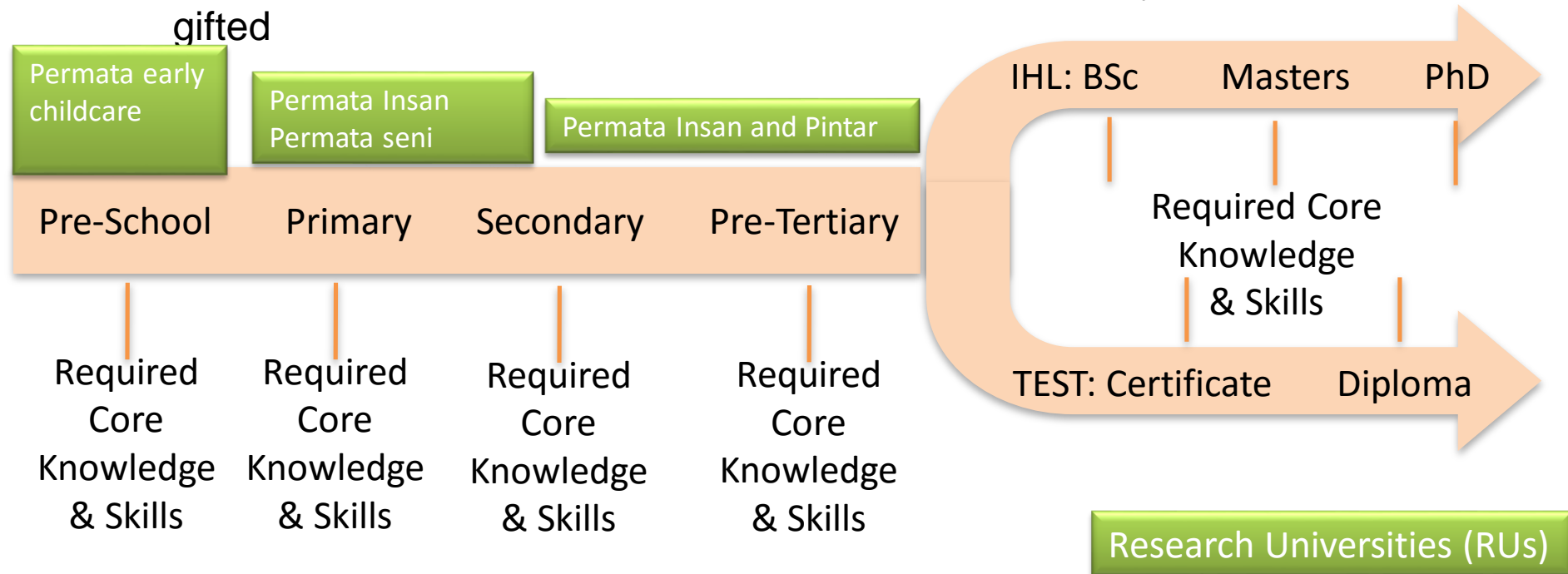
PERMATA National Projects



- **PERMATA Early Child Care and Education** thus came into being and special opportunities will be given to children **below 5 years** of age to experience quality early learning in a well planned and enjoyable environment. It uses the concept of learning through play.
- **PERMATA Seni** is for those gifted in the Arts and performances, ie singing and dancing. The students range from **6 to 15 years** of age. Trained by professionals.
- For the exceptionally gifted children with high IQ (130-150) there is the **PERMATA Pintar programme** (High school: From **Form 4 to Form 5** (O levels and pre-University). Located at UKM.
- **PERMATA Insan programme** – is for the nurturing and development of exceptionally gifted Muslim children with high IQ (130-150 or higher) that is capable of being tomorrows leaders, scientists and researchers and professionals but balanced with the teachings of Quran and Sunnah. **Std 2-6** located at their own schools and from **Form 1-5**, Located at Kolej Permata Insan at USIM.

Seamless Educational Ecosystem

- You cannot turn around the future Nobel laureate within the tertiary education system lifespan.
- There is a need to start early, identify the gifted in order to create a feeder to the RUs
- There is a need to create a seamless educational ecosystem for the gifted



Why “schools within campus concept”?



