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## What is Outcome-Based Education (OBE)?

Prof. Dr. Shahrin Mohammad  
Civil Engineering Faculty  
Universiti Teknologi Malaysia

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### Learning outcomes for this presentation

By the end of the presentation, participants should be able to:

- (1) **Describe orally and convince** about OBE to your colleagues at least in half an hour.

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## Presentation Outcomes

1. Why OBE?
2. What is OBE?
3. When, Who and How – OBE?

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## Current issues

- **Democratisation of educations**
  - increase in the number of HEI's (public and private)
  - wide array of qualifications awarded
  - diverse in arrangements and nomenclature.
  - bewildering educational pathways
  - public sector training institutions of the various ministries and the industry-based skills providers

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### COVERAGE OF MQA

Public Universities & College Universities (BJK)	18 + 3	
Private Universities & College Universities(LAN)	22	
Branch Campus of Foreign Universities (LAN)	4	
Private Colleges(LAN)	532	
Polytechnics	20	
Community Colleges	34	558
<b>TOTAL</b>	<b>630 + 3</b>	

PROGRAMMES & QUALIFICATIONS AWARDED BY AGENCIES OTHER THAN THE MINISTRY OF HIGHER EDUCATION (>1000) **>1000**  
(E.G SKILLS DEVELOPMENT ACT, AKADEMI SENI ACT, EDUCATION ACT)

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### Current issues

- **Public confidence in academic standards**
  - Public understanding on the qualifications- their expectations
  - The usage of qualification titles – lack of nationally agreed criteria in nomenclature – inconsistency eg the term Master
  - Facilitating students and graduate mobility
  - Inconsistency in defining academic load (credits)
  - Recognition of work place training - RPL

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## Current issues

- **International context**
  - Restructuring HE programmes and qualifications – to make it clearer and to promote lifelong learning
  - Council of Europe Convention on the Recognition of Qualifications in European regions - QF EHEA, UK QF, AQF, NZ QF
  - Establishment of European credit transfer system (ECTS).

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## Current issues

- **Realising the concept of life long learning**
  - Learning pathways that are appropriate for them
  - Flexible learning
  - Recognition of prior learning

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# Issue no. 2

View from industries about our students

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## 80,000 graduan menganggur

mingguan  
Malaysia  
20 Feb 2005

Oleh NIZAM YATIM

JELI 19 Feb. – Jumlah perangkaan graduan menganggur amat mengejutkan apabila sehingga September lalu angkanya mencecah 80,000 orang.

Sehubungan dengan itu Menteri di Jabatan Perdana Menteri, Datuk Mustapa Mohamed menggariskan antara faktor perkara itu berlaku:

- Graduan enggan mengubah sikap yang inginkan pekerjaan setaraf dengan ijazah yang dimiliki.
- Sikap graduan yang gemar berkhidmat dengan kerajaan kerana mereka tidak yakin untuk bekerja dengan syarikat swasta.
- Tidak suka berusaha sendiri, termasuk berniaga dan berdikari.

Katanya, nasihat kerajaan supaya graduan terbabit mengubah sikap masih tidak diikuti dan ia terbukti apabila ramai di kalangan mereka enggan bekerja sebagai kerani atau operator pengeluaran di kilang dengan alasan tidak sesuai.

“Kepada graduan terbabit yang kebanyakan daripada kalangan bumiputera, saya nasihatkan tidak usahlah mereka terlalu memilih pekerjaan dan sebagai permulaan kita boleh kerja di mana-mana bagi mencari pengalaman,” katanya.

Beliau berkata demikian kepada pemberita selepas meraikan 24 pelajar yang dipilih mengikuti Skim Anak Angkat Parlimen Jeli di kediamannya, Darul Falah di sini, hari ini.

Kata Mustapa, Unit Perancang Ekonomi (EPU) sedang merangka strategi mengenai langkah-langkah yang boleh dilaksanakan bagi memastikan bilangan graduan menganggur dapat dikurangkan.

“Strategi ini akan diumumkan selepas EPU selesai menyemak laporan daripada universiti-universiti mengenai latar belakang graduan menganggur dan bidang pengajian masing-masing untuk tempoh tiga tahun sejak 2002,” jelasnya.

Beliau berkata, strategi baru tersebut akan memberi tumpuan bagi memastikan lebih ramai pelajar bumiputera menceburi bidang latihan dan kemahiran bagi memenuhi tuntutan pasaran.

“Kita juga akan merangka strategi bagi mengubah sikap siswazah supaya memberi keutamaan untuk bekerja sendiri dengan membuka perniagaan atau terbabit dalam sektor pertanian,” ujarnya.

