



**ENFORCEMENT, LEADERSHIP
AND MANAGEMENT UNIVERSITY**

*"Prime Bastion of Law-Enforcement Education
Exceptional Leaders of Tomorrow, Trained Today"*

OUTCOME-BASED EDUCATION TRAINING

**PRESENTED BY:
TS DR ROZITA HUSAIN**



**22-25 JULY 2025
ELMU GRANDHALL**

Outcome-Based Education (OBE) Outline



At the end of the presentation, the participants will be able to:



Explain the concept, philosophy, principles and applications of OBE



Explain why MOE advocates OBE as the basis for higher education in Malaysia



Explain the relevance of OBE in Malaysian higher education and its relation to the existing government's policies and regulations



Why OBE?



About 44,000 graduates are without jobs as they have nothing outstanding to offer to the job market, although they possess degrees and diplomas.



Professor Emeritus Datuk Dr Khoo Kay Kim of the University of Malaya said this was one problem which must be looked into.



He said this had been mainly caused by students memorising facts without knowing how to apply them in a particular situation.

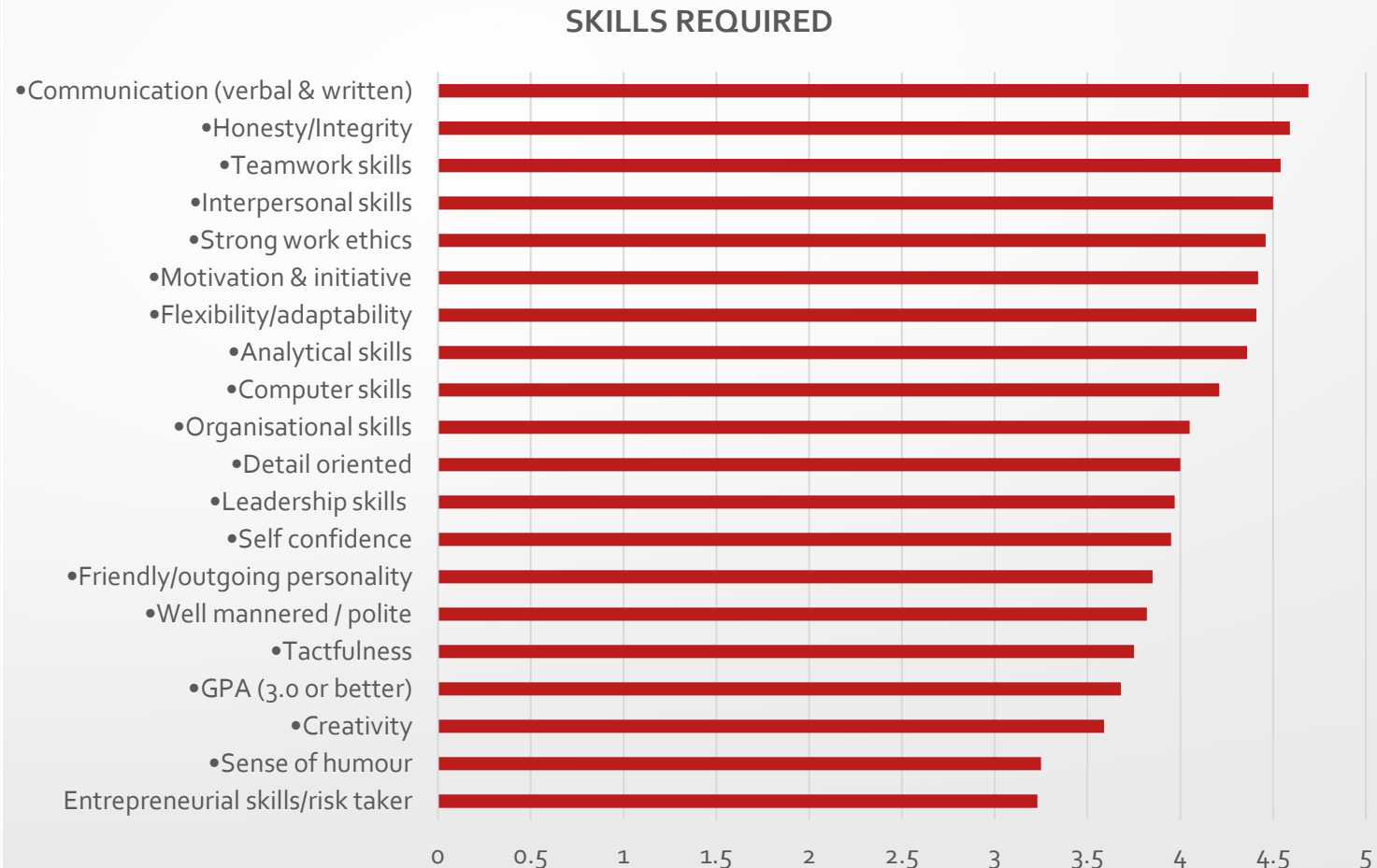


"As a result, most of them can't even do simple things or solve simple problems. Another factor is their laid-back attitude. This is one phenomenon that is evident today". NST August 20, 2002



Employers Rate The Importance Of Candidate Qualities/Skills

REQUIREMENT	%
Entrepreneurial skills/risk taker	3.23
•Sense of humour	3.25
•Creativity	3.59
•GPA (3.0 or better)	3.68
•Tactfulness	3.75
•Well mannered / polite	3.82
•Friendly/outgoing personality	3.85
•Self confidence	3.95
•Leadership skills	3.97
•Detail oriented	4
•Organisational skills	4.05
•Computer skills	4.21
•Analytical skills	4.36
•Flexibility/adaptability	4.41
•Motivation & initiative	4.42
•Strong work ethics	4.46
•Interpersonal skills	4.5
•Teamwork skills	4.54
•Honesty/Integrity	4.59
•Communication (verbal & written)	4.69





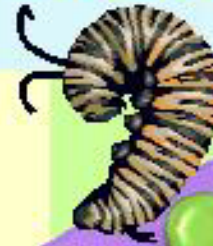
EVOLUTION IN QA SYSTEM IN HIGHER EDUCATION



1996 - 2006

- 1996 : QA Internal Matter of Institutions
- 1997 : Legal Reforms LAN for Private Providers
- 2002 : BJK for Public Providers
- 2002: Draft MQF
- 2005 : Cabinet Decisions - MQA & MQF
“not fully unified HE”
“segmented QA system”

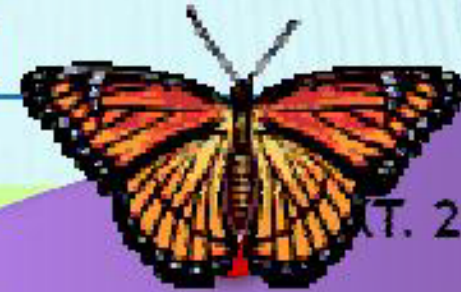
2006 : Consultation &



2007

MQA BILL

- 13 June : Cabinet Approval MQA Bill
- 2 & 16 Jul: Parliament Approve MQA Bill
- Dualism to a unified an expected outcome
- Public confidence
- Strengthening Malaysia as a global player Higher Education



2007 ...- ...

- Transition to full Implementation of a unified Quality assurance system and Qualifications Framework
- MQF to be uphold by QA processes
- Increase Autonomy of Institution /CQI
- MQA a major player in Higher Education contributing human capital and National Competitiveness
- A SHARED VISION FOR QUALITY

PHASE 1

>>>>>

PHASE 2



ARKIB : 01/07/2003



Be the first of your friends to like this.

Kerangka Kelayakan - Memartabatkan kualiti pendidikan tinggi

Oleh RAJMAH HASAN SHIRAT



Abang Johari Tun Openg (duduk) bersama pelajar ketika berada dibilik komputer selepas majlis perasmian kem bina semangat anjuran forum pelajar pelajar sains politik UIA di Kuching, semalam. Gambar - Azman Ahmad.

KERANGKA Kelayakan Malaysia (KKM) yang sedang diusahakan oleh Bahagian Jaminan Kualiti (BJK), Kementerian Pendidikan bakal memartabatkan kualiti pendidikan tinggi di institusi pengajian tinggi awam (IPTA) dan swasta (IPTS).

Ini sejajar dengan salah satu matlamat utamanya iaitu untuk mempromosikan keyakinan awam terhadap tahap kualiti pendidikan tinggi di negara ini.

KKM kini sedang dibentuk untuk dijadikan pusat rujukan kepada semua IPTA dan IPTS, badan dan agensi latihan kerajaan serta bukan kerajaan yang memberikan kelayakan.

Apabila KKM dikuatkuasa kelak, bermakna sebarang kelayakan akademik dan latihan yang dianugerah kepada pelajar merangkumi sijil, diploma, ijazah sarjana muda, ijazah sarjana dan doktor falsafah tertakluk kepada KKM.

Justeru kewujudan KKM amat perlu memandangkan terdapat banyak jenis kelayakan yang ditawarkan oleh pembekal-pembekal pendidikan dan latihan.

Timbalan Pengarah Jabatan Pendidikan Tinggi (Bahagian Penjaminan Kualiti), Profesor Datuk Dr. Sharifah Hapsah Syed Hasan Shahabudin berkata sudah tiba masanya Malaysia perlu mengadakan satu sistem yang menyatu padukan standard setiap kelayakan dalam satu-satu bidang.

``KKM adalah satu sistem yang menyatu padukan semua kelayakan yang dianugerahkan oleh IPTA, IPTS, badan profesional mahu pun yang di luar institusi pendidikan," katanya ketika ditemui Utusan Malaysia di pejabatnya, baru-baru ini.

Menurut Sharifah Hapsah, keperluan mewujudkan KKM penting bagi menyama taraf setiap kelayakan yang ditawarkan oleh semua pihak yang terlibat.

KKM tambahnya menyediakan maklumat mengenai kelayakan dalam bentuk yang memudahkan badan-badan profesional menilai sumbangan mereka kepada perkembangan profesion. Malah katanya, KKM juga menentukan kesetaraan kelayakan-kelayakan luar negara.

Begitupun katanya, KKM perlu mendapat konsensus daripada semua pihak yang terlibat supaya ia menjadi satu sistem yang kukuh dan diterima pakai di peringkat kebangsaan dan antarabangsa.

``Apabila semua ciri-ciri kelayakan ini sudah jelas maka ia harus dipantau oleh badan-badan selia yang dilantik untuk memantau pelaksanaannya," katanya.

Justeru katanya, KKM perlu diletakkan dalam akta tertentu supaya pelaksanaannya di peringkat kebangsaan adalah menyeluruh.

What is OBE?



“Outcome-based does not mean curriculum-based with outcomes sprinkled on top. It is a transformational way of doing business in education.” (William Spady, 1993)

These decisions include curriculum content, educational strategies, student selection and assessment.

OBE is an approach to education in which decisions about the curriculum are driven by the learning outcomes that students should display at the end of the course.



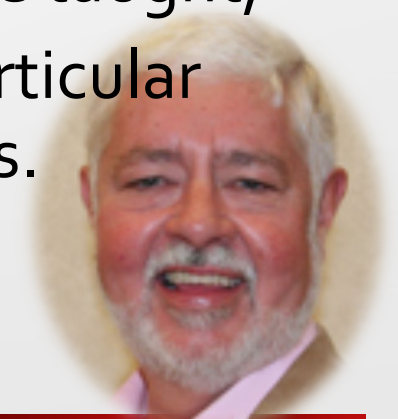
What is OBE?

- *“Education that is outcome-based is a learner-centred, results-oriented system founded on the belief that all individuals can learn”*

• James Towers (1996)

OBE is education based on producing particular educational outcomes that:

- focuses on what students can actually do after they are taught;
- expect all learners/students to successfully achieve particular (sometimes minimum) level of knowledge and abilities.



Basic Types Of Outcomes From the Educational System

- First:
 - Includes performance indicators such as test results, completion rates, post-course employment rates, etc
- Second:
 - Less tangible
 - Usually expressed in terms of :
 - What students know
 - What they are able to do
 - What are they like as a result of their education



(Roy Killen, 2000)



Historic Development Of Outcomes-based Education

MASTERY LEARNING

Acquisition of cognitive, affective and psychomotor skills under appropriate conditions.



COMPETENCE-BASED EDUCATION

Acquisition of a group of skills that bring about competence in specific field, which is assessed against pre-set benchmarks mostly defined by industry



OUTCOMES-BASED EDUCATION

Demonstration of acquired generic skills in different contexts, that are assessed against pre-set criteria agreed upon by all stakeholders



OBE Vs. Traditional Education (Content-based Learning)

Content Based Learning System

Passive students

Assessment process – exam & grade driven

Rote learning

Content based/broken into subjects

Textbook/worksheet focused & teacher centred

See syllabus as rigid & non negotiable

Teachers/trainers responsible for learning - motivated by personality of teacher

Emphasis what teacher hopes to achieve

Content placed in rigid time frames

Outcomes Based Learning System

Active learners

Continuous assessment

Critical thinking, reasoning, reflection & action

Integration knowledge, learning relevant/ connected real life situations

Learner centred & educator/ facilitator use group/ teamwork

Learning programmes seen as guides that allow educators to be innovative & creative in designing programmes/ activities

Learners take responsibility for their learning, learners motivated by constant feedback/ affirmation of worth

Emphasis outcomes – what learner becomes & understands

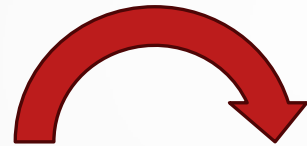
Flexible time frames - learners work at own pace

Paradigm Shift In The Education & Training Philosophy

TEACHER CENTERED

- A traditional teacher owns” the knowledge and conveys it to the students.

The teacher brings the content and the answers into the classroom/ training room with him / her.