- This concept is not new.
- Permata Pintar in UKM is in existence. The University adopts the school, designed its curriculum and manages it for the gifted students (Forms 4-5) in the country.
- Via Malaysian Research Universities Network (MRUN), KPT has created networking with the help of the New York Academy of Sciences, to the various Nobel laureate labs in the USA where these students can be placed.

How is the concept different from prestigious schools in existence?



- Why is there a need to build “school within campus” since prestigious schools (eg TKC, MCKK, MRSM, SMS etc) are already in place?
- We visited Raffles Institution, Singapore where only top 3% of Singapore’s best are enrolled from Forms 1 - Upper 6.
- Majority of its graduates enter the best universities in the UK and in the USA yearly.
- Raffles Institution showed an increasing success rate.

How is the concept different from prestigious schools in existence?



- The MOE of Singapore realised that the gifted students need much more than the regular students.
- They want to do research and explore and discuss science subjects further.
- Surrounding Universities do not have the time for proper nurturing of their enquiring minds.
- So Raffles Institution created a **university environment within the school campus** and hired researchers and experts meant especially for the school.
- They brought the **university environment** to the school.
- This concept is lacking with the current prestigious schools in Malaysia.
- Hence the school in campus programme that KPT has agreed for UKM and USIM with the Permata programme.
- The creation of the university environment for the Kolej will also be emphasised in the value management exercise.

Problems with current system



Current system

- Provide scholarships but no specific labs/institute to return to.
- No one/agency to nurture and create career path for the candidates

Strategy to win is bydesign:

1. FIND and IDENTIFY

2. TRAIN and

3. RETAIN

**potential Muslim Nobel Laureate /leader
/technocrats**

FIND the talents



• Establish the Permata Insan Programme

- To identify talent (short term, mid term and long term) from Std 2 to Form 5.
 - Talent scouting at all levels (High school, Tertiary, Post docs) to look for talents with Blue Sky mindset but balanced with Naqli (revealed/wahyu) and Aqli (human).
 - Screen Malaysia's best using the various screening tools devised by UKM and USIM
- Creation of **Muslim Nobel Laureate/Leaders database** (9 to 15 years) to manage the talent and follow through their career path
- To **nurture** Future Muslim Nobel Laureates/leaders with **Al-Abrar (Noble) personality**

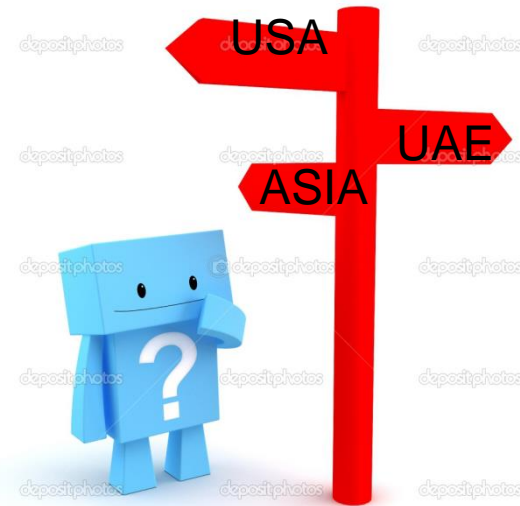


TRAIN the talents



- **Gerak Pintar Nobel (GSIAC connection)**

- Establish connection with Nobel laureate labs via New York Academy of Science (GSIAC connection)
- Establish connection with the best Universities in the middle East (United Arab Universities - 240 universities)
- Establish with the best universities in Asia
- Connect the dots with KPT and Permata Pintar to find the labs that Malaysian researchers should collaborate and expose our talents to Nobel laureate labs or work with potential Nobel laureates
- Establish scholarships and fellowships via KPT and Permata programme for the identified candidates





RETAIN the talents

Suggest establish National Research Institutes (and satellite centers) for science, economics and literature

- Retain talents sent to Nobel laureate labs by placing them in the national Research Institutes to ensure continuity of their research and research careers.
- National Research Institutes are not only for the sciences but for literature and economics as well.
- It is a place where ideas are discussed and churned and cutting edge discoveries are made.
- Create accessibility to these Institutes by having satellite Centers round the country.