Tambah beliau, bidang pengajian di universiti juga akan dipastikan tidak terlalu berorientasikan akademik, sebaliknya harus memasukkan elemen-elemen kemahiran.

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**New Straits Times, 20 April 2005**

## Why local grads losing out

SEPANG, Tues. — Malaysian employers do not think much of local graduates. They told a dialogue today that something must be done fast before the private sector at communicating well with others and the ability to interact socially within a working environment. Universities should encourage overseas attach-

Professor Datuk Dr Mohd Salleh Mohd Yasin, who said the present 10-week internship for local undergraduates was sufficient if employers came up with a com-

whom 14,321 had professional qualifications. Among them, only 1,030 Bumiputera accountants had professional qualifications while 3,475 Bumi-

... apart from academic excellence, most employers would require workers to possess qualities such as **good attitude**, strong work **ethics**, the ability to **communicate** well, a willingness to **learn** and to **contribute** new ideas.

Industry executive director Stewart Forbes said apart from academic excellence, most employers would re-

at present," he said. University chancellors at the session generally agreed with his suggestions, except

suing a professional qualification for accountancy is not important and this is wrong," he said.

fields. "Malaysia is vying to become an automotive hub but we cannot go ahead with this


..efforts must be taken to improve **communication skills** to encompass both general skills at communicating well with others and the ability to interact socially within a working environment.

to en- Universiti Kebangsaan He said at present, there or-general Prof Datuk Dr Hassan Said.

compass both general skills Malaysia vice-chancellor were 21,347 accountants, of

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- Aptitude for independent problem solving
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- Enthusiastic and proactive approach

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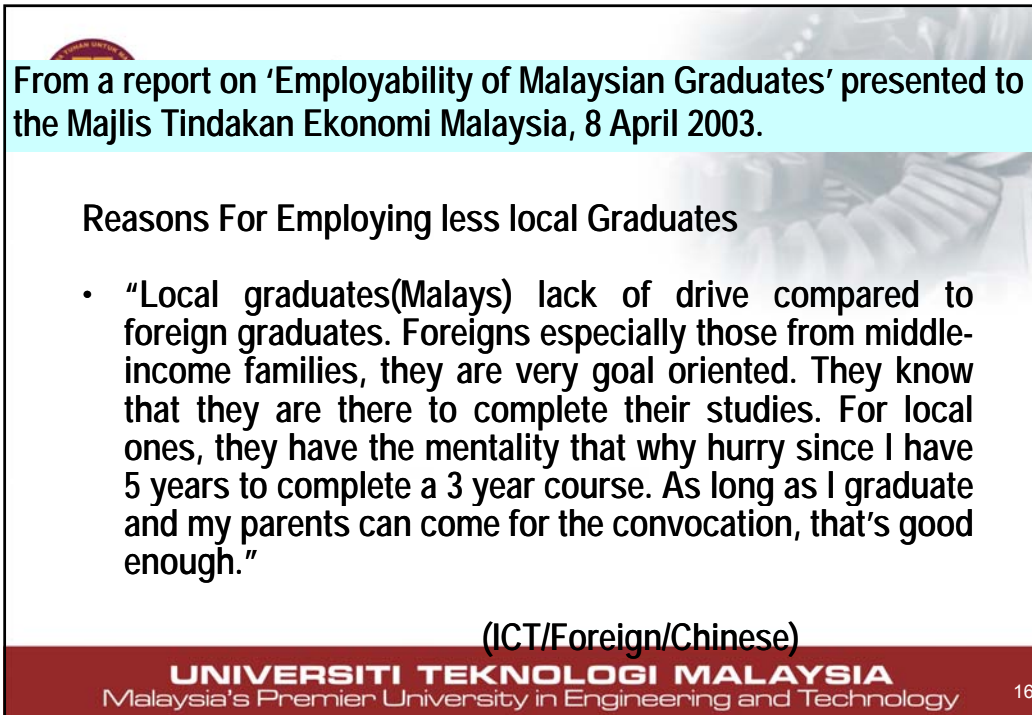
**Views from Industry**  
[www.utm.my](http://www.utm.my)

*From Datuk Paul Low, Vice-President, Federation of Malaysian Manufacturers*

- "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."

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**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(Malays) 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)

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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)

## Skim Latihan Siswazah Menganggur diwujudkan semula 80,000 graduan dilatih

**P**UTRAJAYA 23 Mac — Kerajaan mengambil langkah drastik 'mengerahkan' kesemua 80,000 graduan menganggur di seluruh negara menjalani latihan kemahiran selama setahun bagi memudahkan mereka mendapat pekerjaan atau menjadi usahawan.

Sehubungan itu satu pasukan petugas khas akan ditubuhkan bagi mengesan graduan-graduan menganggur ini.