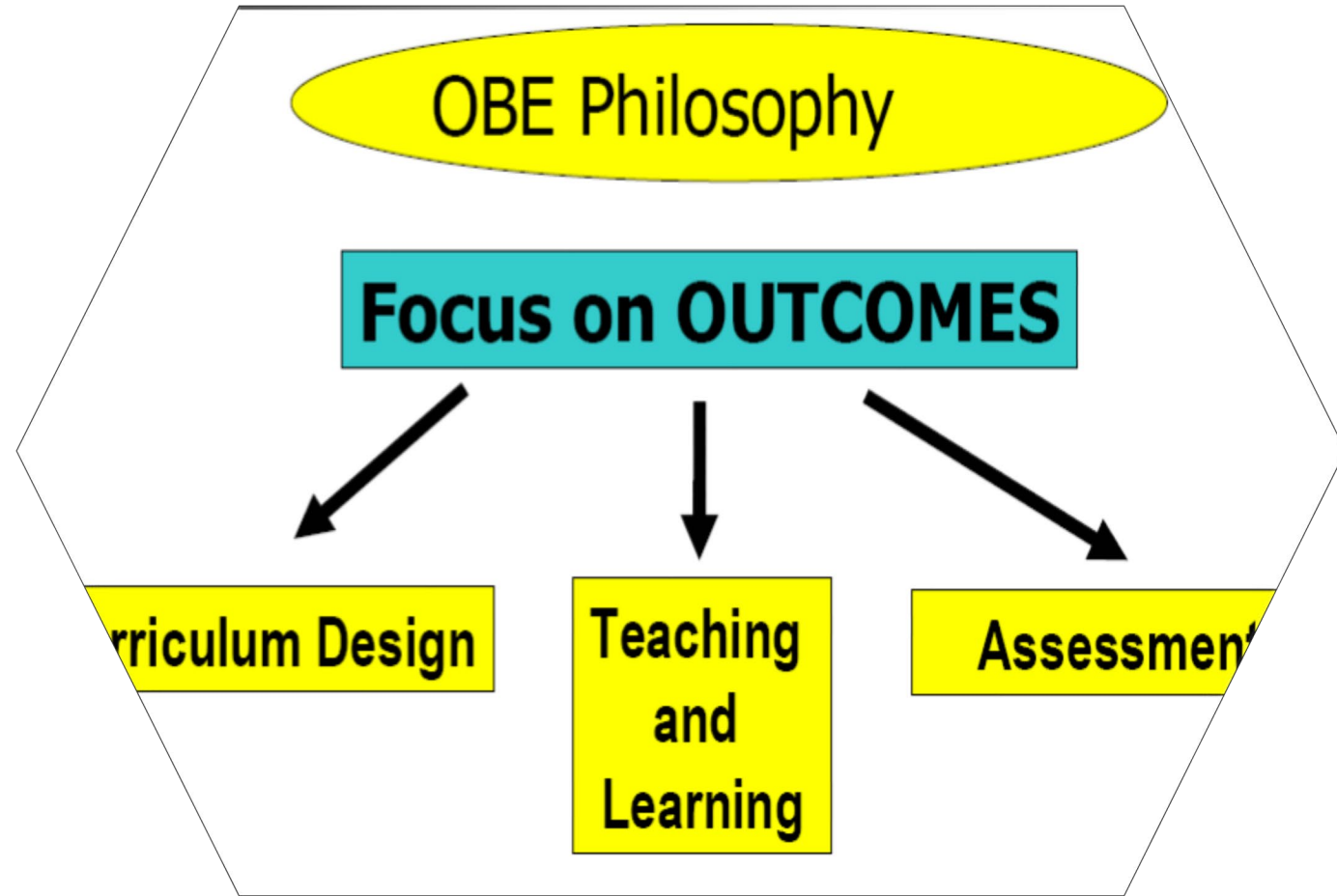


STUDENT CENTERED

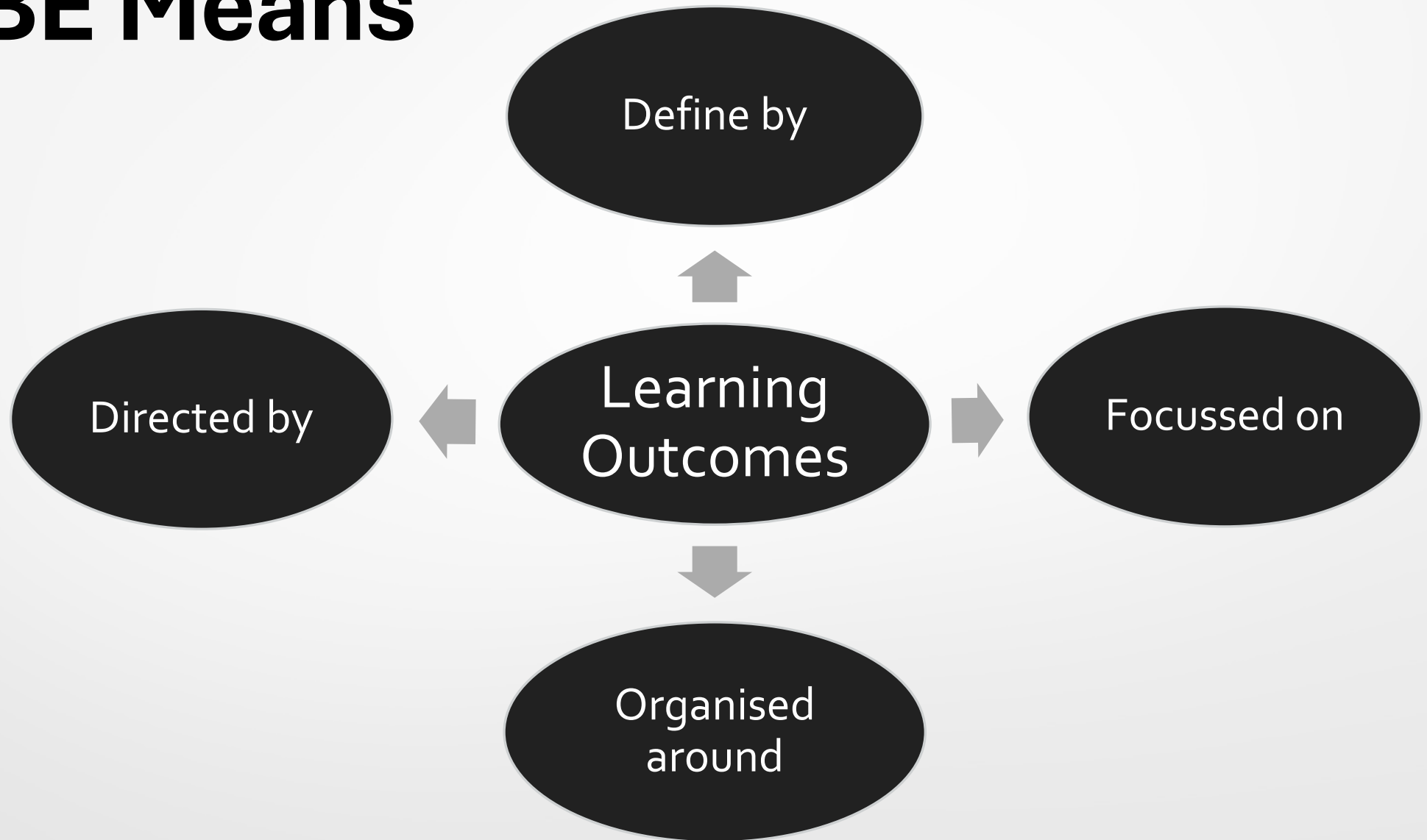
- SCL-based teaching: students (trainees) are to learn as much as possible.
- teacher as a coach who asks questions and provides guidelines for the acquisition of knowledge.



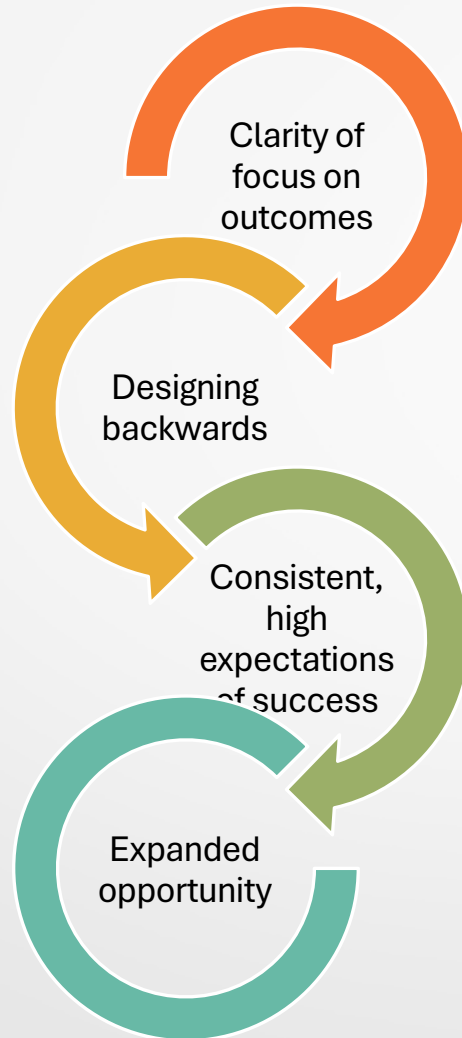
OBE Philosophy



OBE Means



Principles of OBE



- Always have the outcomes as the focus.
- Let the students know what they are aiming for.
- Design curriculum backwards by using the major outcomes as the focus and linking all planning, teaching and assessment decisions directly to these outcomes.
- Set the expectation that OBE is for ALL learners.
- Expect students to succeed by providing them encouragement to engage deeply with the issues they are learning and to achieve the high, challenging standard set (Spady, 1994).
- Develop a curriculum that allows every learner to learn at their own pace.
- Cater to individual needs and differences, for example, by expanding available time and resources, so that all students succeed in reaching the exit outcomes.



OBE Requisites



What the students learn must be clearly identified.



The student's progress is based on demonstrated achievement.



Multiple instructional and assessment strategies need to be available to meet the needs of each student.



Adequate time and assistance need to be provided so that each student can reach their maximum potential



OBE Emphasis?

ASSESSMENT OF
OUTCOMES



OBE is Assessment Driven

Assessment is used to determine whether or not a qualification/ condition/ criterion/ skill has been achieved

To determine whether learners are successful (*i.e. whether students know they have learnt well*), the learners **must be assessed** using the assessment criteria of the outcome



Relevancy of OBE

Rating/Accreditation requirements:

- Quality Assurance Audit by the Ministry of Education: Malaysian Qualifications Framework (MQF) – emphasis on **learning outcomes**.
- Accreditation Requirement for Professional Programmes by professional bodies emphasises **learning outcomes**



Real Benefits of OBE

Anticipation of real benefits

- More directed & coherent curriculum
- Graduates will be more “relevant” to industry & other stakeholders (more well-rounded graduates)
- Continuous Quality Improvement (CQI) is an inevitable consequence



Therefore, OBE

- OBE is an educational process.
- Directed/focused on achieving specific specified **outcomes** in terms of individual student learning.
- **Outcomes** – key things students should understand and be able to do, or the qualities they should develop.
- Both structures and curricula are designed to achieve those capabilities or qualities.
- Educational structures and **curriculum** are regarded as **means, not ends**. If they do not do the job, they are rethought (Continuous Quality Improvement (CQI)).

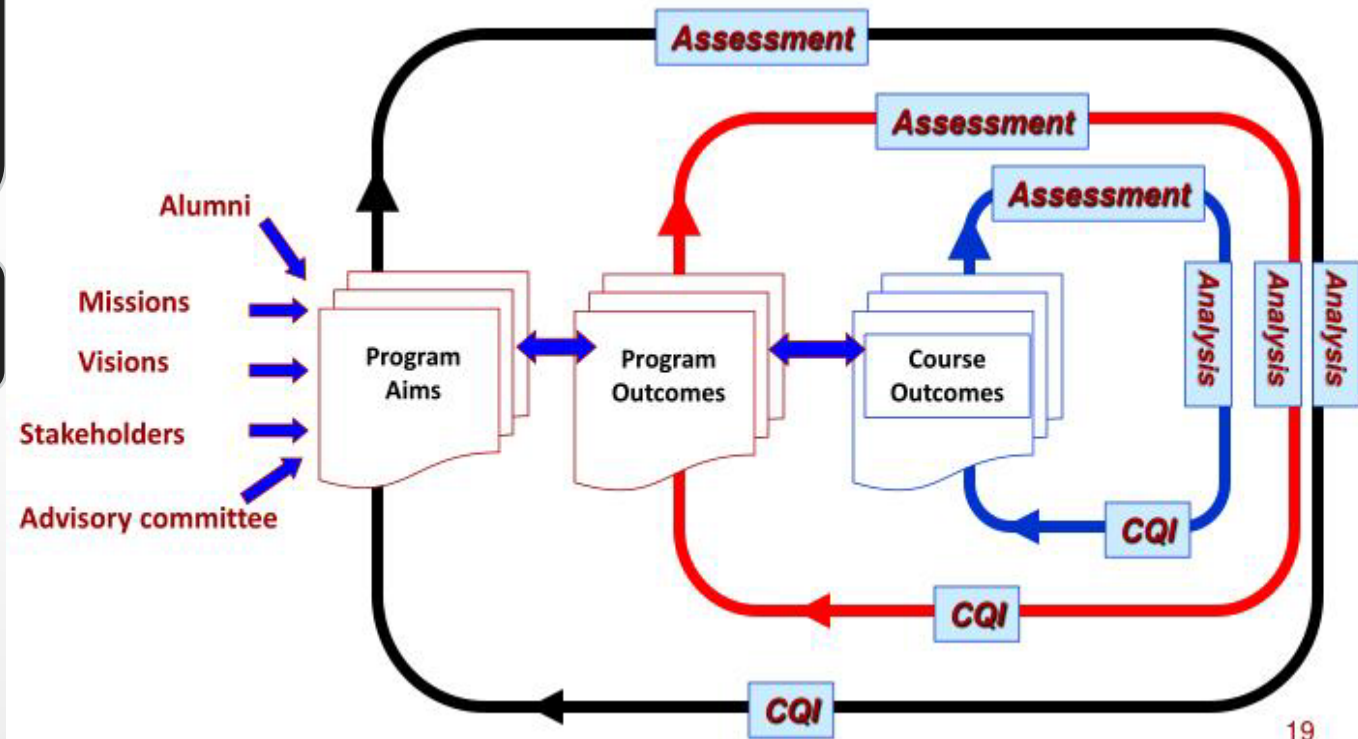


Therefore, OBE

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

Amongst Expected Changes:

- Curriculum Restructuring/Revision
- Innovative/Flexible Delivery Method
- Variety of Assessment & Evaluation Methods
- Collection of Evidence
- Continuous Quality Improvement (Closing the Loop (CDL))



19



RECAP 1

What is OBE?

- OBE is an educational process.
- Directed/focused on achieving certain specified outcomes in terms of individual student learning.



RECAP 2

What is the outcome?

- a statement on what students should know, understand and can do upon the completion of a period of study. (MQF)



RECAP 3

Why OBE?

- PSPTN – Pelan Strategik Pengajian Tinggi Negara
- Objective: Produce human capital with a first-class mentality
- Method: Teaching and Learning in institutions must be based on outcomes (what the students know, understand and can do)



RECAP 4

Why OBE? (Document of References)

- MQF- Malaysian Qualification Framework
- MQA Act 679
- PSPTN
- Garispanduan Penulisan Akademik (JPT,KPM)



RECAP 5

What is MQF?

- An instrument that develops and classifies qualifications
 - How? Clarifies:
 - Levels of qualifications
 - Learning outcomes
 - Credit system based on student academic workload



RECAP 6

What is MQA?

- a single quality assurance agency in Malaysia responsible for assuring the quality of programs offered by higher education providers.
- established under Act 679 to implement MQF





MQF and Act 679: Compliance to MQF and Accreditation needs



Bil. 56

19 Oktober :



**PENYATA RASMI PARLIMEN
DEWAN RAKYAT**

**PARLIMEN KESEBELAS
PENGKAL KEDUA
MESYUARAT KETIGA**

Dato' Dr. Haji Shafie bin Haji Mohd. Salleh: Terima kasih. Satu kajian sedang dilakukan mengenai perkara ini, dan di Majlis Pengajian Tinggi Negara telah pun ada cadangan untuk kita melihat bahawa sesuatu kursus itu akan mengambil masa 120 *credit hours*. Tetapi kita sekarang ini lebih mementingkan *duration* atau lamanya, jadi 120 *credit hours* ini boleh kita samakan dengan 3 tahun.

Dr. Tan Seng Giaw: Saya berharap standard dapat ditingkatkan supaya kita tidak adalah PhD juadah dan sebagainya.

Dato' Dr. Haji Shafie bin Haji Mohd. Salleh: Terima kasih Yang Berhormat, apa yang kita sedang lakukan ialah kita akan sedang membentuk, *Malaysia Qualification Framework* (MQF) dengan izin. Dengan adanya MQF ini selepas itu kita akan adakan *Mutual Recognition* (MR). Di sinilah kita harapkan ramai penuntut luar negara akan datang ke tempat kita belajar apabila mereka balik kerajaan mereka akan *recognized* atau mengiktiraf program-program yang telah kita adakan.

Why OBE? – OBE in PSPTN



- 4.03 Sebagai usaha tambahan untuk mewujudkan pengajian tinggi yang berkualiti, kerajaan telah mula melaksanakan Kerangka Kelayakan Malaysia (*Malaysian Qualification Framework*) pada akhir tahun 2007. Selaras dengan peranannya sebagai tempat rujukan kualiti pengajian tinggi, MQF memberikan penekanan kepada pendidikan berlandaskan hasil pembelajaran (Kotak 4.1). Di samping memberikan jaminan kualiti, ciri utama MQF



OBE in Act 679



MALAYSIAN QUALIFICATIONS AGENCY ACT 2007

An Act to establish the Malaysian Qualifications Agency as the national body to implement the Malaysian Qualifications Framework, to accredit higher educational programmes and qualifications, to supervise and regulate the quality and standard of higher education providers, to establish and maintain the Malaysian Qualifications Register and to provide for related matters.

UNDANG-UNDANG MALAYSIA

Akta 679

AKTA AGENSI KELAYAKAN MALAYSIA 2007



OBE in Act 679



UNDANG-UNDANG MALAYSIA

Akta 679

AKTA AGENSI KELAYAKAN MALAYSIA 2007

“learning outcome” means the standard to be achieved from an educational or skill training programme or qualification as determined by the Framework;

“higher education provider” means a body corporate, organisation or other body of persons which conducts higher education or training programmes including skills training programmes leading to the award of a higher education qualification or which awards a higher education qualification and includes the public or private higher education providers, examination or certification bodies or their branch representatives;



OBE in Act 679



UNDANG-UNDANG MALAYSIA

Akta 679

AKTA AGENSI KELAYAKAN MALAYSIA 2007

PART VI

MALAYSIAN QUALIFICATIONS FRAMEWORK

The Framework

35. (1) The Agency shall be responsible for the implementation of the national framework to be known as the “Malaysian Qualifications Framework”, consisting of qualifications, programmes and higher education providers based on a set of criteria and standards, including learning outcomes achieved and credits based on students’ academic load.



What is MQA?