Seamless environment

Knowing that we care

A place to return to

Established Islamic Science Institute at USIM (hopefully as a National institute in the near future)

- **To mine, study and initiate the knowledge in the Quran and in the manuscripts**
- **Institute will be the place for them upon their return to practice their knowledge and turn USIM into the global reference center for Islamic Science**

PERMATA Insan Programme



- This program is a collaboration between Universiti Sains Islam Malaysia (USIM) and the Islamic Development Department (JAKIM) to create future dynamic muslim leaders .
- The students are required to be proficient in Arabic and English.
- USIM is the only Islamic Science University in the country that selects the best students from Malaysia's religious schools via USIM's Pre-bridging programme (Tamhidi) and trains them to be individuals that are capable of integrating Aqli and Naqli knowledge at the undergraduate and postgraduate levels



PERMATA Insan Programme




- The Kolej Permata Insan students are required to be proficient in Arabic and English.
- As well as learning the current curriculum the student is also highly skilled in understanding, interpreting, memorizing and applying the Al-Quran and As-Sunnah in his/her daily life.
- With the advent of PERMATA Insan, we will develop a seamless ecosystem from primary to secondary to tertiary education
- The education and learning process will be handled by trained teachers for gifted students, Research fellows , Researchers and University lecturers to help create the conducive learning and research environment for the exceptionally gifted.



How do we
connect Kolej
PERMATA Insan to
USIM

Permata Insan (Std 2-6)

Student enrolment

A collage of three photographs showing students in school uniforms. The top photo shows three boys in blue and white uniforms, one in a yellow shirt. The middle photo shows two girls in pink and white uniforms. The bottom photo shows a group of four students, two girls and two boys, in various uniforms.

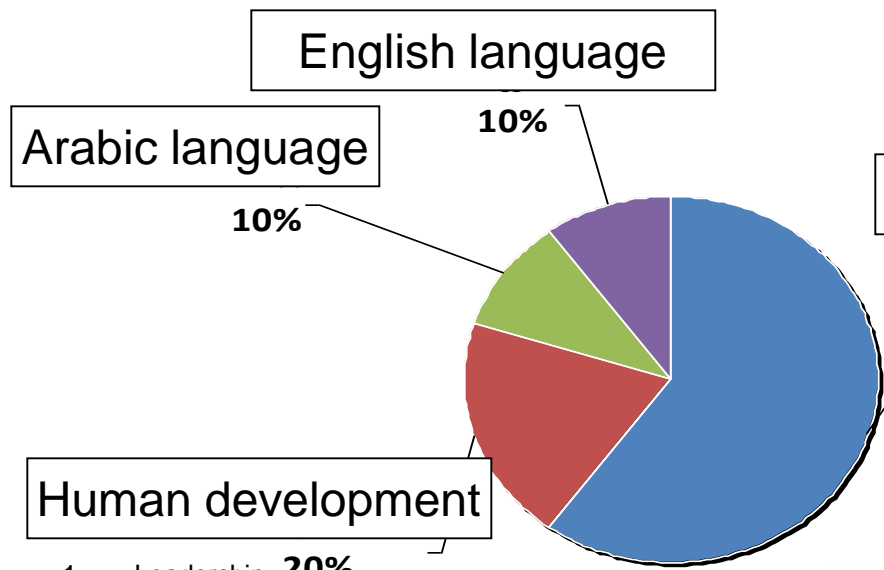
| Year of intake | Males | Females | Total |
|----------------|-------|---------|------------|
| 2010 | 17 | 31 | 48 |
| 2011 | 17 | 15 | 33 |
| 2012 | 17 | 29 | 46 |
| Total | | | 127 |

