



Outcomes-Based Education (OBE) A Malaysian Experience

About Me

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Presentation Outlines :

- **Eng. Edu. In Malaysia – a History**
- **Why OBE?**
- **Experience Implementing OBE in Universiti Malaysia Perlis**

Part 1

**Engineering Education
in Malaysia –
A Brief History**

System Evolution

Phase 1: Australian System

Phase 2: Mixture of Australian-British

Phase 3: Malaysia-made based on Mixture
of Australian-British-American

Phase 4: Malaysia-made based on OBE

Part 2

Why OBE ?

8 Jun 2010: London

- **Worst universities 'could be closed', says CBI**
- **The government should consider closing Britain's worst universities to stop them dragging down elite institutions, a business leader has suggested.**

Two University Campuses to be Closed over Quality Test

April 13, 2010, 6:02pm, UAE

- Warren Fox, the director of the University Quality Assurance International Board, at Dubai International Academic City.
- DUBAI // Two university campuses in Dubai's academic free zones may be put on probation and face possible closure when the results of a study are released this month.

Back in Malaysia !



Reasons given by employers for not hiring young graduates

- Low grades and low levels of academic accomplishments
- Poor attitudes, lack of self-confidence
- Lack of goals, poorly motivated
- Lack of enthusiasm, lack of drive, little evidence of leadership potential
- Lack of preparation for the interview
- Excessive interest in security and benefits, unrealistic salary demands and expectations
- Inadequate preparation for type of work, inappropriate background
- Lack of extracurricular activities



Views from Industry.....

From Federation of Malaysian Manufacturers (FMM)

- "Constant change is the order of the day.... Graduates often turn up without a clue to the changing dynamic global industrial environment."
- "A **constant changing environment** and the need to add value to gain competitive advantage demand for creativity, lateral thinking, agility and risk taking."



Views from Industry...

From a senior representative of Petronas:

"We expect an employee to be able to work when she comes in. That's the reason why when we recruit candidates, we expect them to be able to perform the task as soon as they are on the job. ...to hold the person by the hand.... The person will have to be very **independent**. That's why initiative is very important – **initiative and achievement motivation**."

Source: Editorial Board, ESP Malaysia. 1993. A glimpse into the significant world of Petronas. ESP Malaysia, 1/1:77-86.



From a report on 'Employability of Malaysian Graduates' presented to the Majlis Tindakan Ekonomi Malaysia, 8 April 2003.

Reasons For Employing More Foreign Graduates

~ Attitude of Foreign Graduates

- "Foreign graduates are **more open-minded** and more importantly, they are **risk-takers**. Even during big meetings we can see that those who dare to share their views are more of foreign graduates."
(Property/Local/Malay)



From a report on 'Employability of Malaysian Graduates' presented to the Majlis Tindakan Ekonomi Malaysia, 8 April 2003.

- "Foreign graduates are **more independent**. They can blend well easily with others. They are more **expressive and creative** in new ideas...and their **command of English** is certainly much better."
- "They (foreign graduates) have the **mindset to excel**, wanting to learn more. Maybe because of the competitiveness which they have experienced overseas."
(Other Services/foreign/Chinese)



From a report on 'Employability of Malaysian Graduates' presented to the Majlis Tindakan Ekonomi Malaysia, 8 April 2003.

Reasons For Employing More Foreign Graduates

- "**Good command of English is vital**, not only for external communication with clients but as well for a MNC like us, we have branches all over the world, we certainly need someone with good English background, whereas I find the local graduates are very much lacking in this."

(Construction/Foreign/Chinese)



From a report on 'Employability of Malaysian Graduates' presented to the Majlis Tindakan Ekonomi Malaysia, 8 April 2003.

Reasons For Employing less local Graduates

- "Local graduates (Bumis) **lack of drive** compared to foreign graduates. Foreigns especially those from middle-income families, they are very goal-oriented. They know that they are there to complete their studies. For local ones, they have the mentality that why hurry since I have 5 years to complete a 3 year course. As long as I graduate and my parents can come for the convocation, that's good enough."

(ICT/Foreign/Chinese)



From a report on 'Employability of Malaysian Graduates' presented to the Majlis Tindakan Ekonomi Malaysia, 8 April 2003.

Reasons For Employing less local Graduates

- "Local graduates have **less exposure**. They are **not aggressive and dynamic**. They tend to be **less vocal and open-minded**"

(Construction/Foreign/Chinese)



From a report on 'Employability of Malaysian Graduates' presented to the Majlis Tindakan Ekonomi Malaysia, 8 April 2003.

Reasons For Employing less local Graduates

- "Somehow due to the exposure, the foreign graduates are better because their overseas education is not about academic qualifications, but they are **trained in communications and behavioural skills** (eg. presentation skills)"

(Retailing/Foreign/Chinese)



CURRENT SCENARIO

- The tendency of imparting and evaluating only technical outcomes of graduates.
- Some non-technical outcomes of graduates are imparted (which is very important in OBE), **ASSESSED** and **EVALUATED** formally only in related non-engineering subjects.
- Generally, subjects are focused on imparting only technical outcomes.