The Malaysian Qualifications Agency (Agensi Kelayakan Malaysia) or the MQA is a statutory body in Malaysia set up under the Malaysian Qualifications Act 2007 to:

- Implement MQF
- Accredite HE programmes and qualifications
- Supervise and regulate quality and standard of HEP
- Establish and maintain MQR



Type Of Quality Assurance

1. Programme Accreditation - COPPA
2. Institutional Audit - COPPIA
3. Audit for Self-Accrediting Status - SWA

(UM,UKM,USM,UPM, UTM, Monash Sunway, Nottingham Uni.,
Curtin Sarawak, Swinburne Sarawak)

Equivalency assessment for local and foreign qualifications based on MQF, UK's National Academic Recognition Information Centre(UK NARIC) and Australia's Country Education Profiles(CEP Australia)



COPPA 2017

Standards for Programme Accreditation (2017)

- The 9 areas of evaluation were collapsed to 7 areas



Areas Of Evaluation

Areas of Evaluation	COPPA 2 nd edition No. of Standards
Area 1: Programme Development and Delivery	17
Area 2: Assessment of Student Learning	11
Area 3: Student Selection and Support Services	20
Area 4: Academic Staff	15
Area 5: Educational Resources	10
Area 6: Programme Management	16
Area 7: Programme Monitoring, Review and Continual Quality Improvement	9
	98



Quality Assurance Application

PROVISIONAL ACCREDITATION	FULL ACCREDITATION
MQA-01	MQA-02
■ Part A – General Information on the HEP ■ Part B – Programme Description ■ Part C – Programme Standards	■ Part A – General Information on the HEP ■ Part B – Programme Description ■ Part C – Programme Standards ■ Part D – Self Review Report (SRR)





MALAYSIAN QUALIFICATION FRAMEWORK (MQF)

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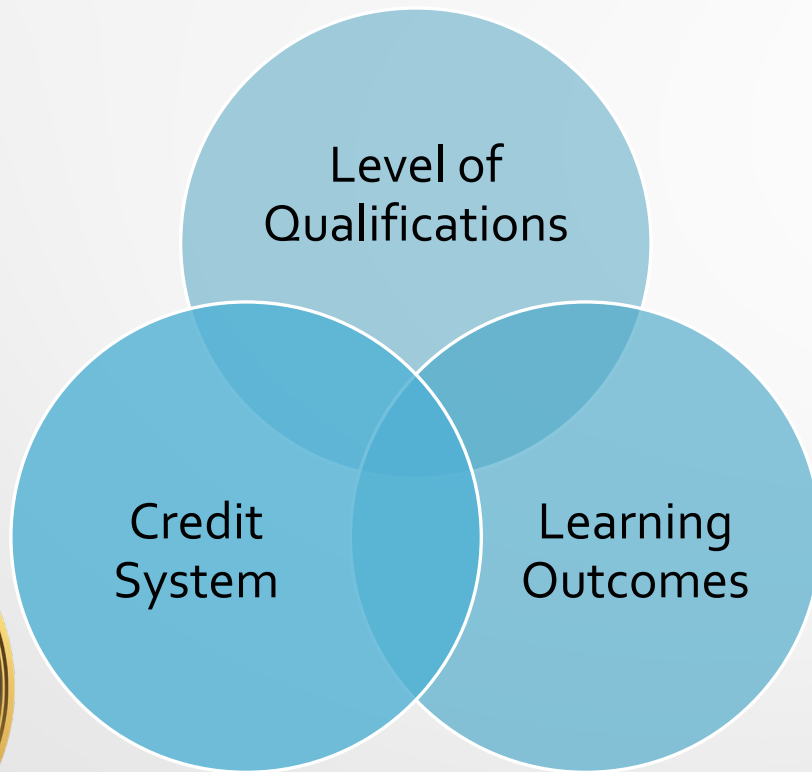
UNDANG-UNDANG MALAYSIA

Akta 679

AKTA AGENSI KELAYAKAN MALAYSIA 2007



3 Main Features in MQF

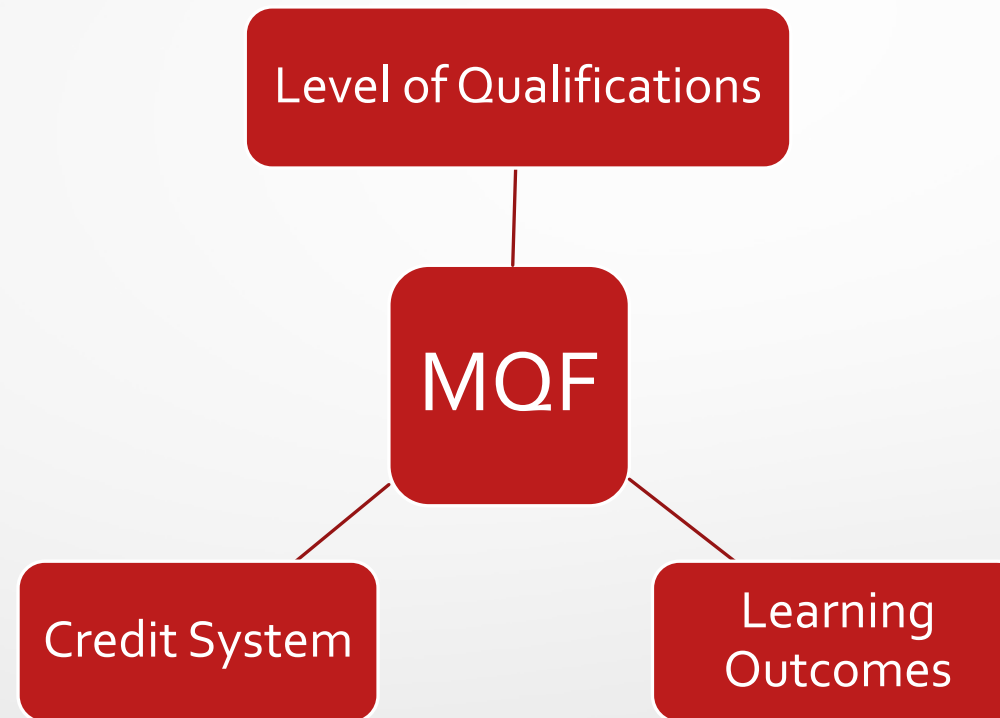


MQF LEVEL	GRADUATING CREDIT	SECTOR		Lifelong Learning
		ACADEMIC	TVET *	
8	No credit rating	PhD by Research		Accreditation of Prior Experiential Learning (APEL)
	80	Doctoral Degree by Mixed Mode & Coursework		
7	No credit rating	Master's by Research		
	40	Master's by Mixed Mode & Coursework		
	30	Postgraduate Diploma		
	20	Postgraduate Certificate		
6	120	Bachelor's degree		
	66 **	Graduate Diploma		
	36 **	Graduate Certificate		
5	40	Advanced Diploma	Advanced Diploma	
4	90	Diploma	Diploma	
3	60	Certificate	Certificate	
2	30	Certificate	Certificate	
1	15	Certificate	Certificate	

* Technical and Vocational Education and Training ** Inclusive of 6 credits for U1 courses from general studies



Compliance to MQF



MQF – Akta 679

Compliance with the Framework

37. (1) No programme or qualification shall be accredited unless it complies with the Framework.

(2) All higher education providers conducting an accredited programme or awarding an accredited qualification shall comply with the Framework.

(3) The Agency or, in the case of a professional programme, professional qualification or higher education provider, the relevant professional body, may direct that the Framework or any part of the Framework may not apply to any programme, qualification or higher education provider subject to such terms and conditions as it deems fit.



MQF – Akta 679

Offences and penalties relating to higher education qualification

98. Any person which has not been granted accreditation under this Act issues or awards any higher education qualification claimed to be complying with the Framework commits an offence and shall be liable, on conviction, to a fine not exceeding two hundred thousand ringgit or to imprisonment for a term not exceeding five years or to both.



Accreditation – Act 679

Enrolment of students for a programme claimed to be accredited

96. Any person who enrolls students for a programme claimed to be an accredited programme without a certificate commits an offence and shall be liable, on conviction, to a fine not exceeding one hundred thousand ringgit or to imprisonment for a term not exceeding two years or to both.



Accreditation – Act 679

Prohibition on advertisement, *etc.*

97. (1) No person shall hold himself out to be or promote a higher education provider as a higher education provider providing accredited programmes or granting accredited qualifications, whether by advertisement, prospectus, brochure or otherwise, unless the higher education provider is accredited under this Act.

(2) No person shall promote a programme as an accredited programme, whether by advertisement, prospectus, brochure or otherwise, unless the programme has been accredited under this Act.

(3) Any person who contravenes subsections (1) and (2) commits an offence and shall be liable, on conviction, to a fine not exceeding two hundred thousand ringgit or to imprisonment for a term not exceeding three years or to both.



Accreditation – Act 679

Offences and penalties relating to applications made under the Act

99. Any higher education provider which, on making an application for provisional accreditation or accreditation or any person making a request for evaluation under this Act, makes any statement which it or he knows to be false, or does not believe to be true, or intentionally suppresses any material fact, or furnishes any information which is misleading in any material particular commits an offence and shall be liable, on conviction, to a fine not exceeding twenty thousand ringgit or to imprisonment for a term not exceeding one year or to both.



MQF (1) : Level Of Qualifications



MQF(1) Level Of Qualifications

Level 1-3	Certificate
Level 4	Diploma
Level 5	Advanced Diploma
Level 6	Bachelors
Level 7	Masters
Level 8	Doctoral

These levels indicate their level of capabilities, and each level is described with generic features indicating the expected capabilities from students in terms of:

- the depth, complexity and comprehension of knowledge;
- the application of knowledge and skills;
- the degree of autonomy and creativity in decision making;
- the communication skills; and
- the breadth and sophistication of practices.



MQF(1) Level Of Qualifications

MQF LEVEL	DESCRIPTION	LO ₁ (KNOWLEDGE) STATEMENT
1-3	CERTIFICATE	use technical information;
	FOUNDATION	show knowledge and comprehension in the field of study that is continued from secondary school as indicated in adv. text books;
4	DIPLOMA	use knowledge, comprehension and practical skills at work;
5	ADV. DIPLOMA	use knowledge, comprehension and practical skills at work;
6	BACHELORS	demonstrate knowledge and comprehension on fundamental principles of a field study, acquired from advanced textbooks;
7	MASTERS	demonstrate continuing and add. knowledge and comprehension above that of the bachelors degree and have capabilities to develop or use ideas, usually in the context of research;
8	DOCTORAL	show a systematic comprehension and in depth understanding of a discipline and mastery of skills and research methods related to the field of study;



Impact of MQF on QA Documents

The Code of Practice for
Programme Accreditation
(COPPA)

sets out guidelines to HEP and Assessors in
relation to programme accreditation

The Code of Practice for
Institutional Audit (COPIA)

sets out guidelines to HEP and Assessors in
relation to institutional audit

Guidelines to Good Practices
(GGPs)

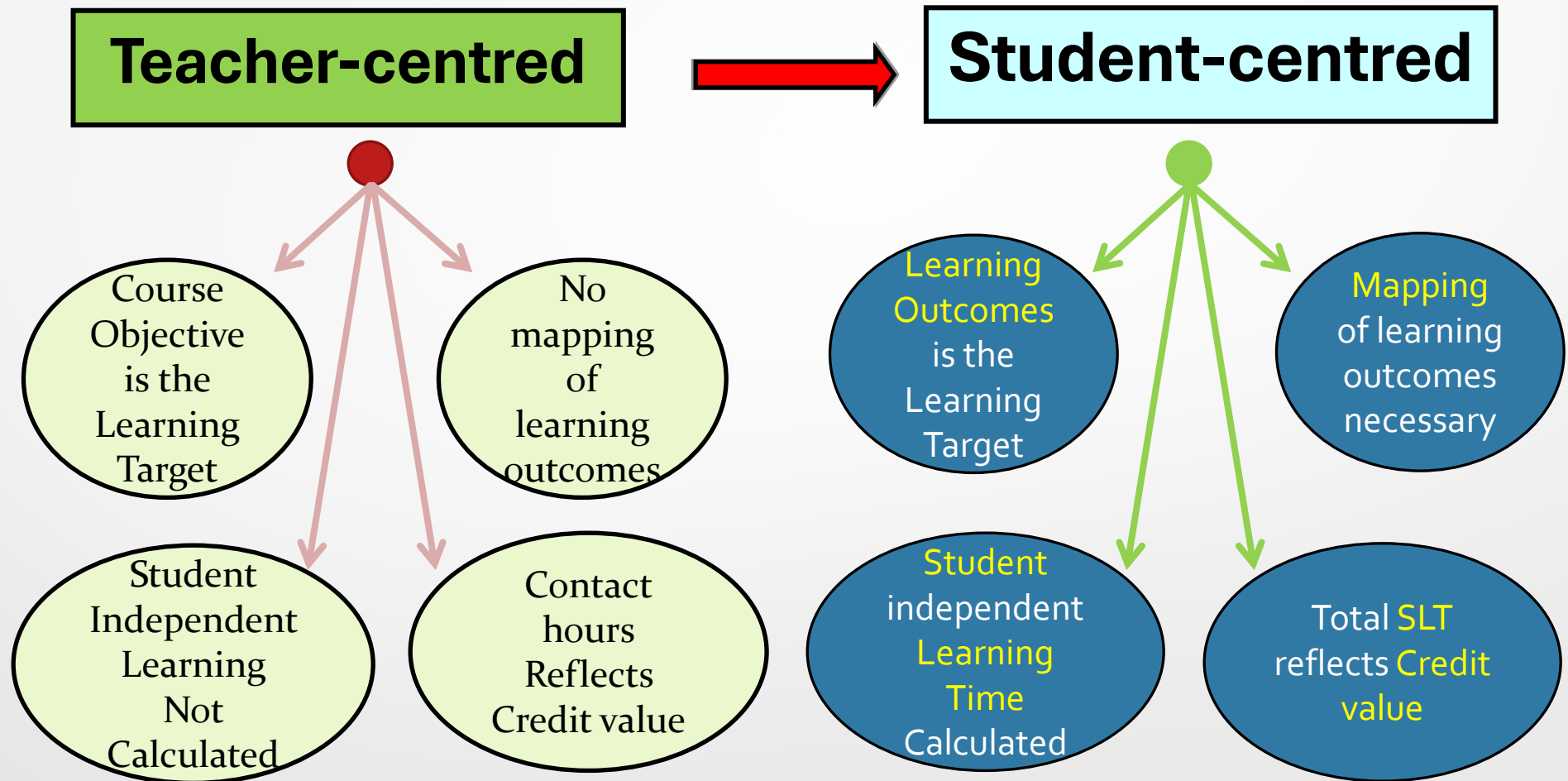
sets out guidelines pertaining to non-curriculum
matters, e.g. student intake, library and
education resources

Programme Standards

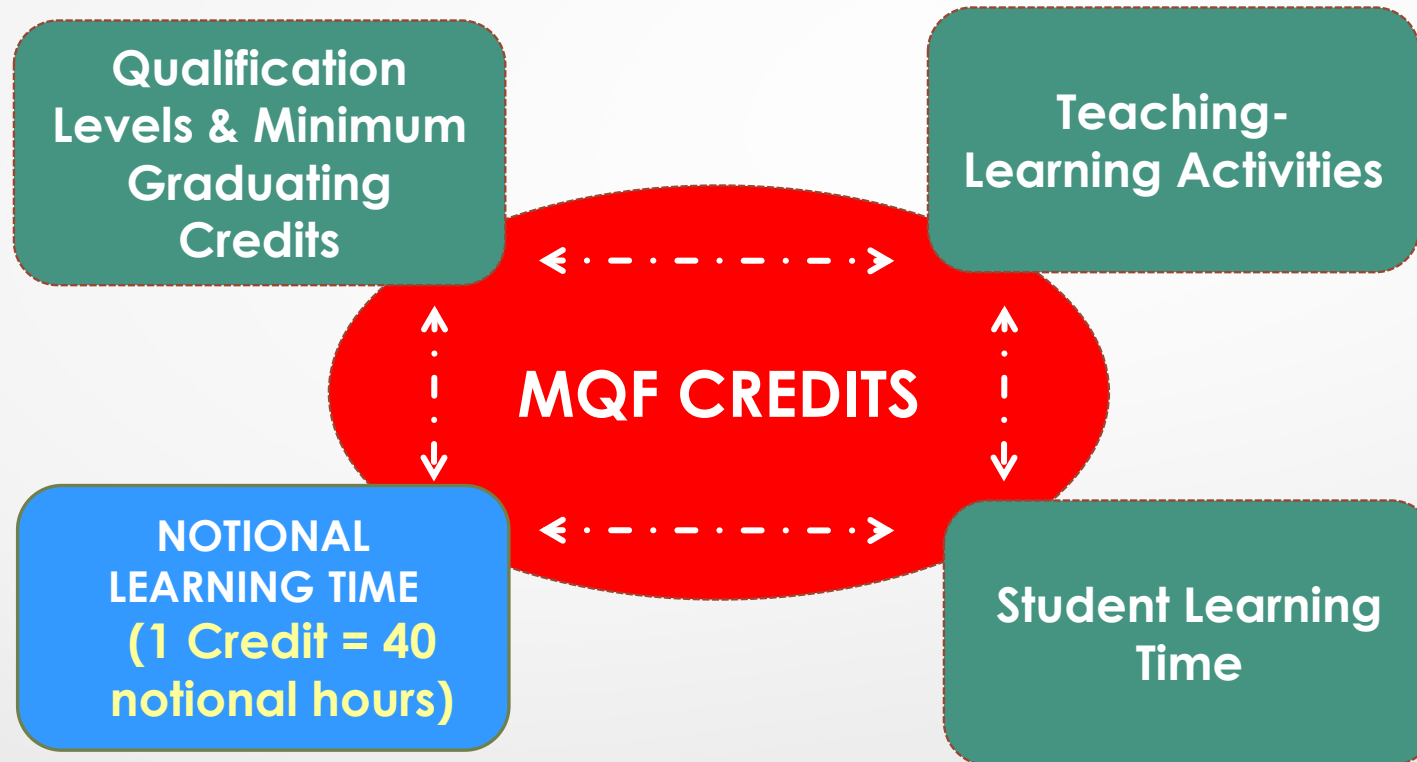
sets out guidelines pertaining to curriculum and
programme design



How Does MQF Affect Teaching-Learning?