Permata Insan Primary Education (Std 2-6): Teaching Modules

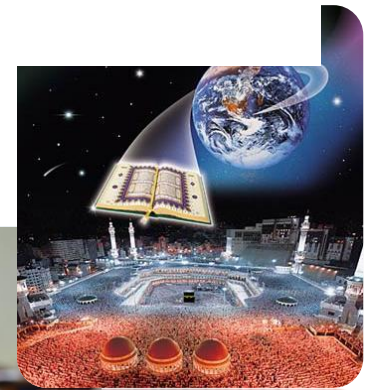


Science and Technology

1. Natural sciences
2. Mathematics
3. Astronomi
4. Human Biology
5. Animal and Plant biology
6. Physics
7. Materials and minerals
8. Technology
9. History of Islamic Science



Quran & Sunnah

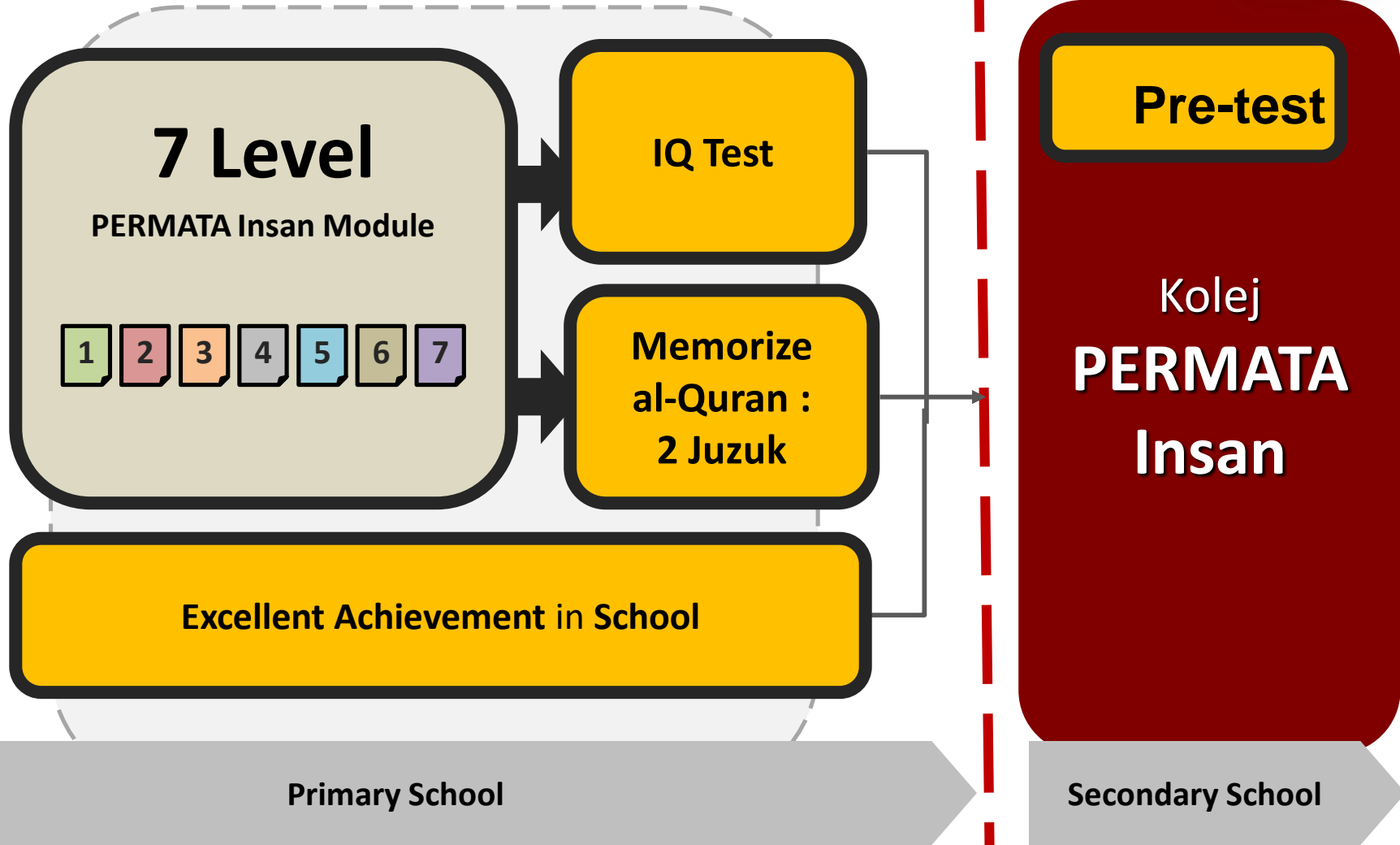


Human development

1. Leadership **20%**
2. Talent and potentials
3. Mental Arithmetic
4. Speed Reading
5. Appreciating Sains dan Teknologi
6. Public speaking
7. Communication skills
8. Social skills
9. ICT



