



Outcome-Based Approach to Education/Accreditation

Prof. Ir. Dr. Wan Hamidon Wan Badaruzzaman

Associate Director/Acting Director
Engineering Accreditation Unit (EAU)

Chairman, Working Group, Revised Version 3 EAC Manual



OBE

OBE is a process that involves the restructuring of curriculum, assessment and reporting practices in education to reflect the achievement of high order learning and mastery rather than accumulation of course credits.

Wan Hamidon, Sept. 2006

What will be involved in the process towards OBE?



- **Course Content** - Reviewing course content to suit specified Learning Outcomes, current development, industrial needs, job specifications, professional body requirement (accreditation), etc.
- **Teaching-Learning Methods** - Introducing innovative/flexible teaching methods/delivery tools to develop PEO and PO in students/graduates
- **Assessment & Evaluation Tools** - Introducing variety of assessment and evaluation tools to measure the achievement of PEO and PO.
- **Data & Evidence Collection** - Collecting evidences of process involved and the achievement of the PEO and PO.

Wan Hamidon, Sept. 2006



Wan Hamidon, Sept. 2006



PROGRAMME OBJECTIVES (PEO):

Specific goals consistent with the mission and vision of the Institution of Higher Learning, and are responsive to the expressed interest of programme stakeholders describing expected achievements of graduates in their career and professional life after graduation.

Wan Hamidon, Sept. 2006



PROGRAMME OUTCOMES:

Statements that describe what students are expected to know and be able to perform or attain by the time of graduation. These relate to the skills, knowledge, and behaviours that student acquire through the programme.

Wan Hamidon, Sept. 2006



ASSESSMENT:

Processes that identify, collect, use and prepare data for evaluation of achievement of programme outcomes or educational objectives.

EVALUATION:

Processes for interpretation of data and evidence from assessment practices that determine the program outcomes are achieved or result in actions to improve programme.

Wan Hamidon, Sept. 2006



Outcome-Based Education at CityU

Anna Kwan
Education Development Office

1



1. Warming up
2. What is OBE?
3. Why is OBE so important?
4. What is your role in OBE?
5. Where to get resources & support?
6. A quiz to check how well you learn

2



1. Warming up

- You are about to participate in a two-week programme for **losing weight**
- **What do you expect to know?**



3



2. What is OBE?

- **Outcomes Based Education**
- **Curriculum design & implementation based on outcomes**
- **Outcomes emphasise on capacity rather than just on content knowledge**
- **Learning process is capacity building rather than content delivery**

4



2. What is OBE?

- Think through 3 important questions to achieve better alignment
 1. What students are expected to achieve?
 2. Through what processes students can achieve it?
 3. How well students have achieved it?

5



2. What is OBE?

The 3 important questions in student learning

1. What students are expected to achieve? (intended learning outcomes, **ILOs**)
2. Through what processes students can achieve it? (teaching & learning activities, **TLAs**)
3. How well students have achieved it? (**assessment**)

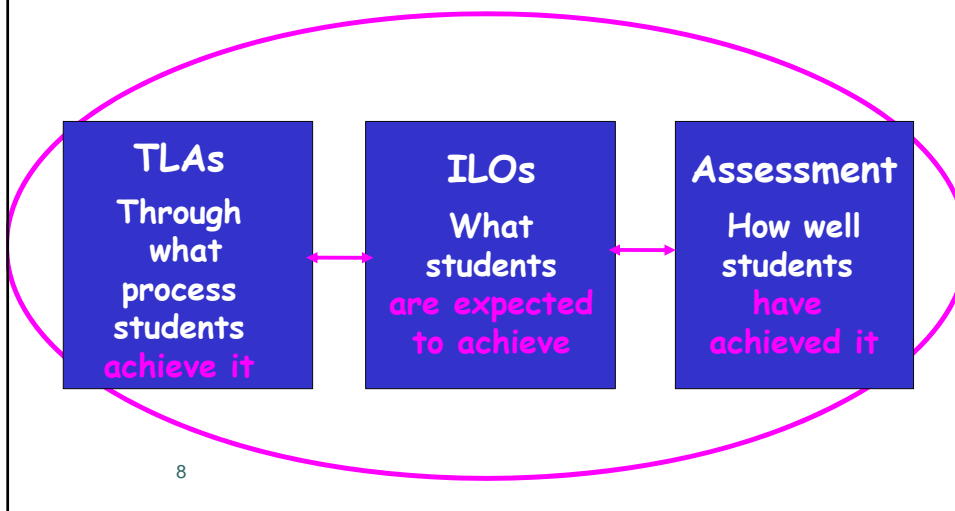
6

Traditional Mode vs OBE

	ILOs	TLAs	Assessment
Traditional Mode	Content-based	Content delivery	<ul style="list-style-type: none">• Exams• MCQs• Assignments
OBE	Ability-based	Ability building	<ul style="list-style-type: none">• Appropriate methods• Formative• Feedback• Assessment criteria