Planning MQF Credits



A credit is the agreed-upon value used to measure a student workload in terms of learning time required to complete course units, resulting in learning outcomes (UNESCO, 2004)

Achievement of Learning Outcomes

Teaching/Learning + Assessment

e.g. 4 800 notional SLT = 120 credits

Total SLT ÷ 40 = Credit

The measurement of students' academic load

Credit =

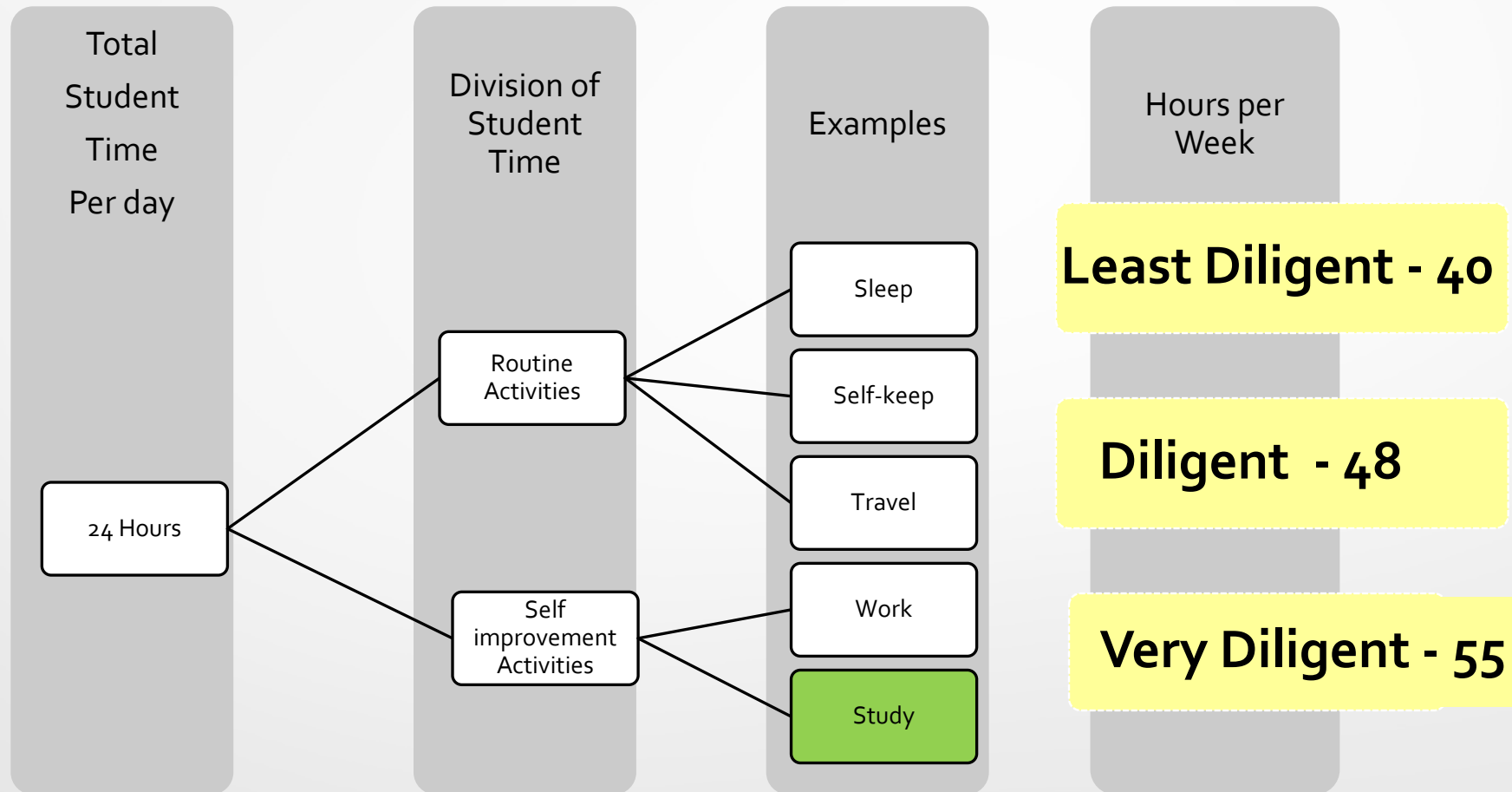
Teaching Learning Activities

Lecture	Project Work	Study Tour	Demonstration
Tutorial	Presentation	Case study	Assignments
Laboratory	Revision	E-Learning	Clinical
Work attachment	Studio work	Group Discussion	
Group Assignment	Field Work	Research Project	
Examination	Industrial training	Directed reading	

Student Learning Time (SLT)



Student Categories and Learning Time



Student Categories & 120 Credit Bachelors

		Least Diligent	Diligent	Very Diligent (not allowed)
1	Number of weeks in a semester (A)	17	17	17
2	Recommended SLT per week (B)	40	48	55
3	Recommended total SLT per semester (C) [A × B]	680	816	935
4	Recommended credit per semester (D) [C ÷ 40]	17	20 (20.4)	23 (23.4)
5	Total graduating credit for programme (E)	120	120	120
6	Number of semesters (long semester) (F) [E ÷ D]	7.1	6	5.2
7	Number of academic year (2 long semesters 1 year) [F ÷ 2]	3.5	3	2.6



Proposed Student Independent Learning Time

Item	Duration (hours) or requirements	Proposed Student Self Learning Time (hours)
Lecture	1	1-2
Tutorial	1	1-2
Tutorial (involving case studies)	1	3
Laboratory (including report writing)	3	2-3
Undergraduate Final Year Project/ Dissertation	6 - 10 credits	200 - 400
Studio Work	2	2
Presentation	1	3-4
Coursework/Assignment	2000 words	10 - 12
Creative Writing (or a project that last a whole semester)	100 – 150 pages	8-10
Examination	3	10 – 20*

Source: Bengkel Kebangsaan Pemantapan Sistem Kredit MQF, 31 Jan. – 2 Feb. 2005 by Quality Assurance Division, Ministry of Higher Education (Malaysia).

* Proposed by MQA, depending on the field of study and the intensity of the examination.



MQF(2): LEARNING OUTCOMES



What are Learning Outcomes?

1. Learning outcomes are statements of what students know and can do as a result of their respective courses of study

Councils for Higher Education Accreditation Board of Directors, USA 2002

2. A learning outcome is a statement of what a learner is expected to know, understand or be able to do as a result of a learning process.

Centre for the Advancement of Teaching and Learning, The University of Western Australia, 2004.



THE MALAYSIAN QUALIFICATIONS FRAMEWORK

Learning Outcomes

14. Learning outcomes are statements that explain what students should know, understand and can do upon the completion of a period of study. Learning outcomes are references for standard and quality as well as for the development of curriculum in terms of teaching and learning, the determination of credits and the assessment of students. In MQF, learning outcomes are asserted in three categories:

- (i) levels of qualification;
- (ii) fields of study; and
- (iii) programme.

3



Why Are Learning Outcomes Important?

They are essential because they:

- define the **type and depth** of learning that students are expected to achieve
- provide an objective benchmark for formative, summative, and prior learning **assessment**
- clearly **communicate** expectations to learners
- clearly **communicate** graduates' skills to the stakeholders
- define coherent units of learning that can be further subdivided or modularized for classroom or other delivery modes.
- guide and organize the instructor and the learner.



Programme Educational Objectives (PEO)

Attributes of graduates 4 to 5 years after graduation

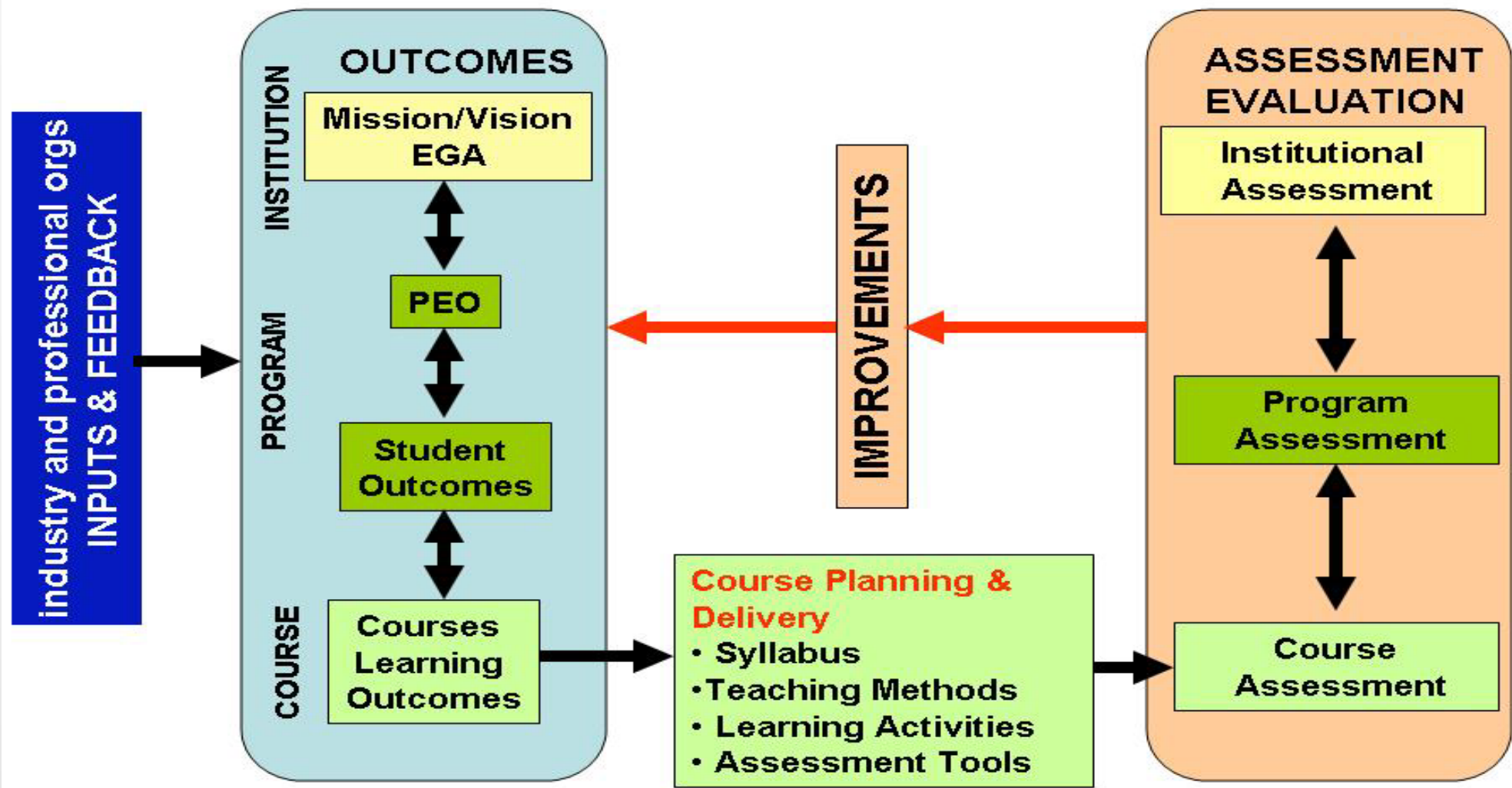
Example of PEO for Bachelor of Civil Engineering:

- A civil engineer who is knowledgeable and technically competent in the civil engineering discipline, in line with the industry requirement.
- A civil engineer who is effective in communication and demonstrates good leadership qualities in an organisation.
- A civil engineer who is capable to solve civil engineering problems innovatively, creatively and ethically through sustainable approach.

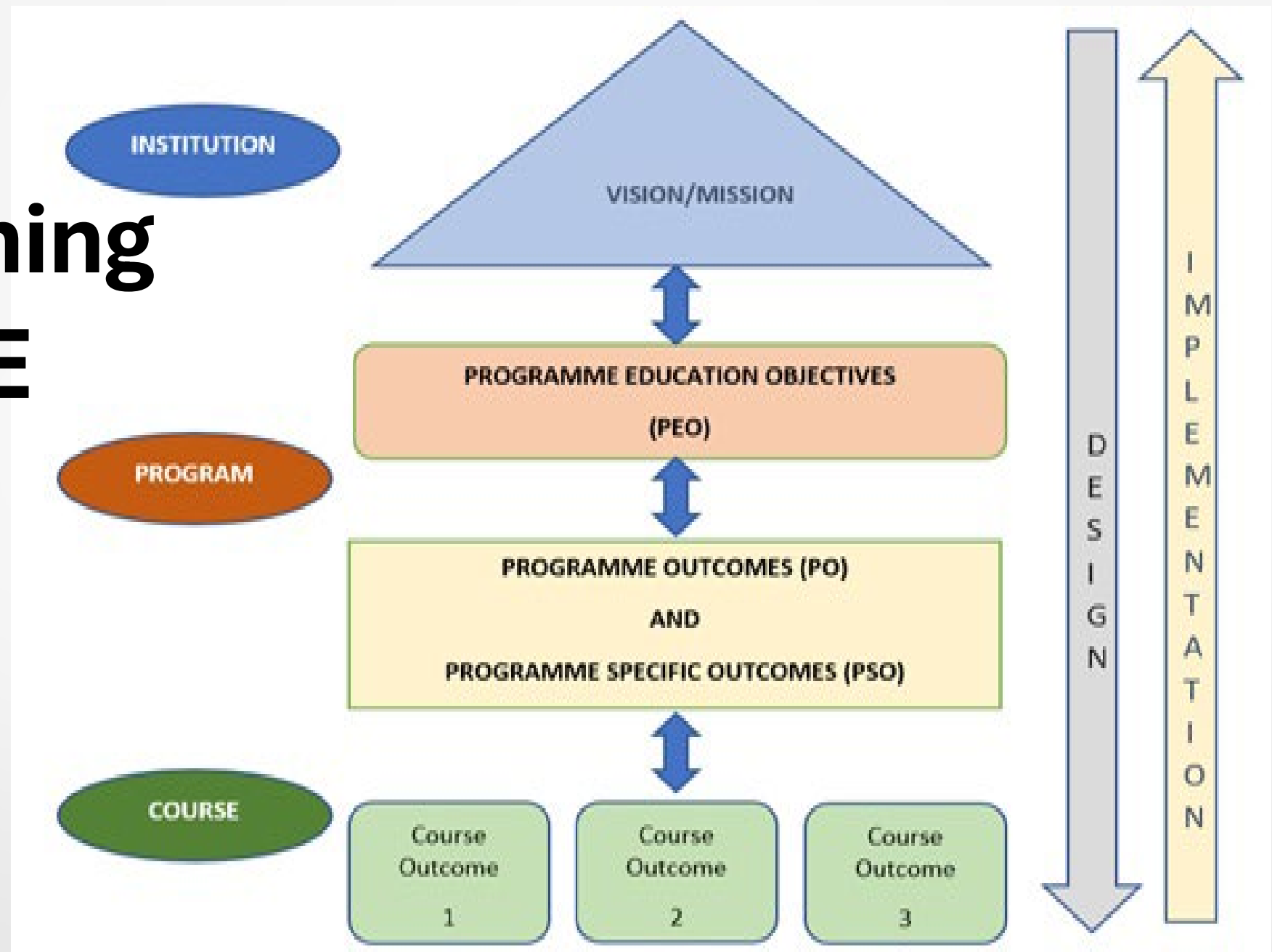


OUTCOME BASED EDUCATION

The OBE Framework



Designing OBE





WHAT?

Programme
Objectives (PO)

Programme
Learning
Outcomes (PLO)

Course
Learning
Outcomes (CLO)

WHEN?



4-5 Years
After
Graduation



Upon
Graduation



Upon Subject
Completion

Components of OBE

Curriculum

Focus on Learning Outcome (LO),

Prepared and documented by BPK, JPP

Instruction

Teaching and learning activities (TLAs)

Prepared by lecturers

ELEMENTS OF OBE

Assessment

Assessment Tasks

(i.e : assignments, quizzes, projects, tests, reflective journals, rubrics ,etc). *Prepared by lecturers*



Assessment Of Outcomes

- OBE is assessment driven
- Assessment is used to determine whether or not a qualification/condition/criterion/skill has been achieved
- To determine whether learners are successful, (*i.e. whether students know they have learnt well*) the learners **must be assessed** using the assessment criteria of the outcome