Entry point to Kolej PERMATA Insan



Target & Basis of the Program



Penyebatan **ILMU**

**National
Philosophy of
Education**



**Philosophy of
Islamic
Education**

- 1 - Islamic Science
- 2 - Knowledge
- 3 - Practical & Psychomotor
- 4 - Social responsibility
- 5 - Valuing the Environment
- 6 - Moral Ethics & Professionalism
- 7 - Spirituality
- 8 - Communication
- 9 - Leadership
- 10 - Teamwork

- 11 - Scientific Method,
Critical thinking, Solution Problems
& Autonomy viewed in decision making
- 12 - Information Technology Skills
- 13 - Information Management Skills
- 14 - Globalization skills
- 15 - Entrepreneurial skills
- 16 - Management skills
- 17 - Social Enterprise

The PERMATA Insan value chain/ecosystem



Entry point

Ujian PERMATA pintar UKM-1

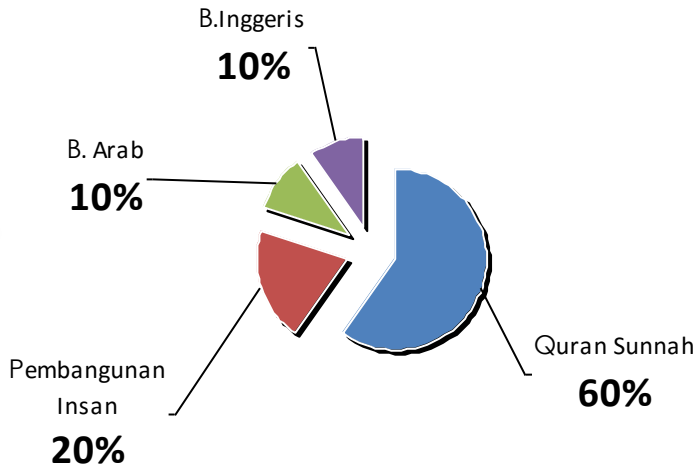


Ujian PERMATA pintar UKM-2



Ujian Kecenderungan Agama USIM-1

Curriculum based on 4 Modules



Method of teaching

Throughout the year

E-learning

Guidance teachers

+

Yearly 2X per year

Camp

Monitoring

First 2 years:

Year 1

- Completed 15 Chapters
- Good reading

Year 2

- Completed 30 Chapters
- Very smooth

Academic, personality and co-curriculum report

- Excellent achievement in Schools
- Follow the guidance teachers

Continuous studying

7

Semesters

Excellent UPSR results

PERMATA Insan College

Pass?

Fail ?

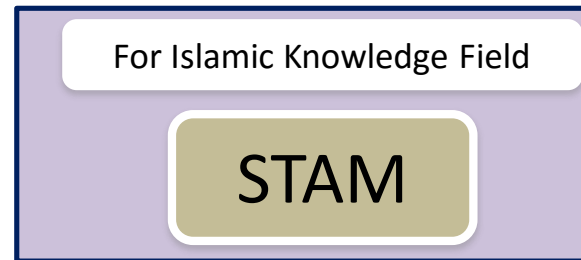
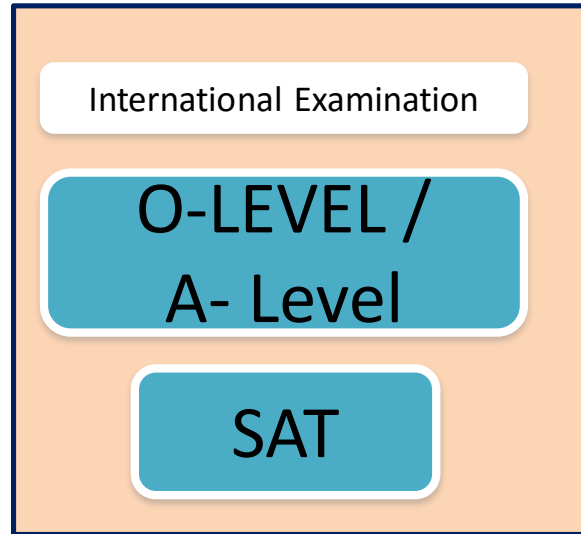
Dropped out