Constructive Alignment



Learning to Learn - Course ILOs

ILOs	TLAs	Assessment
<p>Students become self-regulated learners</p> <p>Students are willing to & able to monitor their learning process</p>	<ul style="list-style-type: none"> • Small group Problem-based learning • Students learn on their own • Teachers as facilitators • Submit & share time schedules & reflective journals each week 	<ul style="list-style-type: none"> • Continuous assessment • Formative feedback • Forms to specify criteria • Student peer & self-assessment • Use LASSI and other tests as Pre- & post-tests

Learning to Learn - Specific ILOs

ILOs	TLAs	Assessment
<p>Oral presentation skills</p> <p>Students are able to evaluate their own oral presentation skills & find ways for continuous improvement</p>	<ul style="list-style-type: none"> • Prepare & perform 4 oral presentations 	<ul style="list-style-type: none"> • Forms to specify criteria • Peer-assessment & feedback • Video recording for self-assessment & improvement



3. Why is OBE so important?

- Make the learning outcomes more explicit to stakeholders
- Provide students with more systematic learning experiences thus better quality education
- This has been promoted by University Grants Committee (UGC)
- The success of OBE will be evidence of education quality work

11

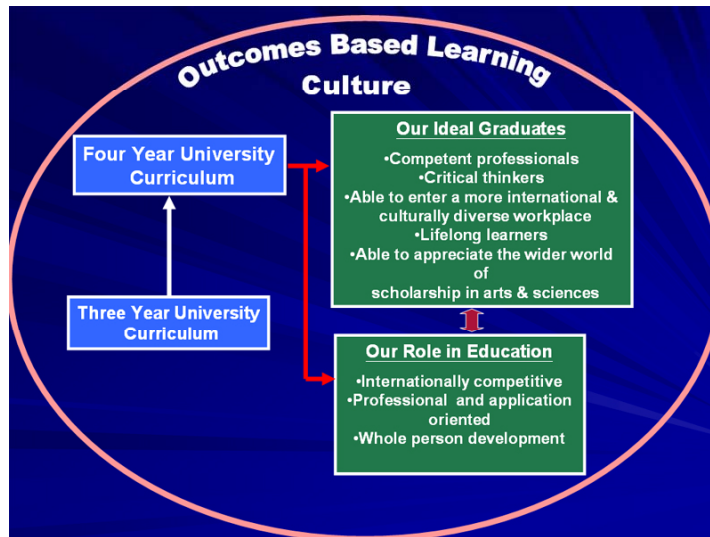


What the UGC said

- the Panel has asked local universities to show that they have thought through the “learning outcomes” they expect their students to achieve, and that they are organising educational experiences to enable students to achieve these outcomes. ... Taken together, these features of a well-designed and well-delivered higher education amount to a demand that learners and learning should be central to education quality work.
- UGC recommended CityU to 'move to ensure that student assessment methods are fully aligned with intended learning outcomes'

12

The CityU Outcomes Based Teaching & Learning (OBTL) Project



Phases of Project

Phase	Action	Time
1	Introduce the OBTL approach	Sep 2005
2	Identify & develop programme/course ILOs	Sep-Dec 2005
3	Develop appropriate learning assessments & construct the curricula	Jan-May 2006
4	Plan the implementation	Jun 2006



Phases of Project

Phase	Action	Time
5	Implement the OBTL approach <ul style="list-style-type: none">• Run each programme/course by the OBTL approach• Review the revised programmes & make appropriate adjustment	Sep 2006 onwards

15



Key Tasks Completed

- Review & reconstruct the aims & objectives of all taught programmes & courses
- Design a set of new forms for course information
- Modify relevant QAC guidelines
- Provide staff training and expert consultant sessions
- Revise relevant reward schemes

16



Key tasks *to be completed*

- Benchmark curriculum design against *international best practices*
- Modify the *teaching evaluation system*
- *Recognise staff's efforts on OBTL in personnel decisions*

17



4. What is your role in OBE/OBTL?

Expectation 1: Work with colleagues in a team

- Analyse & evaluate the *curriculum elements* in the document
- Discuss with colleagues (e.g. programme leaders) for *clarification*
- Ensure the learning process is focused on *capacity building* and the *elements* in the curriculum are *constructively aligned*
- Work with colleagues in a *concerted effort* to ensure students to share *similar learning experiences* thus achieve the *expected learning outcomes*
- Contribute to the *continuous improvement* of the curriculum