Pasukan khas ini yang diketuai oleh pensyarah Universiti Pendidikan Sultan Idris (UPSI), Prof. Madya Dr. Yusof Abu Bakar akan mengguna pakai model di Australia yang ternyata berjaya menangani masalah isu siswazah menganggur di negara itu.

Di Australia, graduan-graduan yang tidak bekerja akan dicari dan dihantar ke kolej-kolej kemahiran untuk diberi nilai tambah.

Hasilnya 90 peratus graduan itu mendapat pekerjaan.

Menteri Pengajian Tinggi, Datuk Dr. Shafie Mohd. Salleh ketika mengumumkan perkara ini kepada pemberita sebelum mempengerusikan mesyuarat pascakabinet di sini hari ini, berkata:

"Kita akan tiru model itu dan cuba laksanakan di Malaysia. Mungkin dengan cara ini kita dapat mengurangkan secara berperingkat jumlah graduan menganggur."

Katanya graduan menganggur itu akan ditempatkan di kolej-kolej kemahiran dan teknik di seluruh negara.

Dua hari lalu, Perdana Menteri, Datuk Seri Abdullah Ahmad Badawi mengarahkan supaya Skim Latihan Siswazah Menganggur (SLSM) diwujudkan semula bagi menangani 80,000 graduan yang masih gagal mendapatkan pekerjaan.

Pengara Menteri menganggap skema itu masih merupakan mekanisme terbaik bagi menangani masalah tersebut kerana sejak diperkenalkan pada 2001, 80 peratus pelajar yang mendaftar, mendapat pekerjaan.

### Utusan Malaysia, 24 Mac 2005

Skim Latihan Siswazah Menganggur (SLSM) diwujudkan semula bagi menangani 80,000 graduan yang masih gagal mendapatkan pekerjaan



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## One-year internship mooted for undergrads

There are 18,000 unemployed graduates and some reasons given for their predicament were a poor command of the **English language** and **lack of marketable skills**.

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### 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

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*From Datuk Paul Low, Vice-President, Federation of Malaysian Manufacturers*

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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)

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# Issue no. 3

What people say about us?

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B10 Berita Harian 16/12/2003 (Selasa)

Pendidikan

## Kaedah konvensional tidak lagi relevan: Mustapa

Oleh Syuhada Choo Abdullah (yang berada di Bangkok, Thailand baru-baru ini)

KAEDAH pembelajaran konvensional yang memberatkan pelajar menjadi pasif, merendahkan diri dan malu bertanya serta meng-harapkan ilham guru saja tidak relevan dengan perkembangan pendidikan kini dan wajar di-ubah.

Sebaliknya, mereka harus di-dedahkan kepada proses pen-di-dikan yang lebih inovatif serta proaktif sejak sekolah rendah lagi bagi melahirkan generasi yang berfikir global dan berani.

Pengarah Eksekutif Majlis Tin-dakan Ekonomi Negara (MITEN), Datuk Mustapa Mohamed, lee-kata, pelajar perlu digalakkan menyertai sesi pembelajaran se-cam dan hala, berbanding kaba-nyakan pelajar ketika ini yang

lam pelbagai bidang seperti per-gaulan, interaksi dan komunika-si supaya mereka mampu me-nyampaikan idea serta pandan-gan berkesan," katanya kepada *Berita Harian*.

Mustapa berkata, pengalaman dan juga pendedahan melalui program global seperti Forum Antarabangsa Insanifil Pemimpin Muda Hiasdu Ke-6 yang berlang-sung selama lima hari di Bang-kok, baru-baru ini, amat ber-bantu bagi mengasah daya ke-pimpinan dinamik serta berwi-bawa di kalangan pelajar Malaysia.

Forum bertema "Meneroka Hala Tuju Baru Bagi Asia" itu disertai 24 pelajar cemerlang serta terpilih dari enam negara, iaitu Malaysia, Singapura, Thai-land, Jepun, Filipina dan Indone-sia.

Mustapa yang juga ahli panel forum itu berkata, kesempatan



**MUSTAPA (kanan) dan Naib Menteri Pendidikan Thailand, Piyabutr Cholvijarn (dua dari kanan), selepas**

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TheStar TUESDAY 12 October 2004

# PM: Rank universities

## 'Healthy competition can improve teaching quality'

**CYBERJAYA:** Public and private institutions of higher learning will be ranked to improve the quality of education in the country and to promote healthy competition among them, said Prime Minister Datuk Seri Abdullah Ahmad Badawi.

He said the Higher Education Ministry has been told to develop the ranking system.

"It is hoped that by ranking them, healthy competition between the institutions would be fostered, thereby motivating them to improve their quality of teaching and research," he said at the opening of the LimKokWing University College of Creative Technology's Malaysia Design Technology Centre here yesterday.