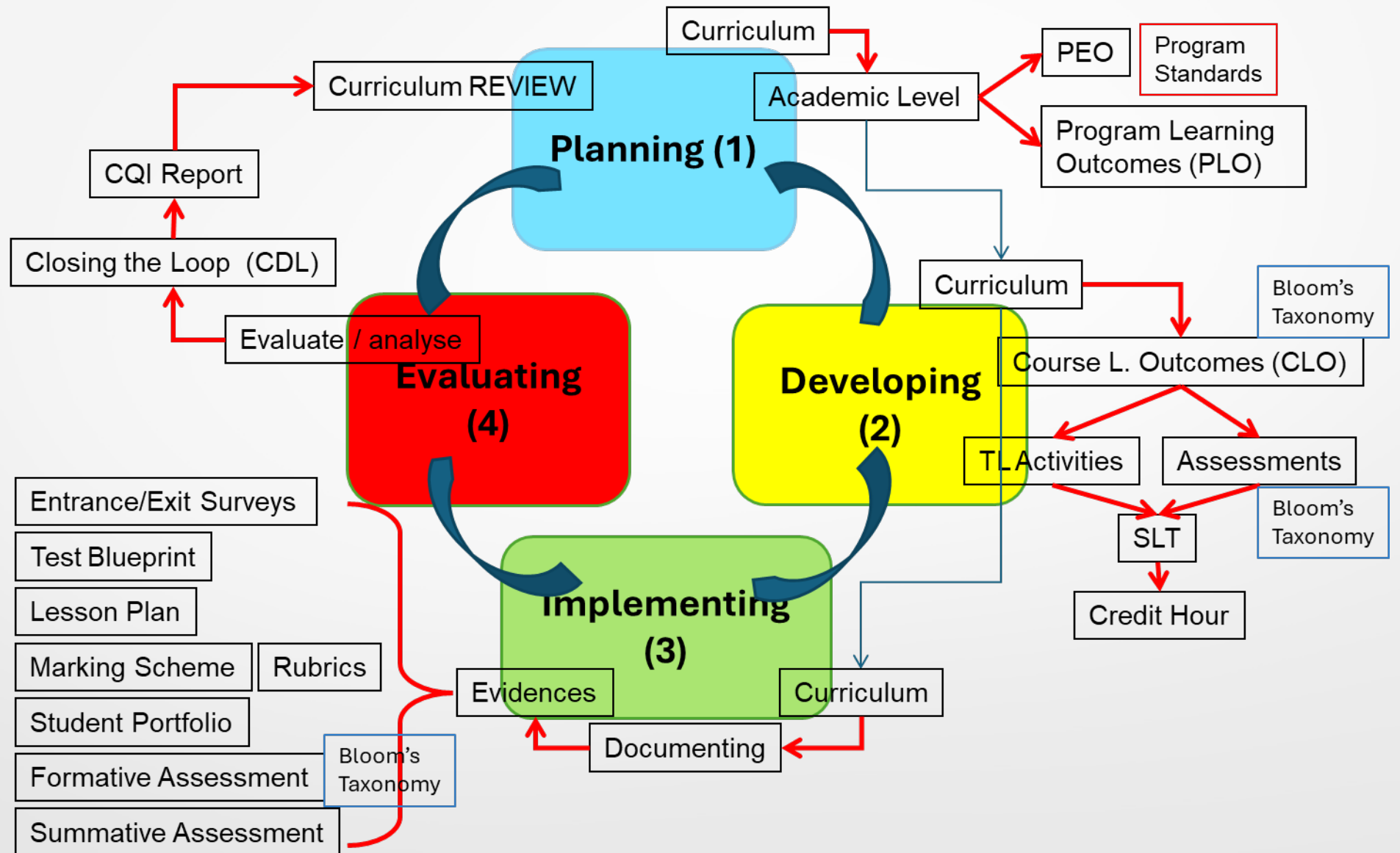


The Four Pillars of OBE

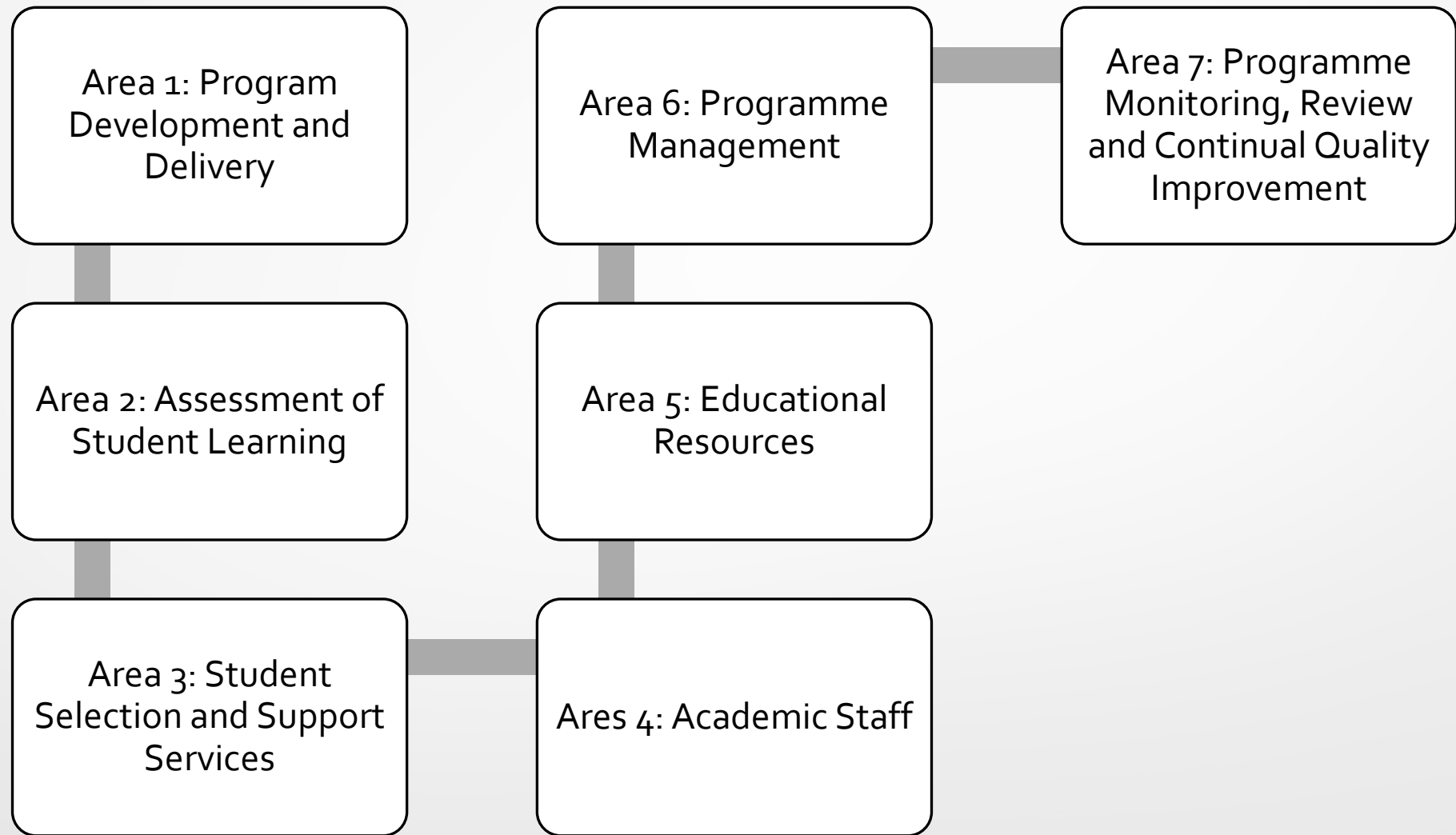
PILLAR	DESCRIPTION
Clarity of Focus	All decisions revolve around clearly defined learning outcomes
Design Backwards	Start planning with outcomes in mind, then assessments and teaching methods
High Expectations	Promote excellence for all students
Expanded Opportunities	Provide various paths and support for students to achieve outcomes



OBE Process



7 Areas of COPPA



Learning Outcomes from 8 to 5 clusters/dimensions (MQF 2.0)

- ❑ Incorporates MQF 1.0 learning outcomes
- ❑ Academic / TVET / Professional qualifications

<u>1. Knowledge & understanding</u>	<u>2. Cognitive skills application</u> (e.g. Blooms) Analytical Evaluation Synthesis Creation Problem solving	<u>3. Skills (Functional skills) application includes</u> • Practical skills (work, technical, organisational, specialized/practice) • Interpersonal • Communications • Digital • Numeracy • Leadership, autonomy and responsibility
<u>4. Personal and entrepreneurial skills</u>		<u>5. Ethics and Professionalism</u>



NEW MQF MAPPING BASED ON MQF 2.0

	MQF 2.0 (NEW)	MQF 1.0 (OLD)
MQF 1	i. Knowledge and understanding	MQF 1 Knowledge
MQF 2	ii. Cognitive skills	MQF 6 Problem Solving & Scientific Skills
MQF 3A	iii. Functional work skills a. Practical skills	MQF 2 Practical Skills
MQF 3B	iii. Functional work skills b. Interpersonal skills	MQF 3 Social Skills and Responsibilities
MQF 3C	iii. Functional work skills c. Communication skills	MQF 5 Communication , Leadership & Team skills
MQF 3D	iii. Functional work skills d. Digital skills	MQF 7 Information Management & Lifelong Learning Skills
MQF 3E	iii. Functional work skills e. Numeracy skills	MQF 7 Information Management & Lifelong Learning Skills OR MQF 6 Problem Solving & Scientific Skills
MQF 3F	iii. Functional work skills f. Leadership, autonomy and responsibility	MQF 5 Communication, Leadership & Team skills
MQF 4	iv. Entrepreneurial skills	MQF 8 Managerial & Entrepreneurship Skills
MQF 4	iv. Personal skills	MQF 7 Information Management & Lifelong Learning Skills
MQF 5	v. Ethics and professionalism	MQF 4 Value, Ethics & Professionalism



Lecturer-Centred to Student-Centred (incorporating SLT)

	Academic Activity (some examples)	Face 2 Face	Student Self- Learning*	Total
1	Lecture	1	2	3
2	Tutorial	1	2	3
3	Laboratory/Practical	4	2	5
4	Assignment - 2000 words	0	20	20
5	Presentation	1	4	5
	Total	7	30	36



Student Independent Learning Time

Item	Duration (hours) or requirements	Proposed Student Self Learning Time (hours)
Lecture	1	1-2
Tutorial	1	1-2
Tutorial (involving case studies)	1	3
Laboratory (including report writing)	3	2-3
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* Proposed by MQA, depending on the field of study and the intensity of the examination.



Different Levels of Learning Outcomes

Programme Educational Objectives (PEO)

Few years after
Graduation – 4 to 5 years
Employer Survey, Alumni Survey

Competent engineers who
are leaders in



Programme Learning Outcomes (PLO)

Upon graduation -
Nine (9) MOE
Learning Outcomes

..will be able to demonstrate
critical thinking skills to solve



My3S, Exit Survey, Prog.Survey

Course Learning Outcomes (CLO)

Upon course completion
Use Bloom's Taxonomy of
Learning Domains (C/A/P)

.. will be able to explain the
physical principles of

Sum/Form/Cont. Assessments



Weekly/Topic Outcomes

Upon topic completion
Use Bloom's Taxonomy of
Learning Domains (C/A/P)

.. will be able to explain
Archimedes principle of

Sum/Form/Cont. Assessments



OBE Process

We normally use the "constructive alignment" technique when putting up an OBE curriculum. The term "constructive" refers to the learner's behaviours that build wisdom. "Alignment" refers to the educator's actions. Assumed learning activities are linked to various components of the teaching system, including teaching methods and assessment tasks.

1

Defining Curriculum
Objectives and
Intended Learning
Outcomes

2

Selecting Teaching and Learning Activities

3

Designing Assessment Tasks

Tips 1: Reviewing
your Program-
level Outcomes

Tips 2: Writing
Intended
Learning
Outcomes

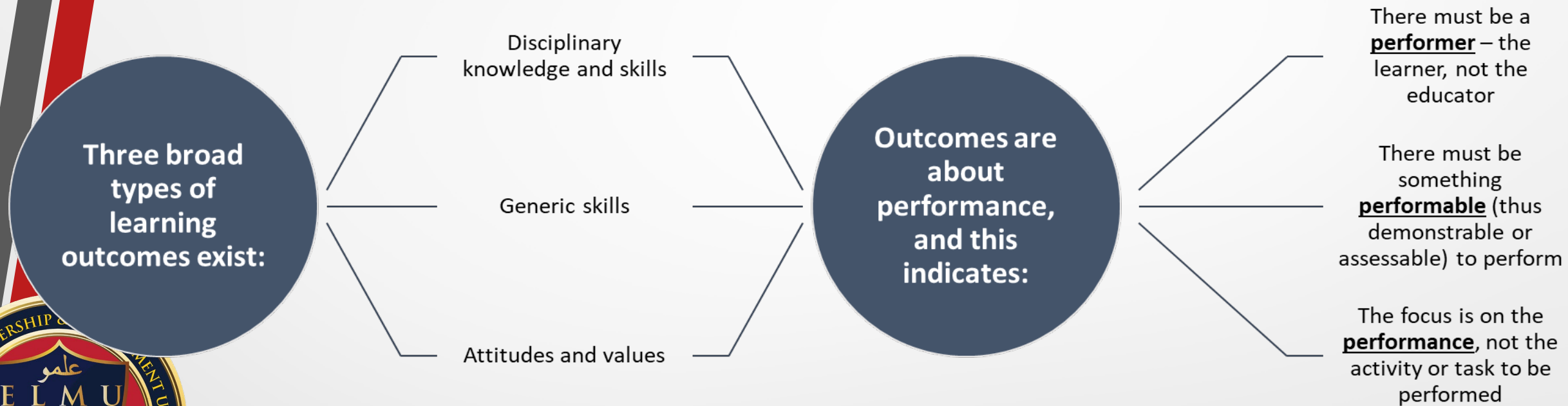
Tips 3: Choosing
an Appropriate
Outcome-based
Assessment Tool
and Method

Formative

Summative



Defining Curriculum Objectives



What is the curriculum?

A curriculum is the set of learning requirements, assignments and resources used by a teacher to arrange and teach a course.

Curriculum typically refers to student expectations for knowledge and skills, including learning standards or objectives.

It can also include teacher-led units and lessons, student-led assignments and projects, and course-specific materials such as textbooks, videos, presentations, and readings.



Approaches to Curriculum

Curriculum as a product or content

Curriculum as a Method

Curriculum as Practice

Curriculum as pedagogy

Curriculum as the context of education



Components of OBE- Framework

The three components that encompass an outcome-based approach to learning are:

- i. An **explicit statement** of learning intent expressed as outcomes that reflect educational aims, purposes and values.
- ii. The **method or approach** to enable the intended learning to be achieved and demonstrated (curriculum, teaching, learning, assessment and support and guidance methods); and
- iii. **Criteria for assessing** learning which is aligned to the intended outcome.



The Shift from Content-based Education to Outcome-based Education

Learners are passive	Learners are active
The approach is exam-driven	Learners are assessed on an ongoing basis
Repetition learning is encouraged.	Critical thinking, reasoning, reflection and action are encouraged
The syllabus is content-based and divided into subjects.	Content is integrated and learning is relevant and connected to real-life situations
Educator-centered	Learning is learner-centred, the educator facilitates and constantly applies group work and teamwork to consolidate the new approach.
The educator sees the syllabus as rigid and non-negotiable.	Learning programs are seen as guides that allow educators to be innovative and creative in designing their programs.
Educators are responsible for learning and motivation depending on the personality of the educator	Learners take responsibility for their learning and are motivated by feedback and affirmation of their worth



OBE's Planning Process



Successfulness Of OBE Depends On

1. **Clear** identification of **LO**
2. Progress measurements based on **demonstrated achievement**
3. Application of multiple instructional & ASLO strategies
4. Provision of adequate time & **assistance to maximise potential**



Curriculum Design

Job Mapping

Learning Outcomes

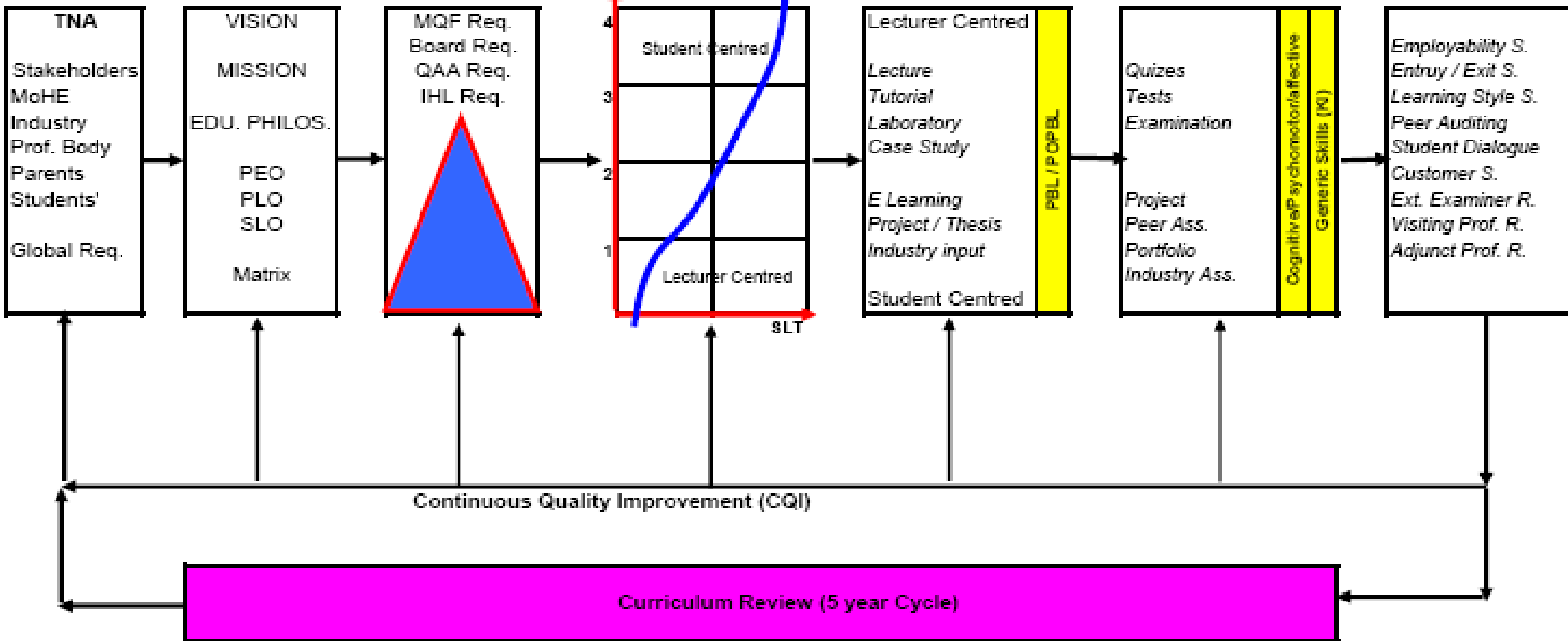
Curriculum Framework

Curriculum Structure

Delivery

Outcome Based Assessment

Evaluation (Product, System)



Characteristics of OBE Curriculum

Student-Centered Approach: OBE curriculum places students at the center of the learning process.

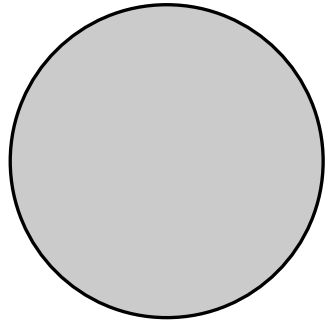
Competency-Based Structure: OBE curriculum is organized around competencies or learning outcomes rather than a rigid content-based structure.

Real-World Application: OBE curriculum emphasizes the application of knowledge and skills in real-world contexts.

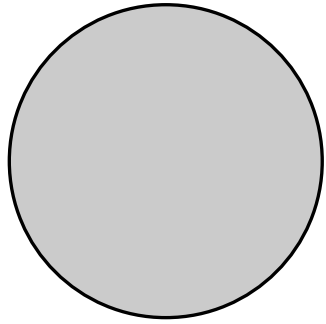
Ongoing Assessment and Feedback: OBE curriculum incorporates ongoing assessment and feedback to monitor students' progress towards the desired learning outcomes.