18

4. What is your role in OBE/OBTL?

Expectation 2: Design OBE curriculum

You need to work backward. You start with what students will achieve at the end. You:

- Write concrete & measurable ILOs
- Design appropriate TLAs
- Plan relevant assessment tasks & criteria to measure students' achievement of ILOs

19

Writing ILOs

- Consider what (attitude, knowledge/ understanding & skills) you want your students to achieve.
- Ask yourself the following questions like:
 - What do I want students to know and be able to do by the end of this programme/course/class meeting?
 - How will students be able to use this learning? Doing what? In what contexts?

Writing ILOs

Use

- an **action verb** (what students will be able to do)
- + **object**
- + a **qualifying phrase** to provide a context

The intended learning outcomes

- After this session, the participants should be able to:
 - List at least 2 characteristics of OBE & 1 reason for adopting it
 - Outline at least 3 expectations & tasks for teachers in OBE/OBTL
 - Identify at least 1 channel to get resources & support for OBE/OBTL at CityU

T & L Activities	Learning Most Likely to elicit
Each teaching/learning activity (TLA) → a form of learning	
<i>Teacher-controlled</i>	
Lecture _____	Reception of selected content
Think-aloud _____	Demonstrate conceptual skills
Questioning _____	Clarifying, seeking error
Advanced organiser _____	Structuring, preview
Concept mapping _____	Structuring, overview
Tutorial _____	Elaboration, clarification
Laboratory _____	Procedures, application
Excursion _____	Experiential knowledge, interest
Seminar _____	Clarification, presentation skills
<i>Peer-controlled</i>	
Learning partners _____	Resolve differences, application
Peer teaching _____	Depends whether teacher or taught
Spontaneous collaboration _____	Breath, insight
Various _____	Elaboration, problem solving, metacognition
<i>Self-controlled</i>	
Generic study skills _____	Basic self-management
Content study skills _____	Information handling
Metacognitive learning skills _____	Independence & self-monitoring

Assessment Tasks	Likely Kind of Learning Assessed
<i>Essay-type</i>	
Essay exam	Rote, question spotting, speed structuring
Open book	As for exam but less on memory, coverage
Assignment, take home task	Read widely, inter-relate, organise, apply
<i>Objective test</i>	
Multiple choice	Recognition, strategy, comprehension, coverage
Ordered outcome	Hierarchies of understanding
<i>Performance assessment</i>	
Practicum	Skills needed in real life situation
Seminar, presentation	Communication skills
Critical incidents	Reflection, application, sense of relevance
Project	Application, research skills
Reflective journal	Reflection, application, sense of relevance
Case study, problem solving	Application, professional skills
Portfolio	Reflection, creativity, unintended outcomes
<i>Rapid assessments (large class)</i>	
Concept maps	Coverage, relationships
3-minute essay	Level of understanding, sense of relevance
Gobbets	Appreciating significant detail, why
Short answer	Recall units of information, coverage
Letter to a friend	Holistic understanding, application, reflection
Cloze	Comprehension of main ideas



4. What is your role in OBE/OBTL?

Expectation 3: Work with students to implement the curriculum

- **Communicate** the what, why & how of ILOs, TLAs & assessment criteria to students
- **Ask students to monitor their own learning** according to the assessment criteria
- **Facilitate** the TLAs to help students achieve the ILOs
- **Organise formative assessment** tasks to help students learn
- **Arrange students to receive feedback** which is based on the assessment criteria

25



5. Where to get resources & support?

- **CityU OBTL Website & Project Team**
<http://www.cityu.edu.hk/obt/>
- **Education Development Office (EDO)**
<http://www.cityu.edu.hk/edo>
- **OBE at UWA**
http://www.catl.uwa.edu.au/current_initiatives/obe
- **Learning Outcomes**
<http://lsn.curtin.edu.au/outcomes/docs/faqs.doc>

26



A quiz

- Work in pairs
 - Take turn to ask your partner the following questions
 - Give the person some constructive feedback
1. What is OBE?
 2. What is constructive alignment?
 3. Why is OBE so important?
 4. What is your role in OBE/OBTL?
 5. Where to get resources & support?

27



The intended learning outcomes

- After this session, the participants should be able to:
 - List at least 2 characteristics of OBE & 1 reason for adopting OBE
 - Outline at least 3 expectations & tasks for teachers in OBE/OBTL
 - Identify at least 1 channel to get resources & support for OBE/OBTL at CityU

28