World class universities



Path to the **Higher Education Level**

SPM



Higher Education

TAMHIDI (USIM
Foundation) & Degree
USIM

USA / Europe
University

Middle East

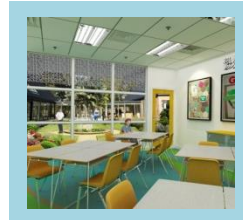
Other universities in
Malaysia and around the
world

Nobel Laureate Labs

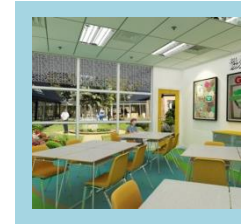


THANK YOU

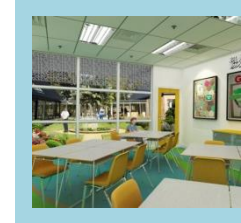
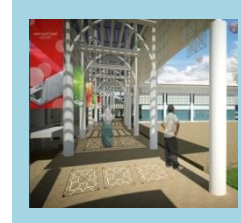
WHAT CAN USIM DO?



WHAT IS USIM DOING NOW?



1. Have set up “INSTITUTE FOR ISLAMIC SCIENCE”
2. INCREASE RESEARCH CAPABILITIES OF USIM RESEARCHERS especially the Young
 - Participate in Nobel Laureate Programmes
 - Research Attachments in Nobel Labs
 - Research Funding for young researchers
 - Research Collaborations - working in a bigger multi-disciplinary groups
 - Enhancing research environment in USIM
3. Successfully obtained NRGs funding (RM 5M)
4. LRGS in 2015 - discussions to start now



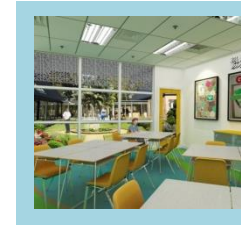
Thinking of research projects in the near future...utilising current expertise to:

Food and Nutrition for mothers: healthy mother → healthy child, educated mother → intelligent child?

Is the brain activity and memory of the gifted different from normal child?

What foods? Prophetic foods?

Role of religion - doa, zikir and other rites?



USIM Research Achievements:

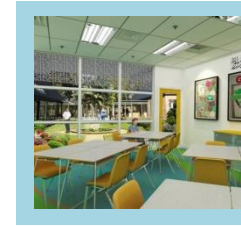
Kumulatif Dana Penyelidikan USIM

Dari Tahun 2001 – September 2013 = **RM18,145,197.70**

Capaian Dana Penyelidikan USIM (Jan- Julai 2013)

| TAHUN 2011 | TAHUN 2012 | TAHUN 2013 |
|--------------|--------------|--------------|
| RM 2,760,229 | RM 5,420,154 | RM 4,031,093 |

| USIM (RM) | Kerajaan (RM) | Swasta (RM) | Antarabangsa (RM) |
|---------------|-----------------------|-------------|-------------------|
| 344,960 | 3,287,781 | 350,352 | 48,000 |
| JUMLAH | RM4,031,093.00 | | |



