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Outcome-Based Approach to student learning

What is it all about?

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EDC
26 Oct 2007

OBE – important long term endeavour

PolyU is serious about it

- Curriculum Revision 2004
- Pledged to UGC to adopt OBE in
  - Academic Development Plan 2004
  - Recent Report on progress in 4-year curriculum
- Appointed OBE 'Champions' in all Faculties/Schools
- Working Group on OBE to steer & monitor implementation
- Business Plan to include plan on implementation of OBE in department
- Funding to support departments and staff

UGC is serious about it

- Appointed consultant Dr Peter Ewell, Vice President of the National Centre for Higher Education Management Systems
- Additional funding for promoting 'outcomes'
- Set up 'Inter-Institutional Task Force' to drive adoption of 'outcomes' within institutions
- Expect institutions to 'cement' outcomes into the 4-year curriculum

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Outcome-based approach to student learning – Underpinning theories

- Outcome-based education theory (Spady)
- Constructive alignment (Biggs)
- Assessment of Learning Outcomes (US)

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Outcome-based approach to student learning: 4 essential elements

Define
intended learning outcomes

Design curriculum, teaching, learning & assessment to support attainment of outcomes
Alignment

Collect data on student attainment of outcomes
Outcomes Assessment

Use data to inform improvement of programmes

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The theory of Outcome-Based Education

"Outcome-based education means starting with a clear picture of what is important for students to be able to do, then organising the curriculum, instruction, and assessment to make sure that this learning ultimately happens."
(Spady, 1994)

* *Spady is recognised as the world authority on OBE*

Group work:
Read the quotation carefully to identify the key principles of outcome-based education

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Outcome-based approach to student learning: 4 essential elements

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Learning outcomes

Outcome is a ***desired STATE in student*** as a result of learning

Learning outcomes encompass

a) What students should know / understand
b) What students should be able to do
c) What students should be like

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Are these outcome statements?

(a) From whose perspective are they written?
(b) How to test that they are achieved?

Objectives of the programme / subject are to

provide a broad view of both theoretical and practical issues in xyz.
introduce students to the concepts and applications of xyz.
familiarize students with the tools and languages for xyz.
expose students to the applications of xyz.

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Are these good outcome statements?

(a) Do they include what students will understand, be able to do and be like?

(b) How far are they different from a content list?

Students will gain a knowledge and understanding of

- the Nature of XYY
- ABC Characteristics
- KLM
- .....

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A change in paradigm

Common 'old' approach	Outcome-based approach
A ***teacher's perspective***, concerning: input from teacher what the teacher *plans* to do	A ***student's perspective***, concerning: output of students what the students will do
Planning with reference to what ***content to teach*** Achieving: knowledge	Planning with reference to what ***outcomes to be demonstrated*** Achieving: knowledge abilities attitude

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Overarching outcomes for PolyU programmes: All-round students with professional competence

Programme outcomes and subject outcomes required to encompass

- Professional / academic knowledge and skills
- Attributes for all-roundedness

[Curriculum Revision Guidelines, 2004]

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Outcomes for engineering programmes

(Accreditation Board for Engineering and Technology, ABET, USA)

1. to apply knowledge of mathematics, science, and engineering
2. to design & conduct experiments as well as analyze & interpret data
3. to design a system, component, or process to meet desired needs
4. to function on multi-disciplinary teams
5. to identify, formulate, and solve engineering problems
6. have an understanding of professional and ethical responsibility
7. to communicate effectively
8. have the broad education to understand the impact of engineering solutions in a global and societal context
9. possess the ability to engage in life-long learning
10. possess a knowledge of contemporary issues
11. to use the techniques, skills, and modern engineering tools necessary for engineering practice

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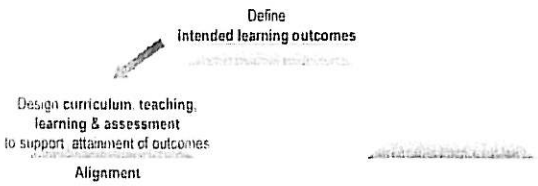
Outcome-based approach to student learning: 4 essential elements



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The theory of Outcome-Based Education

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Material Technology for Interior Designers

Intended learning outcome	Use materials as an interior designer
Teaching / learning	Lectures to provide information on the properties of the materials
Assessing student learning	Examination on the knowledge of the properties of materials

Group discussion
Can the teaching and assessment methods *make sure* that the intended learning outcome is achieved?

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Material Technology for Interior Designers

	Old programme	Outcome-oriented programme
Learning outcome to be achieved	Understand technical details of materials	Use materials as interior designers
Teaching and learning	Lectures	Produce a "User Guide"
Assessing student learning	Exam	User Guide case study

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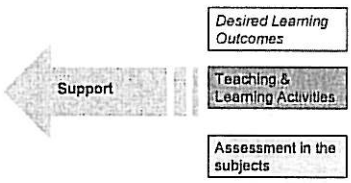
Constructive alignment (Biggs)



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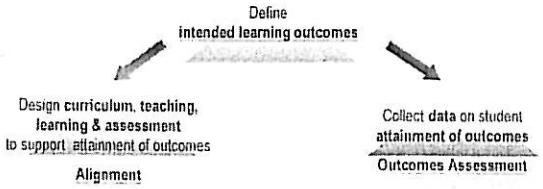
Outcome-based approach to student learning: 4 essential elements



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Outcomes assessment

"Outcome assessment is **not about examination**"

(M. Stone, General Secretary, UGC, speech presented in the PolyU OBE Symposium, 15 Dec 2005)

"...the process of assembling broader evidence of **programme or institutional effectiveness** that goes **beyond the performance of individual students.**"

(Ewell, UGC Consultant on Student Learning Outcomes, 2006)

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'Legitimate' evidence / data

Direct evidence

- subject-based assessment
- performance assessment (e.g. practicum or WIE)
- standardised knowledge or competency tests
- progression/completion rate
- employment statistics
- professional or licensure exam
- etc.

Indirect evidence

- students' self assessment of learning gains
- students' engagement in learning activities
- students' feedback on learning experience or environment
- graduate survey
- alumni survey
- employer survey
- Etc.

Adapted from slide written by KP Kwan

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Purposes of outcomes assessment

Improving student learning
- providing evidence and feedback for improvement

Accountability
- UGC QAC Audit

Demonstration of value and quality to
- professional bodies or accreditation agencies
- other stakeholder groups (e.g. prospective and current students, employers, etc.)

Adapted from slide written by KP Kwan

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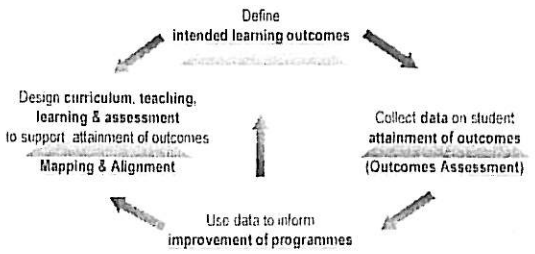
PolyU's approach to student learning outcomes
(parallel efforts on Quality Enhancement & Quality Assurance)



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