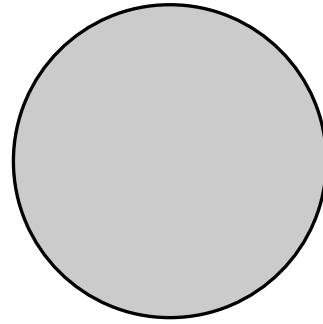
Components of OBE



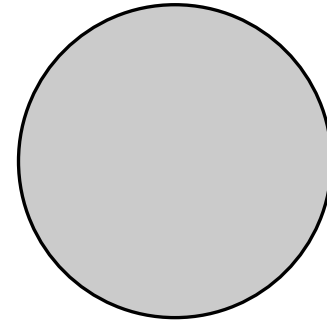
Learning Outcomes:
Learning outcomes are the foundation of OBE.



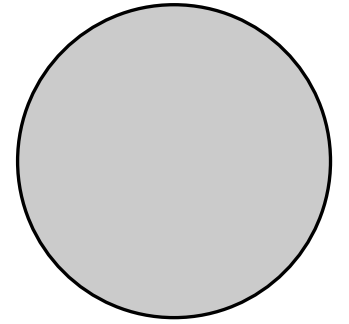
Curriculum Design:
OBE curriculum design focuses on aligning teaching and learning activities with the defined learning outcomes.



Teaching and Learning Strategies: OBE promotes student-centered teaching and learning strategies that actively engage students in the learning process.



Assessment Methods:
OBE utilizes a variety of assessment methods to evaluate students' achievement of learning outcomes.



Quality Assurance:
OBE requires quality assurance mechanisms to ensure that the educational experience meets the desired outcomes and standards.



OBE Framework Mappings

- Course outcomes, or CLO, are a term used to describe the results of each course in an academic programme.
- These COs are developed by the goals of the programme (PLO).
- The CLO-PLO matrix will be used to map each CLO. Finally, they will be aligned with PEOs of the programme.
- CLO, PLO, and PEO are shown to have a mutually beneficial interaction.



Curriculum Design

JOB MAPPING

CONDUCT
NEED
ANALYSIS

Stakeholder

Industry

MOHE

Professional bodies

Parents

Global requirement

LEARNING OUTCOMES

- Vision
- Mission
- Educational Philosophy
 - PEO
 - PLO
 - CLO
 - TLO
- Constructive matrix

CURRICULUM FRAMEWORK

- MQF Requirements
- Board Requirements
- IHL Requirements
 - PEO
 - PLO
 - CLO
 - TLO
- Constructive matrix

CURRICULUM STRUCTURE

Yr/
CR

S1

S2

Yr/ CR	S1	S2
4	Student centered	
3		
2		
1	Lecturer centered	

S L T



Curriculum Delivery

• JOB MAPPING

Lecturer Centered

- Lecture
- Tutorial
- Lab
- Case study

- E-learning
- Project/thesis
- Industry input

Student Centered

• OUTCOMES BASED ASSESSMENT

- Quiz
- Test
- Examination
- Project
- Peer assessment
- Portfolio
- Other alternative assessment

Cognitive/ psychomotor Affective assessment

EVALUATION OF THE OUTCOMES

- Employability
- Exit survey
- Peer auditing
- Student's dialogue
- Customer survey
- External examiner
- Visiting professors
- Industrial advisors

CQI

CURRICULUM REVIEW IN 5 YEARS CYCLE

MQA LEARNING OUTCOMES 2.0

1- Knowledge and Understanding

2- Cognitive skills

3- Practical skills

4- Interpersonal skills

5- Communication Skills

6- Digital

7- Numeracy

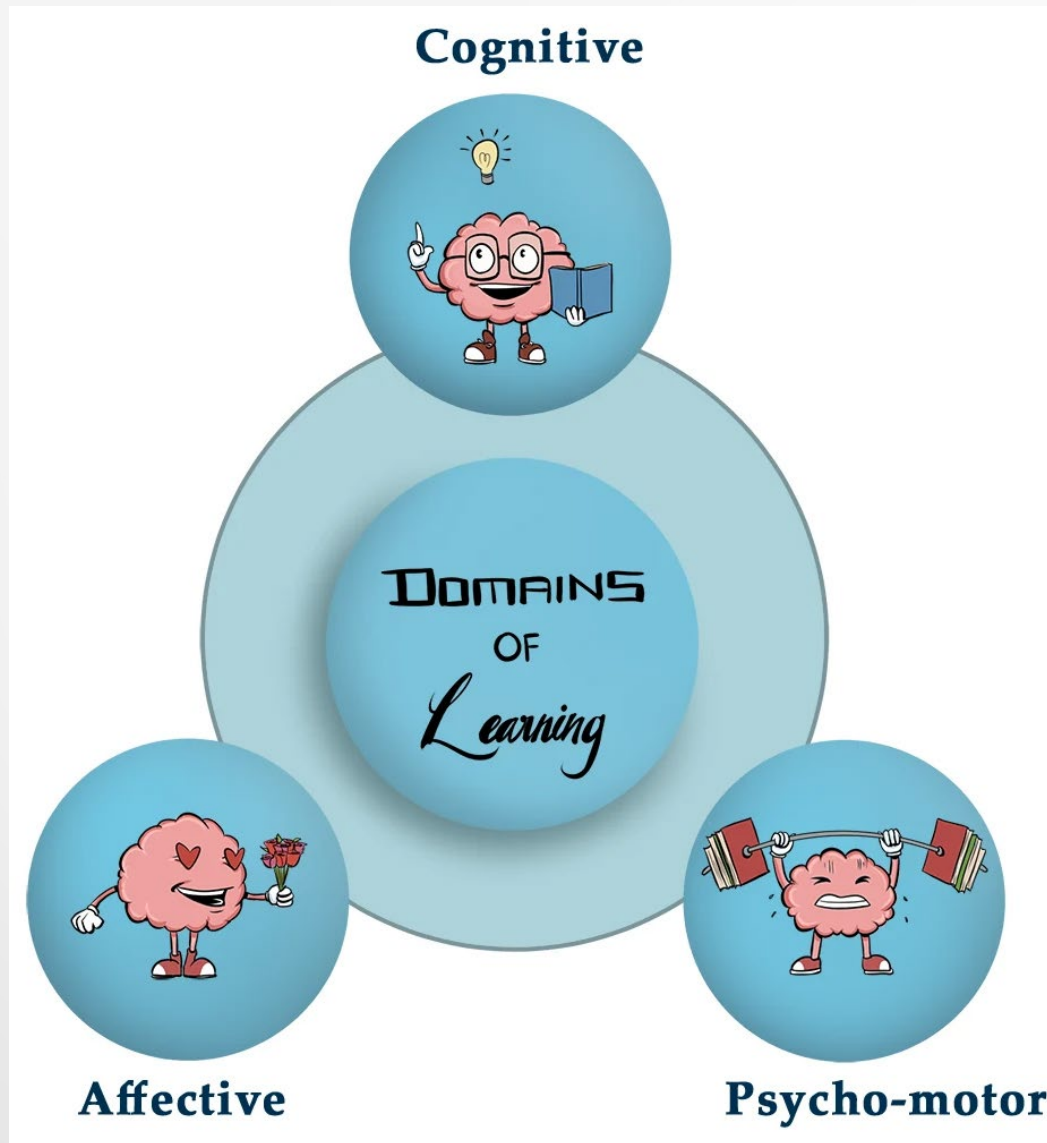
8- Leadership

9- Personal skills

10- Entrepreneurial

11- Ethics and professionalism





Bloom's Taxonomy of Learning Domains

Malaysian Qualifications Framework 2nd Edition: Level Descriptors

MQF LEVEL	Summary of Learners' Profile	CLUSTER 1: Knowledge and Understanding	CLUSTER 2: Cognitive skills	CLUSTER 3: FUNCTIONAL WORK SKILLS				CLUSTER 4: Personal and entrepreneurial skills	CLUSTER 5: Ethics and Professionalism
				Practical skills	Interpersonal and Communication Skills	Digital and Numeracy Skills	Leadership, Autonomy and Responsibility		
Level 1 CERTIFICATE	Learners will have basic, foundational or general knowledge and skills. Perform basic and/or highly routine tasks under guidance, Prepare for further learning and being responsible ethical workers. Awareness of community as well as local and national institutions Curiosity of the world beyond self.	Describe simple, factual and basic knowledge and skills within a narrow range of subjects/fields to undertake highly routine and predictable task(s) and study.	Apply basic knowledge in the context of well-defined, highly routine and predictable tasks with guidance. Demonstrate ability to reflect and improve performance.	Demonstrate simple skills by using a variety of common basic tools and materials for very well defined tasks.	Communicate familiar everyday expressions and simple phrases within a limited range of contexts. Express an interest in at least one other language besides the national language.	Show competency to use basic mathematical tools. [e.g. symbols]. Use a few simple/basic applications, which are adequate to perform given task(s) under guidance.	Work under direct guidance in highly structured activities/tasks with support. Demonstrate capacity to work independently or in a team.	Initiate some responsibility for learning with prompting and guidance. Demonstrate ability to reflect on the tasks undertaken/performed with guidance. Show an ability to identify some applicable personal values in task or learning contexts.	Be a responsible member of the society and show sensitivity to other cultures than own.
Level 2 CERTIFICATE	Learners will have factual knowledge and skills to carry out work in a well-defined environment as responsible and ethical workers. Demonstrate interest to undertake	Describe/demonstrate or show factual knowledge of subjects/disciplines to address a variety of routine tasks/work or for study.	Apply knowledge and skills to well defined routine tasks and/or study. Apply familiar solutions to solve predictable problems in well-defined	Demonstrate capacity to plan and complete well-defined tasks using common basic tools, methods and materials mostly with guidance.	Communicate within a limited range of contexts requiring simple and direct exchange of information on familiar and routine matters Develop basic proficiency in one	Use a limited range of basic applications and digital tools which are adequate to perform a given set of task(s) under supervision that enables access, and to process simple data.	Work with limited autonomy and substantial support under general supervision in structured activities. Work in a team and exchange views, feedback with others	Initiate some responsibility for learning with guidance. Demonstrate an ability to reflect on tasks and personal actions and values.	Show an ability to apply some personal values in task(s) or learning contexts. Deepen an understanding of cultural diversities by continued exposure to other cultures and



MQF LEVEL	Summary of Learners' Profile	CLUSTER 1: Knowledge and Understanding	CLUSTER 2: Cognitive skills	CLUSTER 3: FUNCTIONAL WORK SKILLS				CLUSTER 4: Personal and entrepreneurial skills	CLUSTER 5: Ethics and Professionalism
				Practical skills	Interpersonal and Communication Skills	Digital and Numeracy Skills	Leadership, Autonomy and Responsibility		
	further studies as well as make a commitment to lifelong learning. Develop skills to engage with local communities. Develop basic proficiency in one other language [eg. English]		routine tasks or study.		other language besides National language. Take responsibility for and initiate steps to learn further.	Interpret limited simple and familiar numerical and graphical data.	with limited responsibility and accountability.		value systems. Develop political and social awareness.
Level 3 CERTIFICATE	Learners will have the fundamental, theoretical and technical knowledge of facts and principles at an intermediate level. Demonstrate balanced operational skills as required. Show an interest in pursuing further studies in specific subjects or disciplines pertaining to their field of interest or work. Acquired elementary proficiency in one additional language [e.g. English].	Describe basic principles, theories and skills, within a significant range of knowledge in a subject and discipline to address well-defined, varied and routine tasks/work.	Apply knowledge, familiar solutions and skills to solve predictable problems of routine tasks and/or study.	Organise, operate and complete, using information appropriate methods, tools, technologies, materials to solve/ address routine and some non-routine tasks/problems within an area of work and/or study under supervision.	Communicate effectively and clearly orally or in writing, ideas, information, problems and solutions, individually or as a team to peers, experts and non-experts. Develop elementary proficiency in at least one other global language, besides the national language.	Use basic digital technology applications to support study/work to seek and process data related to a subject of study/work. Interpret and use familiar and uncomplicated numerical and graphical data.	Demonstrate capacities to work with considerable autonomy and minimal supervision. Provide guidance to others within context of work/study. Undertake considerable responsibility for quality and impact of outputs. Take responsibility for, and reflect on, performance of tasks/work/study.	Initiate self-improvement through study or seek further training with minimal guidance. Show awareness and general knowledge of Malaysia and its ASEAN partners in the region. Demonstrate basic understanding of entrepreneurship knowledge and skills.	Demonstrate ability to comply with work ethics in task(s) or learning especially in diverse multi-cultural contexts. Pursue active engagement with local civil societies on matters of interest to local and global communities [e.g. environmental issues].



MQF LEVEL	Summary of Learners' Profile	CLUSTER 1: Knowledge and Understanding	CLUSTER 2: Cognitive skills	CLUSTER 3: FUNCTIONAL WORK SKILLS				CLUSTER 4: Personal and entrepreneurial skills	CLUSTER 5: Ethics and Professionalism
				Practical skills	Interpersonal and Communication Skills	Digital and Numeracy Skills	Leadership, Autonomy and Responsibility		
	Demonstrate age-appropriate local civic engagement and awareness of global issues.								
Level 4 DIPLOMA	Learners will have a broad knowledge of the general theories, principles and demonstrate skills in a focused area of study/discipline enabling them to undertake specialized work leading to a career path in technical, professional or management fields. Learners express interest in pursuing further education. Learners will have a commitment for appropriate ethical behavior and express an appreciation of national aspirations within global perspectives.	Demonstrate systematic comprehension (understanding) of a broad range of complex technical and theoretical knowledge and skills to undertake varied, complex, routine and non-routine tasks/study within a field/discipline.	Identify, interpret, apply and evaluate general concepts, theory and/or operational principles within a well-defined context of a subject/discipline and/or work with minimal supervision. Solve problems of a common and well-defined kind as well as those others of a non-routine nature.	Apply a limited range of practical skills, essential tools, methods and procedures to perform required tasks/work. Reflect and make adjustments to practices and processes, as necessary, related to routine or non-routine tasks.	Communicate clearly, both orally and in writing, ideas, information, problems and solutions, to others including peers, experts and non-experts. Interact effectively, individually or as member of a team with supervisors, peers and subordinates. Demonstrate a high level of proficiency in at least one other language besides the national language.	Use a range of digital applications to support study/work as well as to seek and process data related to work or study. Demonstrate skills to use and interpret routine and complex numerical and graphical/visual data.	Perform work with significant degree of personal responsibility and autonomy under broad guidance and direction on well-defined and non-routine study/work activities performed in a variety of contexts. Lead and manage diverse teams to manage issues at work.	Identify self-improvement initiatives and possibilities for further education. Develop realistic career and professional goals. Explore and engage in activities relating to entrepreneurship. Show interest in and participate at professional and civic activities leading to local and region wide communities building.	Demonstrate ability to understand and comply with, organizational and professional ethics in work environment. Demonstrate ability to apply sustainable practices in the context of local and global work and social environment.
Level 5 ADVANCED DIPLOMA	Learners have significant theoretical and	Describe a range of theoretical, conceptual and technical knowledge	Identify, interpret, apply, analyze and evaluate detailed	Using a range of practical skills apply essential methods	Communicate and interact effectively and cogently in a comprehensive and	Use a range of information, media and technology applications to	Perform work with substantial degree of autonomy and often carrying significant	Engage in self-directed lifelong learning effectively and participate	Demonstrate ability to exercise social responsibilities; comply with

MQF LEVEL	Summary of Learners' Profile	CLUSTER 1: Knowledge and Understanding	CLUSTER 2: Cognitive skills	CLUSTER 3: FUNCTIONAL WORK SKILLS				CLUSTER 4: Personal and entrepreneurial skills	CLUSTER 5: Ethics and Professionalism
				Practical skills	Interpersonal and Communication Skills	Digital and Numeracy Skills	Leadership, Autonomy and Responsibility		
	outputs in the form of a thesis, patents, products, new advanced professional practice or advanced technologies, creative models or works of art, or music. Demonstrate capacities to present and defend points of view, thesis and ideas in area(s) of expertise with knowledge and confidence.		Independently applying advanced research methods, analytical tools and skills to creatively generate new knowledge, theories, novel solutions and/or new practices within the field(s) of study/discipline/practice. Make substantial contribution through the creation of new knowledge/theories/solutions/practice through originality and independent research, which satisfies peer reviews and international standards.	specialized research methodologies which is at the forefront of one or more area of specialization.	present solutions cogently/coherently to peers, scholarly community and society at large in the field of expertise. Demonstrate advanced/sophisticated leadership skills and abilities to bring effective collaboration with a diversity of partners.		responsibility for own work, and significantly for others in the research team/organization/projects/work. Contribute to the technological, social and cultural progress on academic and professional practice to the society at large on emerging issues at professional/expert/specialist level.		



Writing Program Learning Outcomes

Steps to effectively write program learning outcomes:

- Step 1: Identify the Program's Goals and Objectives
- Step 2: Consult Stakeholders
- Step 3: Break Down the Program into Key Components
- Step 4: Use Action Verbs
- Step 5: Be Specific and Concrete
- Step 6: Align with Bloom's Taxonomy
- Step 7: Reflect Progressive Complexity
- Step 8: Consider Program-Specific Requirements
- Step 9: Validate and Refine
- Step 10: Communicate and Review



Step 1

Identify the Program's Goals and Objectives:

- Start by understanding the overarching goals and objectives of the program.
- Consider the purpose, scope, and desired outcomes of the program.
- Review any relevant institutional or industry standards that may guide the program's objectives.