CURRENT SCENARIO

- Too much focus on curriculum and educational process.
- Very prescriptive.
For example: EUT120 Computer Programming
 - Prescriptive: Students would be exposed to the C language.
 - Outcomes: Students should be able to make use of the C language in programming.
- Students are not being assessed, evaluated, and informed of the levels of achievement of the non-technical outcomes.
- Programs are reviewed every five years based on universities' own review and comments from external examiners, i.e. no input from



CURRENT SCENARIO

- Accreditation process gives too much emphasis on the content and process and very prescriptive.
- Doesn't require documented evidences on the achievement of the graduate attributes.
- Doesn't include external stakeholders or constituencies in any accreditation exercise and hence no feedback is received from these very important components.
- Not much assurance on the delivery of the outcome capabilities in every graduate.

In Short

Graduates are not assured of having adequate professional training with necessary technical and non-technical skills.

A Very Important & Significant Step.

Malaysia applied to be a Member of the WASHINGTON ACCORD



The Need for an Outcomes Approach
for
Continual Quality Improvement (CQI)



Quality Assurance Division (QAD),
Ministry of Higher Education

- Entrusted with & committed to ensuring quality in Higher Education
- **OBE elements in :**
 - QA Code of Practice &
 - M.Q.F.



Signed 1989

A MULTINATIONAL AGREEMENT FOR THE MUTUAL RECOGNITION OF ENGINEERING DEGREES

- ® Substantial equivalency of accreditation systems.
- ® Graduates prepared to practice engineering at the entry level



Signed 1989

Members (1989):

- 1. USA**
- 2. UK**
- 3. Australia**
- 4. Canada**
- 5. Ireland**
- 6. New Zealand**

Provisional Members (2003)

- 1. Japan
- 2. Malaysia
- 3. Germany
- 4. Singapore



Signed 1989

- Members (2010):** 1. USA(1989) 2. UK(1989)
3. Australia(1989) 4. Canada(1989)
5. Ireland(1989) 6. New Zealand(1989)
7. Hong Kong(1995) 8. South Africa(1999)
9. Japan(2005) 10. S'pore(2006)
11. S. Korea(2007) 12. Taiwan(2007)
13. **MALAYSIA (2009)**
Provisional Members: Germany, India, Pakistan, Russia [and YEMEN ?]



SIGNIFICANCE OF WASHINGTON ACCORD MEMBERSHIP

An endorsement that the engineering education system has demonstrated a

strong, long-term commitment to quality assurance

in producing engineers ready for industry practice in the international scene.



Implications of WA membership

- Washington Accord essentially demands 2 major efforts :-
 - Improvement of procedures, documentation, criteria, etc
- *easily attainable*
 - "a genuine shift towards OBE" in the Malaysian Engineering Education System
- *requires bigger effort*
- Existing:*
....conventional prescriptive-based system



Implications of WA membership: Shift towards OBE

Accreditation Criteria:

EAC 2003-4	EAC 2005 draft (ABET 2004)
1. Academic programme	1. Programme objectives
2. Staff & students	2. Programme outcomes & assessment
3. Learning facilities	3. Academic content
4. Quality management systems	4. Students
4.3 Assessment of programme objectives	5. Staff
	6. Facilities
	7. Institutional support & financial resources
	8. Quality systems



THE WAY FORWARD ?

- Adoption of the Outcomes Approach for program improvement (OBE)
- Towards international recognition of graduates (WASHINGTON ACCORD)



What is Outcome-Based Education (OBE)?



What is Outcome-Based Education ?

"OBE, like most concepts in education, has been interpreted in many ways"
(Killen, 2000)



Outcome-Based Education....

- A Shift in Focus

from curricula, resources and processes towards outcomes.

What Outcomes ?

- **Technical Outcomes**
- **Non-Technical Outcomes**

That's Why We Go for OBE!

- To ensure we have quality engineering degree programs
- To ensure we continue to be a member of Washington Accord

Part 3

Experience Implementing OBE in Universiti Malaysia Perlis

Major Problems Encountered

- **Faculty's Understanding of Essential Components of OBE for Engineering Degree**

Problem with understanding of

- **Concepts and Principles in Engineering**
- **Bloom's Taxonomy of Depth of Engineering Knowledge**
- **The Breadth As Required by EAC**
- **Lab Modules**
- **Assessment and Evaluation**
- **Design of New Curriculum**

The Good News

- **Eng. Degree Programs in Universiti Malaysia Perlis Are Accredited by EAC**

The End

•**Shukran Lakum**

•**Thank You**

•**Terima Kasih**