The grand and colourful event was attended by close to 1,000 guests, including a minister, deputy ministers, ambassadors and high commissioners, heads of colleges and universities, as well as CEOs of numerous companies. (See StarEducation on Sunday for details)

Abdullah said he hoped information on ranking of public higher learning institutions would be available soon.

He added that private education institutions should be graded into appropriate categories — based on centres and tuition centres.

"This initiative will facilitate the monitoring of the quality and integrity encouraged the growth of private institutions of higher learning to meet the growing demand for higher education of the country annually when Malaysian students study abroad," he added.

Earlier in the day, Abdullah met his



THANK YOU: Abdullah receiving a standing ovation from LimKokWing University College of Creative Technology students after opening their new campus in Cyberjaya yesterday.

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## CURRENT SCENARIO ?

- the tendency of imparting and evaluating only technical outcomes of graduates.
- Some non-technical outcomes of graduates are imparted ASSESSED and EVALUATED formally only in related non-engineering subjects.
- Students are not being assessed, evaluated, and informed of the levels of achievement of the overall outcomes.

## CURRENT SCENARIO ?

- **documented evidences** on the achievement of the graduate attributes scarcely available
- rarely include external **stakeholders or constituencies** and hence little feed back received from these very important components.
- Not much assurance on the **delivery of the outcome capabilities** in every postgraduate.

## CURRENT SCENARIO ?

- Quality system - **not embracing and assuring the whole cycle of setting objectives, outcomes, targets, learning design, delivery and performance measurement across a wide range of targeted graduate capabilities.**
- This contrast with the **quality assurance systems** which, can guarantee that these particular quantitative outcomes will be satisfied by the University itself.



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# So... what next ?

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## Perubahan/Change?

- **Do we need to do something about it?**
- **Keep your mind open to change all the time. Welcome it. Court it. It is only by examining and re-examining your opinions and ideas that you can progress. (*Dale Carnegie*)**

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إِنَّ اللَّهَ لَا يُغَيِّرُ مَا بِقَوْمٍ حَتَّىٰ يُغَيِّرُوا مَا بِأَنْفُسِهِمْ

Sesungguhnya Allah tidak mengubah apa yang ada pada sesuatu kaum sehingga mereka mengubah apa yang ada pada diri mereka sendiri.

(Surah Ar Ra'd 11)

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## Change?

### Survey by Harvard Univ.

- ..large measure of satisfaction with technical competence of the graduating students... can crunch numbers, analyse markets.... But when it comes to human-relation skills, Harvard is stepping up its effort... That seems where improvements are needed.. Oral and written communication, teamwork, and other human skills...

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## Change?

- **Swiss Vs Quartz/Digital watch**



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# 1 MQA/MQF

and the

Engineering Accreditation Council,  
Board of Engineers



**Washington Accord**

## 2 The Need for an Outcomes Approach for Continual Programme Improvement

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## What is Outcome-Based Education ?

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


Talking about OBE, there are 3 levels:

1. Philosophy / Theory / “Broad Perspective”
2. Curricula / structures / procedures
3. Classroom practice (PBL, CL, AL, etc)



## OUTCOME-BASED EDUCATION (OBE)

- An educational philosophy that states education ought to be aimed at producing particular educational outcomes :
  - Giving students a particular, minimum level of knowledge and abilities.
- OBE addresses the following questions:
  - What do you want the students to learn?
  - Why do you want them to learn?
  - How can you best students learn it?
  - How will you know what they have learnt?