Step 2

Consult Stakeholders:

- Engage stakeholders, such as faculty, administrators, industry professionals, and students, in the process of defining program learning outcomes.
- Seek their input, perspectives, and expertise to ensure the outcomes align with the needs and expectations of various stakeholders.



Step 3

Break Down the Program into Key Components:

- Analyze the program's curriculum, content, and areas of study to identify the key components or areas of focus.
- Determine the main knowledge domains, skills, and competencies that are essential for students to gain proficiency in each component.



Step 4

Use Action Verbs:

- Write program learning outcomes using clear and measurable action verbs that describe observable behaviors or actions.
- Use Bloom's Taxonomy or similar frameworks to select appropriate verbs that correspond to the intended level of learning.
- Examples of action verbs include analyze, evaluate, demonstrate, design, create, apply, and interpret.



Step 5

Be Specific and Concrete:

- Ensure that the learning outcomes are specific and concrete, leaving no room for ambiguity or misinterpretation.
- Clearly state what students will be able to do, know, or understand as a result of completing the program.
- Avoid vague or overly general statements that lack clarity.



Step 6

Align with Bloom's Taxonomy:

- Consider the cognitive levels described in Bloom's Taxonomy (e.g., remembering, understanding, applying, analyzing, evaluating, creating) to ensure a balanced range of learning outcomes.
- Aim to include outcomes at different cognitive levels that progressively build upon each other throughout the program.



Step 7

Reflect Progressive Complexity:

- Structure the learning outcomes to reflect the progressive complexity of the program.
- Start with foundational knowledge and skills and then move towards higher-level thinking and application.
- Ensure that the outcomes reflect the expected growth and development of students throughout the program.



Step 8

Consider Program-Specific Requirements:

- Take into account any program-specific requirements, accreditation standards, or industry expectations when defining the learning outcomes.
- Align the outcomes with relevant competencies, professional standards, or licensing requirements that are specific to the program's field of study.



Step 9

Validate and Refine:

- Validate the program learning outcomes by seeking feedback and input from faculty, professionals in the field, and external reviewers if applicable.
- Review the outcomes against established criteria for clarity, measurability, and relevance.
- Refine and revise the outcomes based on the feedback received.



Step 10

Communicate and Review:

- Clearly communicate the program learning outcomes to all stakeholders, including faculty, students, and accreditation bodies.
- Ensure that the outcomes are integrated into the program's curriculum, assessments, and instructional strategies.
- Regularly review and update the outcomes to keep them aligned with changing needs and advancements in the field.



Writing Program Learning Outcomes (PLO) Statement

At the end of this program graduate should be able to---

1. Use knowledge--
2. Resolve critical issues--
3. Apply practical skill--
4. Practice interpersonal skills—
5. Practice communication skills--
6. Use digital skills--
7. Apply numeracy skills--
8. Practice leadership skills—
9. Express personal skills—
10. Discover entrepreneurial skills—
11. Practice ethics and professionalism--



What next after having PLOs?

After having a good comprehensive PLOs, faculty should think of how to make the PLOs achieved via:

- Courses to deliver the PLOs
- Delivery methods to ensure PLOs are delivered
- Assessment techniques to test the PLOs



Courses to Deliver the PLOs

Courses shall be able to mold the intended outcomes

- Cognitive components
- Working skills components
- Personal development
- Entrepreneurial
- Ethics & professionalism



Writing Course Learning Outcomes

- Writing course learning outcomes involves a process of clearly defining the specific knowledge, skills, and abilities that students should gain upon completing the course.
- Here are the steps to effectively write learning outcomes for a writing course



1

Identify the Course Objectives:

1. Begin by understanding the overall objectives and purpose of the writing course.
2. Consider the desired outcomes in terms of writing proficiency, critical thinking, creativity, and communication skills.
3. Review any relevant curriculum guidelines or institutional requirements.



2

Analyze the Skills

1. Break down the skills and competencies that are essential for students to develop throughout the course.
2. Consider areas such as mechanics, organization, coherence, clarity, argumentation, research, citation, and revision.
3. Identify the specific aspects of skill that will be covered in the course.



3

Use Action Verbs

1. Write learning outcomes using clear and measurable action verbs that describe observable behaviors or actions related to writing.
2. Select verbs that correspond to the intended level of learning, such as analyze, evaluate, compose, revise, edit, synthesize, cite, and communicate.
3. Be specific about the actions or tasks that students should be able to perform.



4

Be Specific and Measurable

1. Ensure that the learning outcomes are specific and measurable, providing clarity on what students should be able to achieve.
2. Use precise language to define the skills and knowledge that students will acquire.
3. Avoid vague or ambiguous statements that can lead to misinterpretation.



5

Align with Bloom's Taxonomy

1. Consider the cognitive levels described in Bloom's Taxonomy (e.g., remembering, understanding, applying, analyzing, evaluating, creating) to ensure a balanced range of learning outcomes.
2. Include outcomes at different cognitive levels to reflect the progression of learning and the complexity of writing tasks.



6

Incorporate Critical Thinking and Analysis

1. Integrate learning outcomes that promote critical thinking and analysis within the writing process.
2. Specify the ability to analyze and evaluate information, generate coherent arguments, provide evidence to support claims, and engage in thoughtful reflection on writing choices.



7

Align with Course Assessments

1. Ensure that the learning outcomes align with the course assessments. The assessments should directly measure the achievement of the learning outcomes.
2. Connect specific assignments, projects, or exams to the corresponding learning outcomes.



8

Review and Refine

1. Validate the learning outcomes by seeking input from colleagues, writing professionals, or educational experts.
2. Review the outcomes against established criteria for clarity, measurability, and relevance.
3. Refine and revise the outcomes based on feedback received.



LEARNING OUTCOMES: EXAMPLE 1

VERB

CONDITION

Compare various conceptual models of advance practice nursing.

STANDARD



LEARNING OUTCOMES: EXAMPLE 2

VERB

CONDITION

Explain the theoretical bases of various dramatic genres using examples from plays of different eras.

STANDARD



Writing Programme Educational Objectives (PEO) Using MQF 2.0

What Qualification	What the Graduates can become in 4-5 years	PEO Statement	Mapped MQF 2.0 Learning Outcome Domains
Bachelor of Civil Engineering	Civil Engineer	Graduates will apply broad and in-depth knowledge of civil engineering principles and practices to develop sustainable infrastructure and solve complex engineering problems.	1. Knowledge 2. Cognitive skills 3. Practical skills
		Graduates will demonstrate effective communication, teamwork, leadership, and interpersonal skills in multidisciplinary and multicultural environments.	4. Interpersonal skills 5. Communication skills 8. Leadership, autonomy & responsibility
		Graduates will utilize digital technologies, numerical methods, and modern engineering tools to innovate and improve engineering design and construction.	6. Digital skills 7. Numeracy skills
		Graduates will engage in life-long learning, professional development, and advanced studies in civil engineering as well as entrepreneurial skills.	9. Life-long learning & Personal skills, 10. Entrepreneurship
		Graduates will uphold professional ethics, cultural sensitivity, and social responsibility in civil engineering practice for the benefit of society.	11. Ethics & professionalism 8. Personal skills



Writing Programme Learning Outcomes(PLO)

PLO No.	Programme Learning Outcome	MQF 2.0 Domain(s)
PLO ₁	Apply fundamental and advanced knowledge of mathematics, science, and civil engineering to identify, formulate, and solve complex engineering problems.	1. Knowledge
PLO ₂	Analyse and synthesise complex civil engineering problems using theoretical and practical knowledge, supported by scientific principles and research.	2. Cognitive skills
PLO ₃	Demonstrate technical competencies in planning, designing, testing, implementing, and evaluating civil engineering systems, structures, and materials.	3. Practical skills
PLO ₄	Function effectively as an individual, team member, and leader in diverse technical and multidisciplinary teams.	4. Interpersonal skills
PLO ₅	Communicate effectively on engineering activities with the engineering community and society at large through reports, design documentation, and presentations.	5. Communication skills
PLO ₆	Apply digital tools, civil engineering software, and relevant ICT tools for design, analysis, and project management.	6. Digital skills
PLO ₇	Apply quantitative and numerical techniques to analyse engineering problems, evaluate data, and support engineering decisions.	7. Numeracy skills
PLO ₈	Demonstrate responsibility, autonomy, and leadership in managing engineering activities and projects to meet specified objectives and constraints.	8. Leadership, autonomy & responsibility
PLO ₉	Demonstrate awareness of societal, health, safety, legal, environmental, and cultural issues relevant to civil engineering practices. Engage in independent learning and pursue continuous professional development to keep pace with evolving civil engineering knowledge and practices	9. Personal skills
PLO ₁₀	Display entrepreneurial skills and demonstrate understanding of business practices in civil engineering projects and innovations.	10. Entrepreneurship
PLO ₁₁	Adhere to ethical principles and professional standards in engineering practice and decision-making.	11. Ethics and professionalism

Mapping CLO To Bloom's And To PLO

Course Outcomes (CO) or Course Learning Outcomes (CLO):

At the end of this course, the students will be able to:

1. **Propose** solution to manufacturing and operation problems using related theory and analytical methods (C5, A5, PLO 3)
2. **Organise** in groups to study and **present** the application of advanced manufacturing and operation analysis methods based on a given topics (C5, A4, P5, PLO4, PLO5)
3. **Explain** the main concepts and methods obtained from literatures to professionally analyse the manufacturing and operation system (C6, A4, PLO1, PLO3, PLO7)



Mapping Outcomes And Assessment

At the end of the presentation, the participants will be able to:

- Map various level of outcomes to each other
- Evaluate the relationship between various level of outcomes
- Explain types of assessments suitable for different levels of taxonomy



Constructive Alignment (CA)

CLO	Teaching methods	Type of assessment
By the end of the course, students will be able to <u>describe</u> asepsis technique used in nursing to prevent infection. (C2,P1,PLO2)	C - Lecture/Tutorial / Group Discussion P - Demonstration/ Practical / Skills Lab	c2 - Test (MCQ or short answer)/ Assignments p1 – Practical tests

Aligning the CLOs to the Teaching Methods and Assessment Methods
= **Constructive Alignment !!!!**



Assessment And Evaluation

- Relationship Between Assessment And Learning

1. Assessment for learning

- To gauge the progress of students in their learning (i.e. to see whether the students are learning)
- To indicate the next step to be taken to advance the student's learning
- Assess student's progress and learning needs in relation to the curricular outcomes

Example: Formative assessment

2. Assessment of Learning

- Involves assessing students' achievement by grading and certification
- Used for institutional accountability and quality assurance purposes

Example: Summative assessment

3. Assessment as Learning

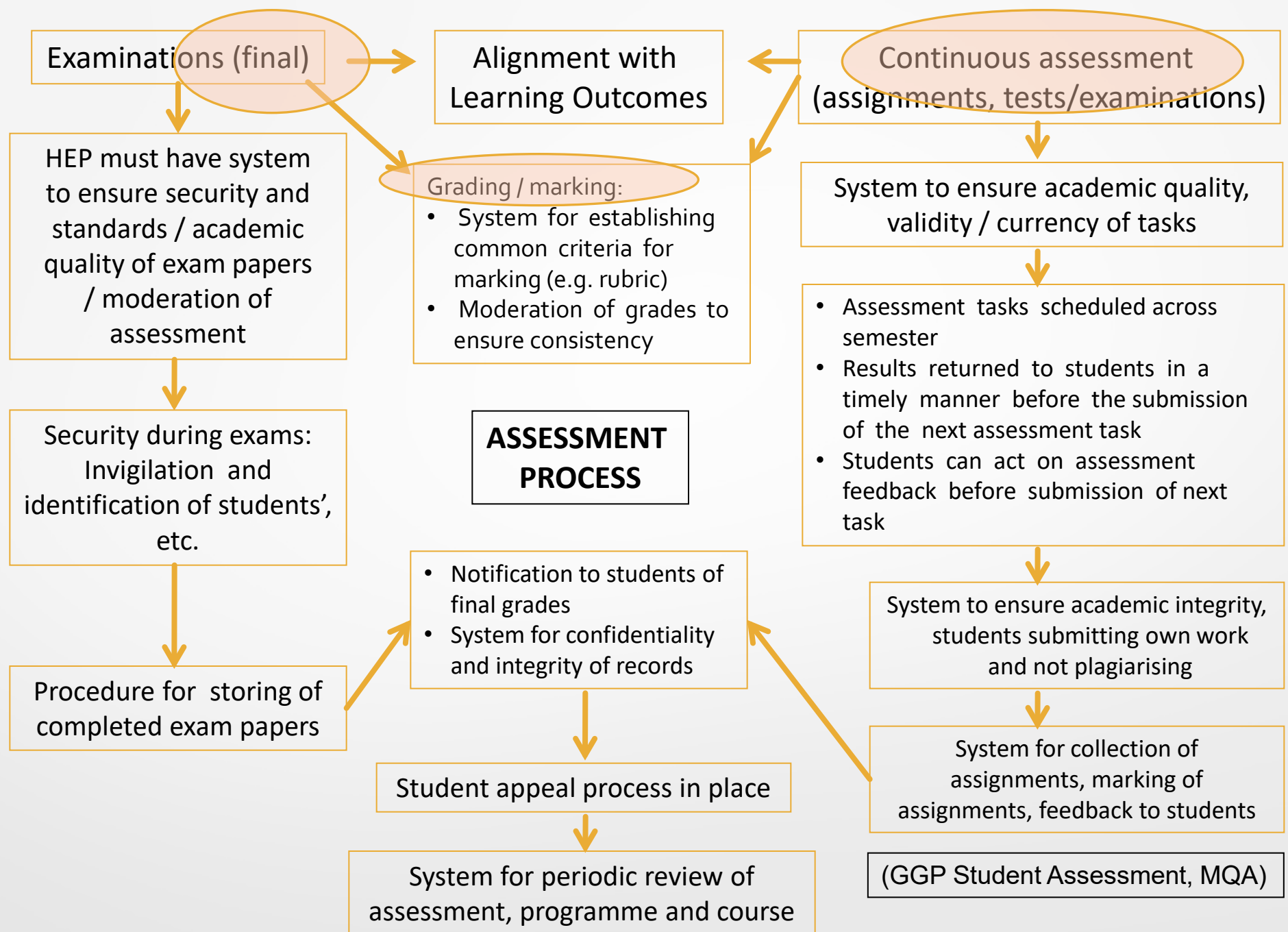
- Requires students to play an active role of becoming independent in their own learning and assessment
- Focuses on students' capacity over time to be their own best assessors to assess themselves.
- Assess student's thinking about his or her learning

Example: Self-evaluation and metacognition





Assessment process

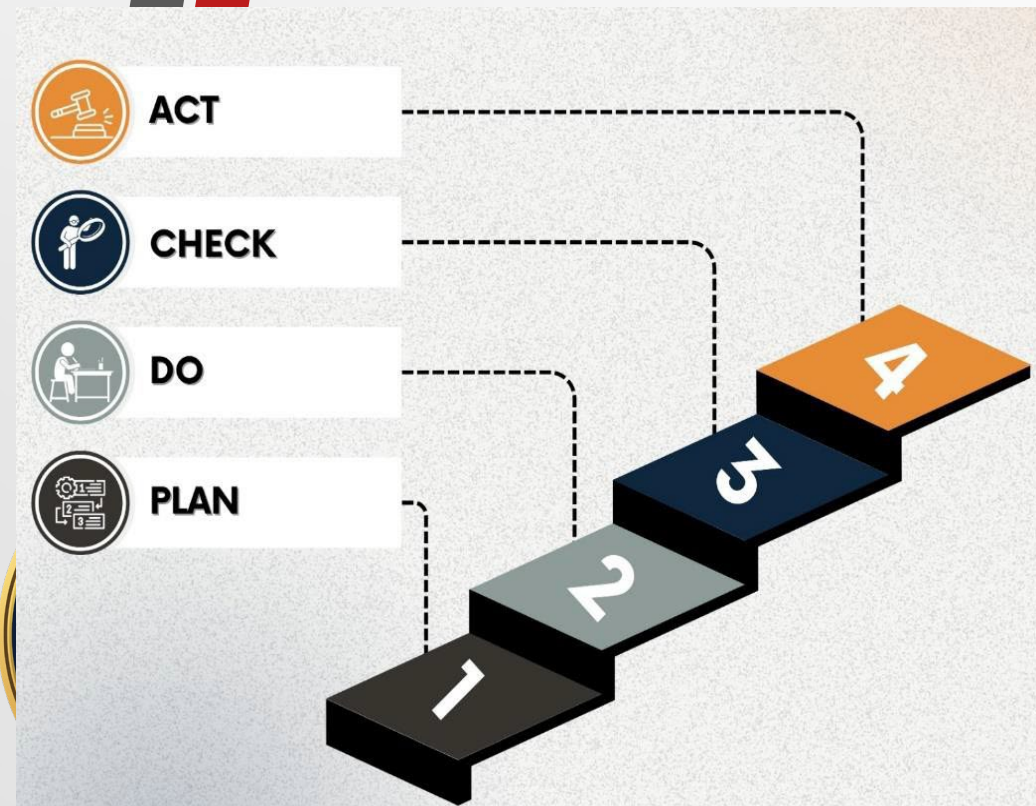


OBA Principles

Assessment is the process of finding evidence that the Los have been achieved when students have successfully completed a certain course or graduated from a particular programme offered by the HEP.