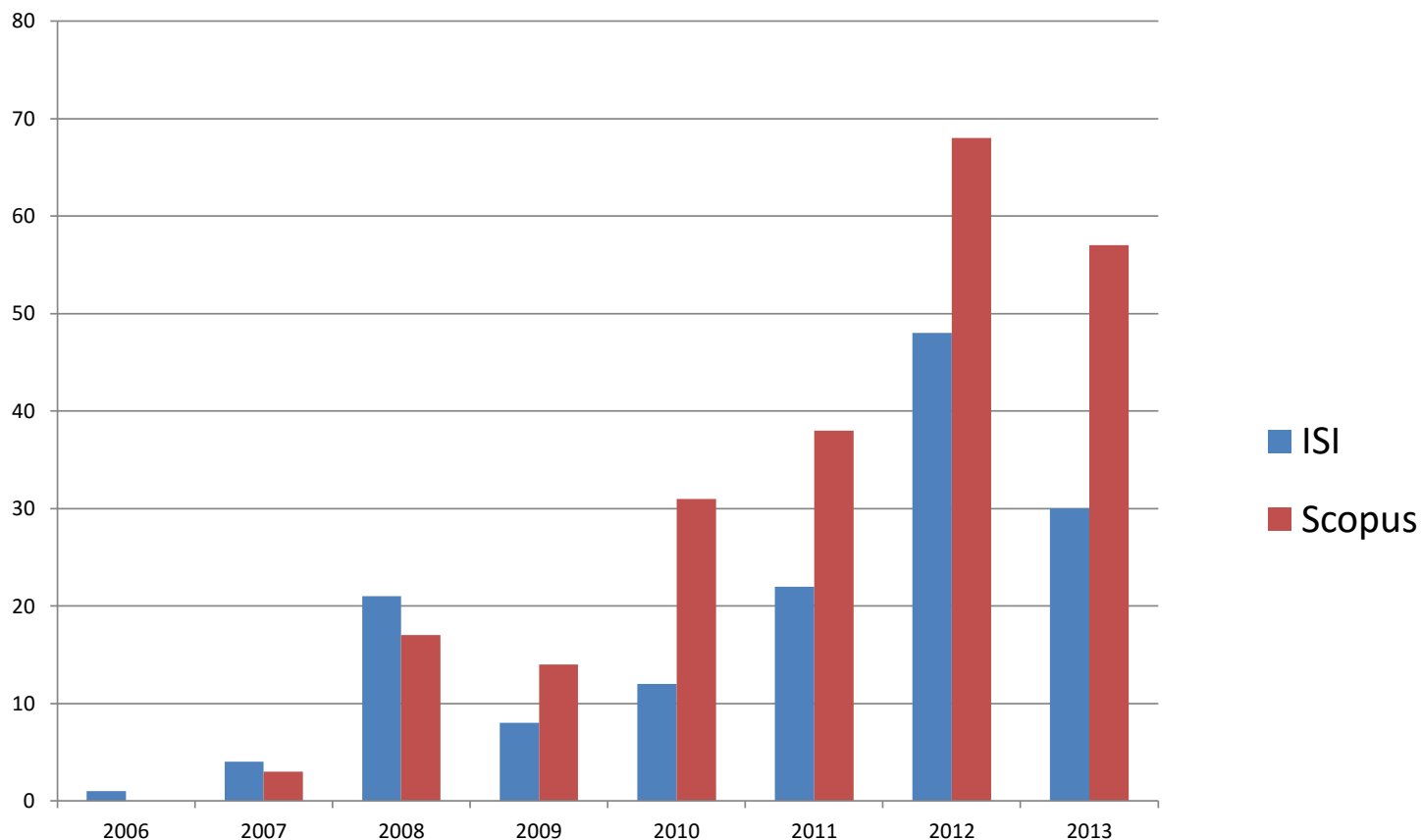
USIM Research Achievements:

Jumlah Penyelidik Utama USIM (2010- Jul 2013)

| Tahun | Jumlah PI | Jumlah Kakitangan Akademik Aktif | Peratus |
|-------|-----------|----------------------------------|---------|
| 2010 | 84 | 214 | 39.2 |
| 2011 | 137 | 257 | 53.3 |
| 2012 | 102 | 272 | 37.5 |
| 2013 | 134 | 317 | 42.27 |