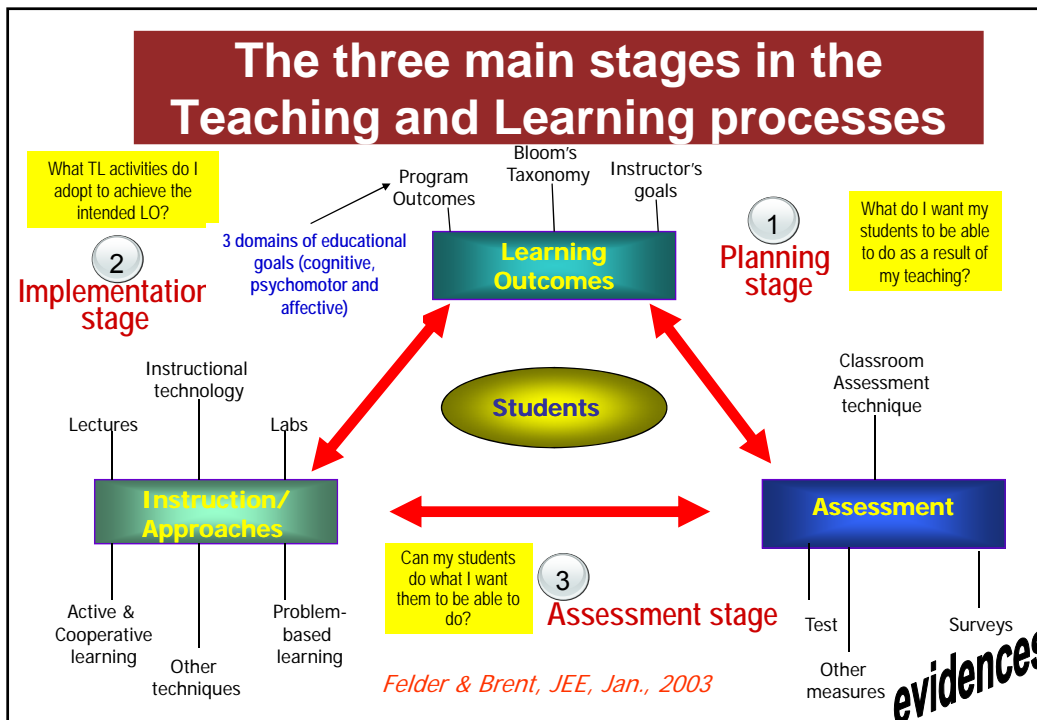
## Outcomes Based Education?

Outcomes Based Education **focuses on student learning** by:

- Using **learning outcome** statements to make explicit what the **student** is expected to be able to know, understand or do;
- Providing **learning activities** which will help the **student** to reach these outcomes;
- **Assessing** the extent to which the **student** meets these outcomes through the use of explicit assessment **criteria**.

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## Paradigm Shift in the Education & Training Philosophy

- From teacher-centred → to a student-centred
- Traditional teaching : teacher "owns" the knowledge and convey it to the students. → modern teaching : students (trainee) to learn as much as possible.
- Teacher brings the content and the answers into the training room with him / her. → teacher as a coach who asks questions and provides guidelines for the acquisition of knowledge.

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## What is Outcome-Based Education ?

Outcomes Based Principles (Spady, 1994; Killen, 2000)

OBE Principles	Explanation	Application to practice
Clarity of focus	Focus on what want learners be able to do successfully	<ul style="list-style-type: none"> <li>❖ Help learners develop competencies</li> <li>❖ Enable predetermined significant outcomes</li> <li>❖ Clarify short &amp; long term learning intentions</li> <li>❖ Focus assessments on significant outcomes</li> </ul>
Design down	Begin curriculum design with a clear definition of the significant learning that learners are to achieve by the end of their formal education	<ul style="list-style-type: none"> <li>❖ Develop systematic education curricula</li> <li>❖ Trace back from desired end results</li> <li>❖ Identity "learning building blocks"</li> <li>❖ Link planning, teaching &amp; assessment decisions to significant learner outcomes</li> </ul>
High expectations	Establish high, challenging performance standards	<ul style="list-style-type: none"> <li>❖ Engage deeply with issues are learning</li> <li>❖ Push beyond where normally have gone</li> </ul>
Expanded opportunities	Do not learn same thing in same way in same time	<ul style="list-style-type: none"> <li>❖ Provide multiple learning opportunities matching learner's needs with teaching techniques</li> </ul>

Content Based Learning System	Outcomes Based Learning System
Passive students	Active learners
Assessment process – exam & grade driven	Continuous assessment
Rote learning	Critical thinking, reasoning, reflection & action
Content based/broken into subjects	Integration knowledge, learning relevant/ connected real life situations
Textbook/worksheet focused & teacher centred	Learner centred & educator/ facilitator use group/ teamwork
See syllabus as rigid & non negotiable	Learning programmes seen as guides that allow educators to be innovative & creative in designing programmes/ activities
Teachers/trainers responsible for learning - motivated by personality of teacher	Learners take responsibility for their learning, learners motivated by constant feedback/ affirmation of worth
Emphasis what teacher hopes to achieve	Emphasis outcomes – what learner becomes & understands
Content placed in rigid time frames	Flexible time frames - learners work at own pace
Stay in single learning institution until complete	Learners can gather credits different institutions until achieve Qualification
Previous knowledge & experience in learning field ignored – Each time attends whole course	Recognition of prior learning: after pre-assessment, learners credited outcomes demonstrated or transfer credits elsewhere

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Differences between contents-based education and OBE		
PROCESS STEP	Contents-based Education	Outcomes-based Education
Needs analysis	A very few parties are consulted before trainers develop courses themselves. Trainers decide on how needs are determined and expressed.	All stakeholders are consulted prior to curriculum development: employers, employees, government, special interest groups, providers and learners. The end-product of needs analysis is reflected as unit standards.
Course design	Instructional designers develop courses around the contents. The outcomes of a course are written as objectives.	Learning programmes are designed according to the needs of the above six stakeholders. Outcomes clearly indicate what the learner must be able to do in line with national standards.