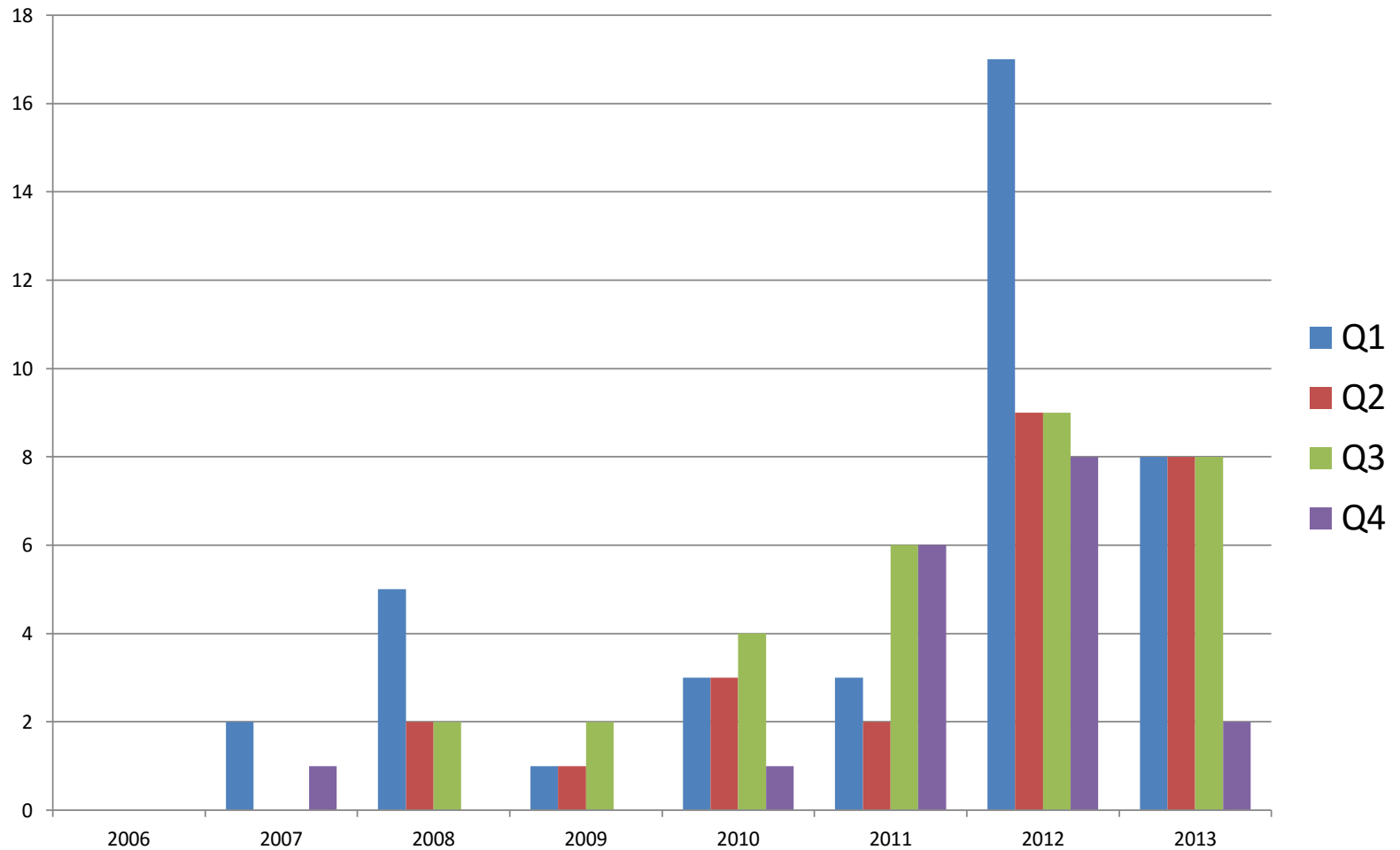
TOTAL PUBLICATION IN ISI AND SCOPUS INDEXED JOURNALS 2007 – Aug 2013

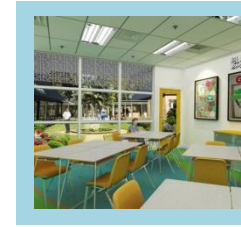
PUSAT PENGURUSAN PENYELIDIKAN



PUBLICATION IN TOP ISI JOURNALS

PUSAT PENGURUSAN PENYELIDIKAN





THANK YOU AGAIN

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