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Differences between contents-based education and OBE		
PROCESS STEP	Contents-based Education	Outcomes-based Education
Learning material	The learning material is called study manuals or textbooks which is contents-driven. The instructor determines the content. The content is mainly theoretical.	Learning material is called learning guides and is outcomes-driven. The contents are determined by the inputs of various role-players. The contents are practical, addressing particular skills.
Presentation	The instructor presents a pre-determined lesson The instructor is in control of the learning event.	A facilitator presents a lesson based on the unit standard in a flexible manner The facilitator guides learners to achieve outcomes.
Assessment	Learners do assignments and write tests and examinations in order to indicate their level of competence. Assessment criteria are non-existent or vague	A variety of assessment techniques are used, for example simulations, portfolios, self assessment, workplace assessment. Assessment criteria are clearly defined and indicated as part of the unit standard.


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Learning System Characteristics	Content Based (Traditional/Transactional)	Outcomes Based (Transformational)
Framework	❖ Predefined curriculum, assessment & credentialing in place ❖ Structures "ends", no defined learners' outcomes	❖ Curriculum, instructional strategies, assessment & performed standards ❖ Structures support outcomes, flexible & a means to define "learning ends"
Time	❖ Inflexible constraint for educator & learner schedule controls learning & success	❖ Used alterable source - match needs of educator & learners
Performance standards	❖ Comparative & competitive approach ❖ Linked to predetermined "curve" or quota of possible successes	❖ Learners potentially able receive credit for achieving performance standards ❖ No quotas & standards pursued
Learning assessments	❖ Continuous testing & permanent grading ❖ Mistakes on permanent record: best grades & records fast & consistent performers; slower learners never catch up ❖ Never assess/ document what learners can ultimately do successfully	❖ Macro view learning & achievement ❖ Mistakes inevitable steps in development, internalizing & demonstrating high level of performance capabilities ❖ Ultimate achievement what able to do

Learning Systems: Content Based versus Outcomes Based  
(Source: Spady, 1994)

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**Ruth Stiehl, "Teaching Toward Significant Outcomes," Oregon State U, [www.c2t2.ca/](http://www.c2t2.ca/)**

	Content Framework (Traditional)	Competency Framework (60's model)	Outcome Framework (21 <sup>st</sup> century)
<b>Intent</b>	"Cover Topics"	Check-off discrete tasks	Demonstrate significant "whole" task
<b>Instructor</b>	Expert: Disseminator of information	Give instruction and check-off tasks	Coordinate collaborative investigation
<b>Student Role</b>	Receiver: Stores and returns information	Practices and demonstrates small, isolated tasks	Active collaborator and investigator; synthesizer
<b>Content</b>	Topics	Performance Objective	Concepts and process skills
<b>Materials</b>	Cover textbooks	Use Multimedia	Access multiple sources
<b>Evaluation</b>	Competitive: quiz and test	Meet minimum standard	Assessment against quality standards; continuous, self, peer and instructor assessment

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"destination" or "end of journey"


**OBE :**  
**Focusing on the *outcomes* of programme implementation**

*"Always begin with the end in mind"*

- Steven Covey's 7 Habits of Highly Successful People

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## OBE means:

Defined by

Focussed on


Organised around

Directed by

**LEARNING OUTCOMES**

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**Under OBE, curriculum design includes these steps:**

- Determine future conditions
- Derive exit outcomes
- Develop performance indicators
- Determine instructional strategies
- Deliver instruction
- Document results
- Determine advancement

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## Some immediate Advantages:-

- Always alert on quality of graduates
- More effective & innovative teaching
  - PBL, CL, etc
- More industry input

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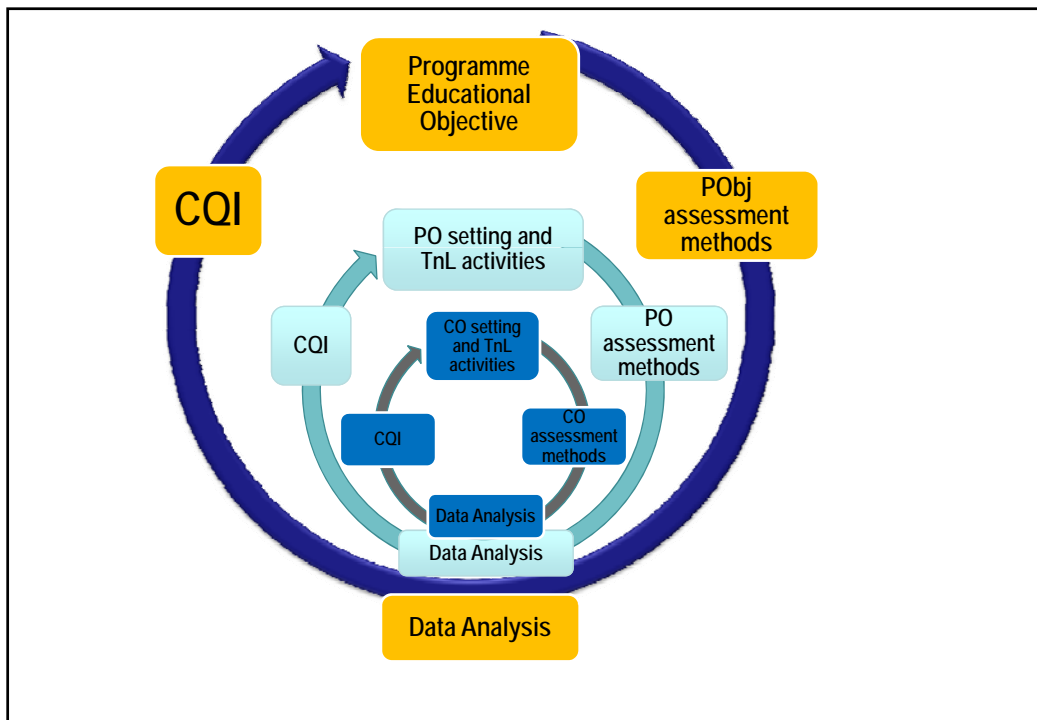
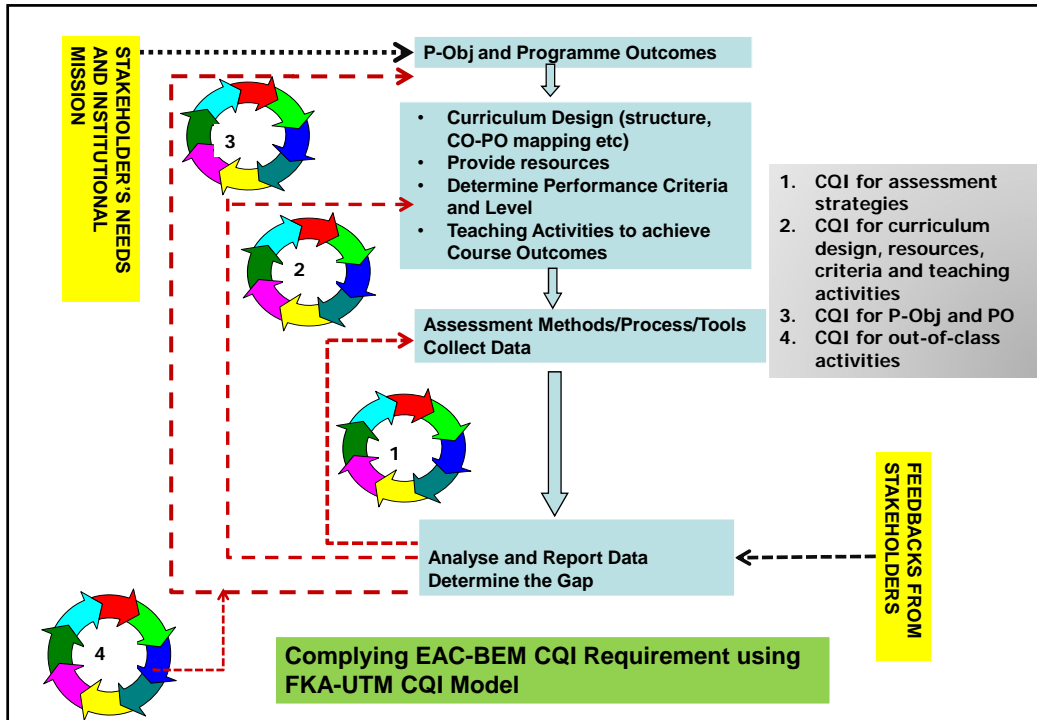


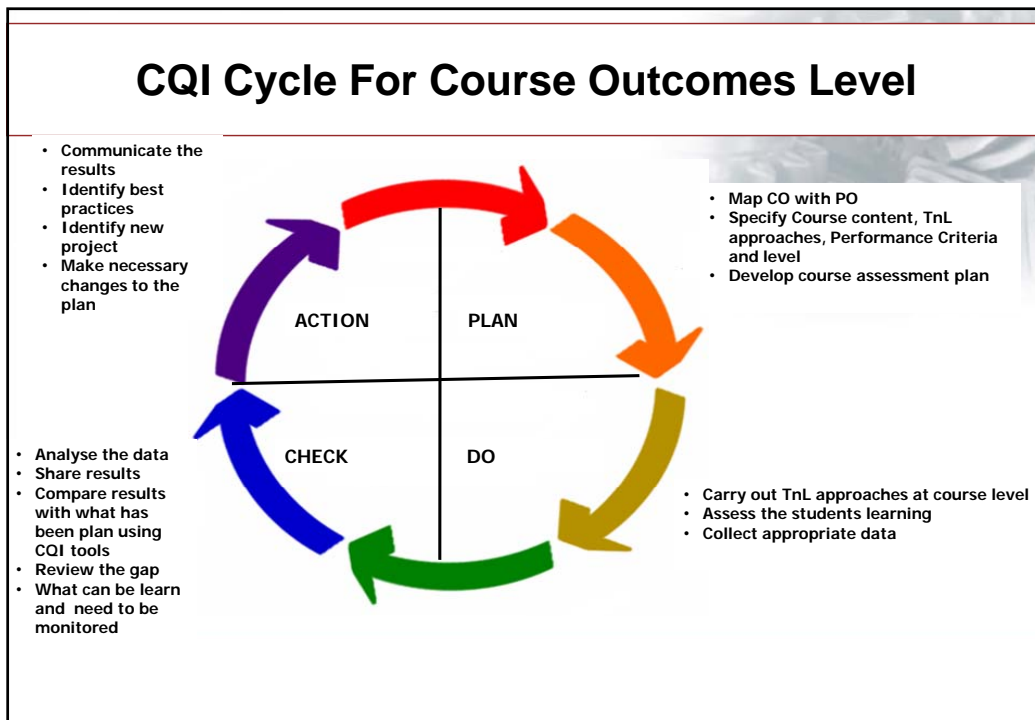
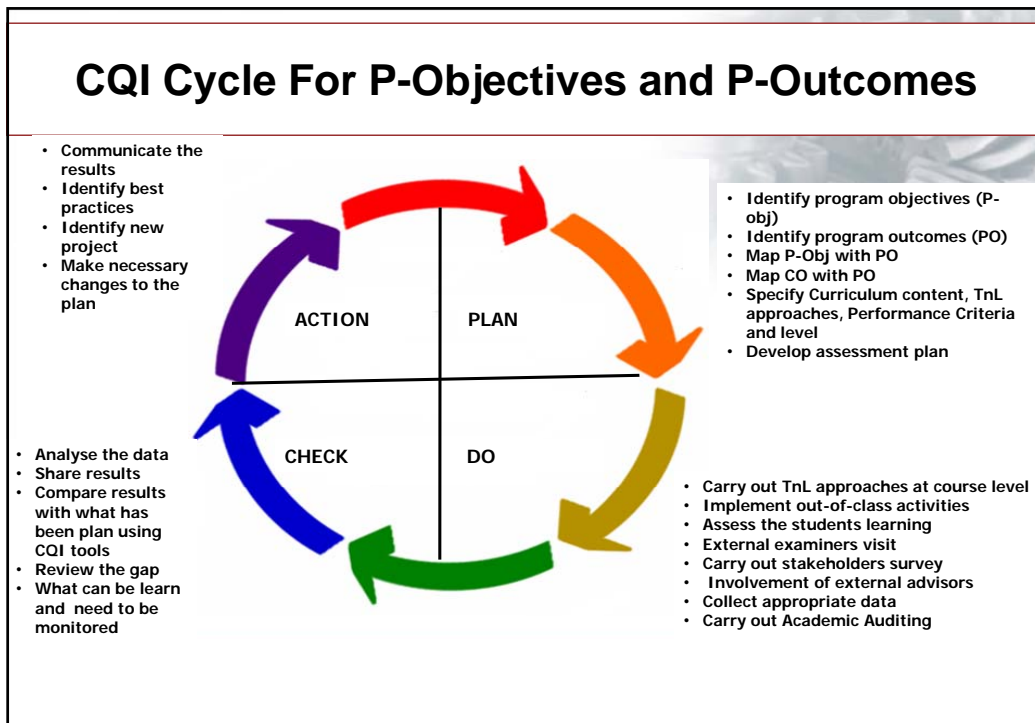
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## IMPLICATION OF CHANGES TO OBE

- Need to understand what is OBE.
- Need to specify programme educational objectives.
- Need to specify learning outcomes.
- Need to revise curriculum.
- Need to change teaching, assessment, and evaluation method.
- Need to start documenting evidences on OBE.
- Need to send staff for training on OBE.
- Need to resist disagreement from faculty members.
- Etc.