Assessment purposes are to promote learning;

- ❑ **measure performance** by awarding grades that indicate whether and how well a particular student has attained the stated LOs;
- ❑ determine whether a particular **student** is sufficiently **well prepared** in a subject **area to proceed to the next level of instruction**;
- ❑ provide **feedback** to students that indicates **levels of attainment** and diagnoses misunderstandings and learning difficulties; and
- ❑ provide **feedback** to **teaching staff to identify and diagnose ineffective teaching** methods/techniques.



Assessment of Student Learning

MQF Learning Outcome Domains (LOD)	MQF Learning Outcome Clusters	Bloom's Taxonomy
Knowledge and Understanding	1	Cognitive -LOTS
Cognitive Skills	2	Cognitive-HOTS
Practical Skills	3	Psychomotor
Interpersonal Skills	3	Affective
Communication Skills	3	Affective
Digital Skills	3	Cognitive/ Psychomotor/Affective
Numeracy Skills	3	Cognitive-HOTS
Leadership, Autonomy and Responsibility	3	Affective
Personal Skills	4	Affective
Entrepreneurial Skills	4	Affective
Ethics and Professionalism	5	Affective



Levels of Learning Outcome

Level of Outcomes	Purpose	Measurement	Examples
Programme Educational Objectives (PEO)	Few years after Graduation – 4 to 5 years	Employer Survey, Alumni Survey	Competent engineers who are leaders in ...
Programme Learning Outcomes (PLO)	Upon graduation - MOHE, MQF Learning Outcomes	My3S, Exit Survey, Prog.Survey	Able to demonstrate critical thinking skills to solve
Course Learning Outcomes (CLO)	Upon course completion Use Bloom's Taxonomy of Learning Domains (C/A/P)	Sum/Form/Cont. Assessments	Able to explain the physical principles of ...
Weekly/Topic Outcomes (TLO)	Upon topic completion Use Bloom's Taxonomy of Learning Domains (C/A/P)	Sum/Form/Cont. Assessments	Able to explain Archimedes principle of ...

Programme Blueprint

MQF Learning Outcome Domains (LOD)	MQF LO Clusters	Sub-Attributes Learning Outcome	Taxonomies Domain & Level	Discipline/Generic	Functional Skills	Sample Action Verb	Sample Delivery Methods	Sample Assessment Methods
Knowledge and Understanding	1	Foundations, Theories, Model, Concept	Cognitive	Discipline	Hard	List, Explain, Apply	Interactive Lecture	Test, Assignment
Cognitive Skills	2	Complex-Problem Solving, Creativity, Critical Thinking, Design Thinking	Cognitive	Discipline	Hard	Apply, analysis, Evaluate, Synthesise	Active Learning, PBL	PBL, Case Analysis, Case Study
Practical Skills	3	Procedural, Steps, Mechanism (tools and applications)	Psychomotor	Discipline	Hard	Show, Displays, Follow, Adapt,	Demonstration	Observation
Interpersonal Skills	3	Collaborate, Interact, Maturity, Respect, Sensitivity, Empathy, Socially Responsible, Emotion Management	Affective	Generic	Soft	Demonstrate, Adhere, Display, Perform, Show, Integrate, Practice	Social Learning, Active Learning	Case Study, Case Analysis, Reflective Writing, Portfolio
Communication Skills	3	Clear, Confident, Effective, Adaptive, Coherent, Systematic,	Affective	Generic	Soft		Collaborative & Peer Learning	Written and Oral
Digital Skills	3	Literacy, Tools and Application (Relevance, Curation, Articulation, References, Optimisation)	Affective	Generic/ Discipline	Hard		PBL	PBL, Portfolio
Numeracy Skills	3	Quantitative and Qualitative data / reasoning (diagnostic, descriptive and predictive)	Cognitive	Generic	Soft	Apply, Analysis, Evaluate, Synthesise	Case based Learning	PBL, Case Analysis, Case Study
Leadership, Autonomy and Personal Skills	3	Coaching, Dynamic, Responsive, Effective, Respect, Autonomy, Responsible, Adaptable, Relationship	Affective	Discipline	Hard	Demonstrate, Adhere, Display, Perform, Show, Integrate, Practice	Simulation, Role Play,	Case Study, Case Analysis, Reflective Writing, PBL, IBL
Entrepreneurial Skills	4	Independent, Confident, Self Initiate, Self Development, Self Awareness, Self Discipline, Inquisitive	Affective	Generic	Soft		Active Learning, SCL	Case Study, Case Analysis, Reflective Writing, Portfolio
Ethics and Professionalism	4	Mindset, Skills, Planning and Organising, Visionary, Network, Risk Taker, Negotiation	Affective	Discipline	Hard		PBL	PBL, Portfolio
	5	Responsible, Relation, Ethic, Integrity, Moral, Proactive, Volunteerism	Affective	Discipline	Hard		Case based Learning	Case Study, Case Analysis, Reflective Writing,



Programme Learning Outcome (PLO)

Statements	Taxonomies	MQF Learning Outcome Domains (LOD)
Apply advance knowledge and understanding of traditional and contemporary VAE theories, concept and principles	Cognitive	1. Knowledge and Understanding
Provide solution for complex problem solving through creative and innovative approach in VAE	Cognitive	2. Cognitive Skills
Demonstrate competencies in practicing VAE skills through systematic creative and innovative approach, methods and strategies	Psychomotor	3. Practical Skills
Demonstrate idea and solution using broad range of information, media and technology application with well structure manner	Affective	4. Interpersonal Skills
Practice effective communication skills in oral and written using appropriate approach, methods and strategies	Affective	5. Communication Skills
Competently use a wide range of suitable digital technologies and appropriate software to address defined and new situations	Affective	6. Digital Skills
Use quantitative and qualitative tools and reasoning techniques	Cognitive	7. Numeracy Skills
Demonstrate independence autonomy and responsive leaders with alternate roles	Affective	8. Leadership, Autonomy and Responsibility
Exemplify self-advancement through continuous academic and professional development	Affective	9. Personal Skills
Integrate entrepreneurial concept and practice in leading VAE projects and settings	Affective	10. Entrepreneurial Skills
Demonstrate adherence to legal, ethical and professional codes of practice in the field of education (ethics & professionalism)	Affective	11. Ethics and Professionalism



Programme Mapping vs Courses-Table 3

	Cluster 1	Cluster2	Cluste 3							Cluster 4	Cluster 5
	Knowledge and	Cognitive Skills	Practical Skills	Interperson al Skills	Comm. Skills	Digital Skills	Numeracy Skills	Leadership, Autonomy	Personal Skills	Entrepreneu rial Skills	Ethics and Professiona
	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10	PLO11
Course1		√		√							√
Course2			√			√	√				
Course3		√								√	√
Course4	√				√				√		
Course5		√			√						√
Course6					√	√					√
Course7	√	√			√						
Course8		√				√	√				
Course9								√		√	√
Course10		√	√				√				√
Course11				√				√		√	
Course12				√					√	√	
Course13				√					√	√	
TOTAL	2	6	2	4	4	3	3	2	3	5	6

Programme Assessment Blueprint

Course 1	Course 2	Course 3	Course 4	Course 5	Course 6
Quiz 1	Test	Presentation	Need Analysis	Test 1	Case Study
Quiz 2	Video Presentation	Report	Problem-based	Test 2	Project-based
Assignment	Article Review	Final Project	Portfolio	Quiz 1	Product Pitching
Lab Report	Case Study		Final Project	Quiz 2	Report
Industry Case				Assignment	Presentation
Final Assessment				Final Assessment	



Know The Domains And Skillsets

Cognitive Skills (PLO2)	Cognitive											
		Cluster 1	Cluster2	Cluster 3				Cluster 4			Cluster 5	
		Knowledge and Understanding	Cognitive Skills	Practical Skills	Interpersonal Skills	Comm. Skills	Digital Skills	Numeracy Skills	Leadership, Autonomy and Responsibility	Personal Skills	Entrepreneurial Skills	Ethics and Professionalism
		PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10	PLO11
Numeracy Skills (PLO6)	Cognitive	Course1	√	√	√							
		Course2	√	√	√	√						
		Course3		√			√	√				
Digital Skills (PLO7)	Affective	Course4	√	√								
		Course5	√	√			√					
		Course6	√					√	√			

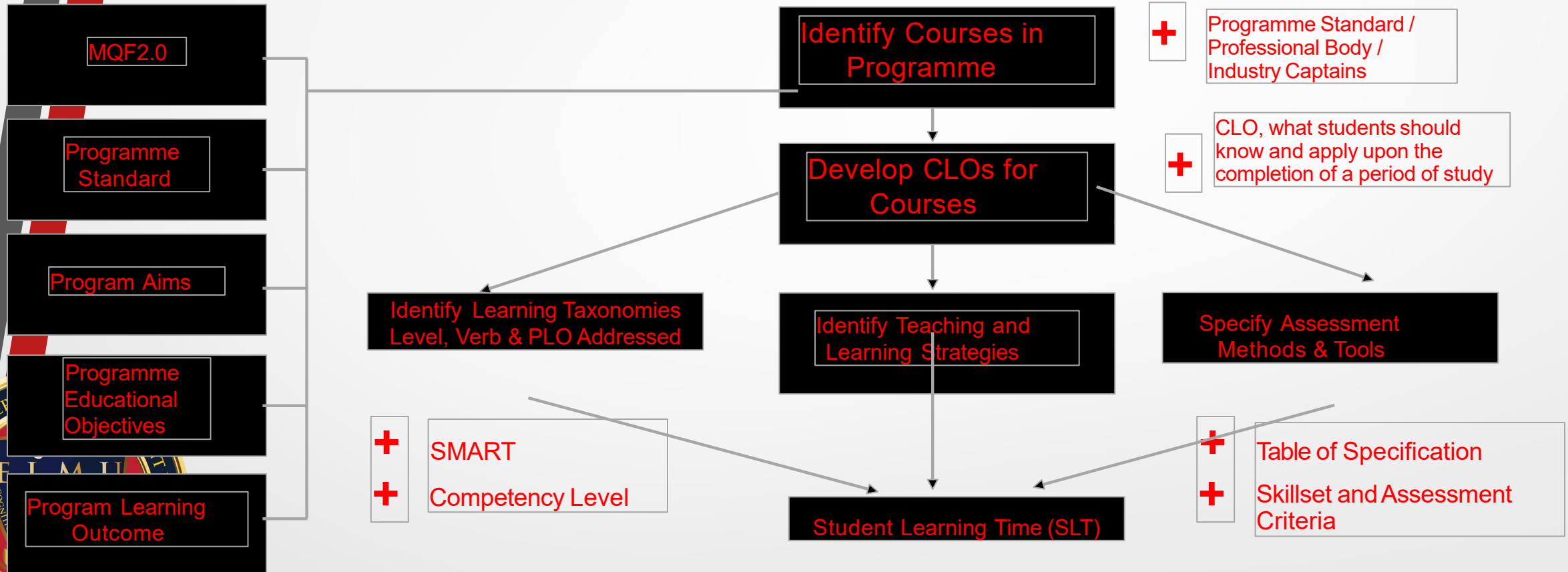


Designing Programme & Course

Reference :

GP Penulisan Program Akademik, JPT KPM

Modul Pembangunan Kemahiran Insaniah untuk IPT



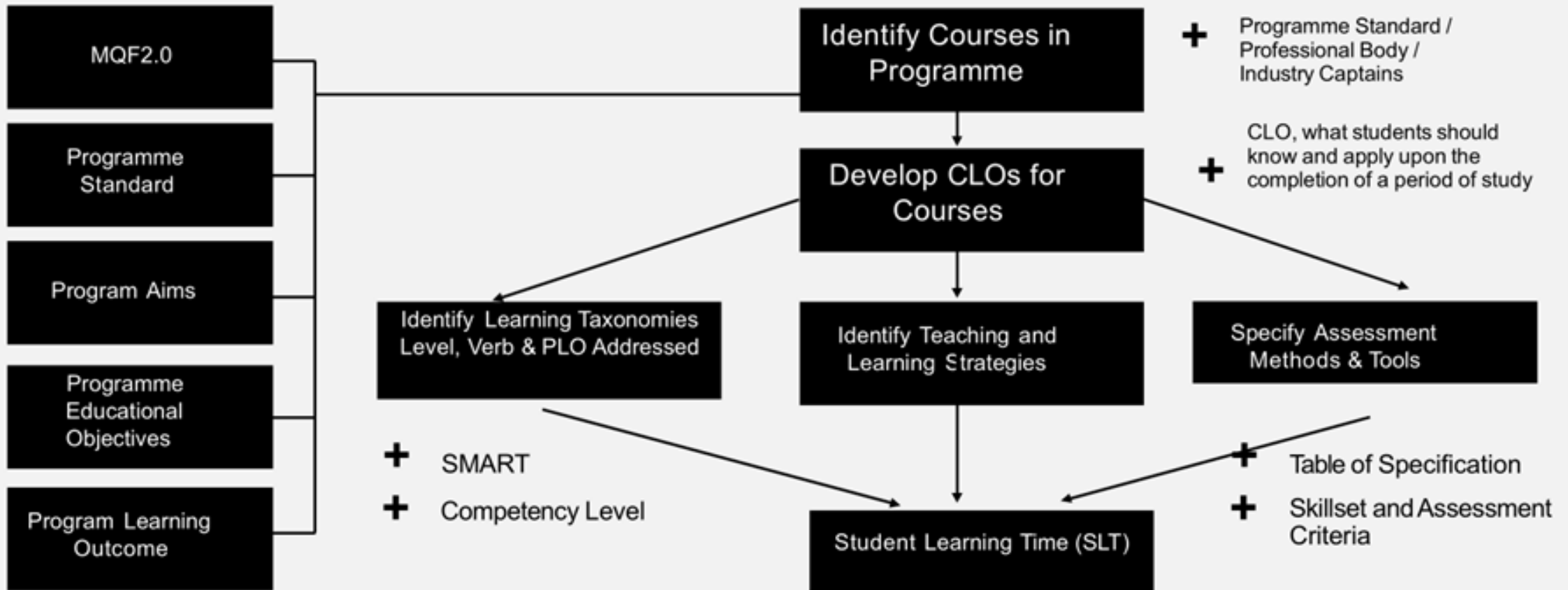
Constructively Alignment

Designing Programme & Course

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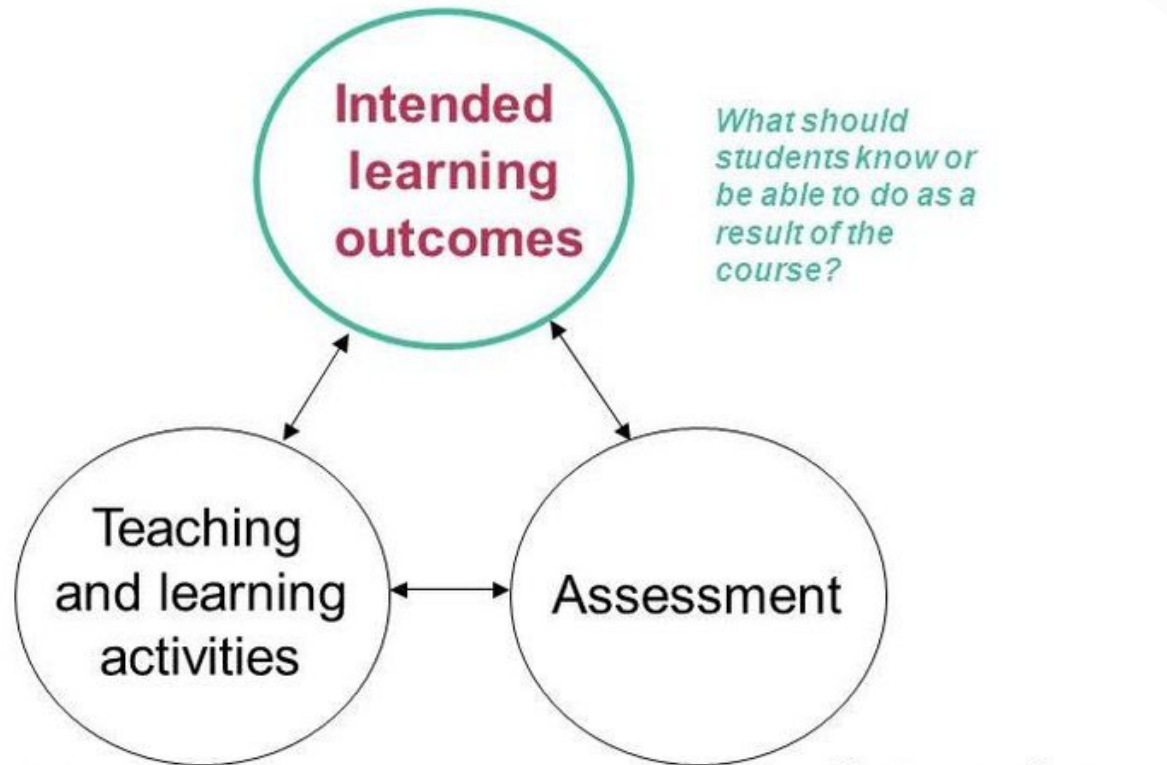


Constructively Alignment

Constructive Alignment

To maximize the quality of learning outcomes, we, as academics, need to develop courses in ways that provide students with teaching and learning materials, tasks and experiences which:

- are authentic, real-world and relevant
- are constructive, sequential and interlinked
- require students to use and engage with progressively higher order cognitive processes
- are aligned with each other and the desired learning outcomes; and
- provide challenge, interest and motivation to learn



What should students know or be able to do as a result of the course?

What activities are appropriate for students in order to develop the desired competencies?

How can students demonstrate that they have acquired the desired levels of competencies?

'Constructive' refers to the idea that students construct meaning through relevant learning activities

'Alignment' refer to a learning where T&L activities, assessment tasks are aligned to the intended learning outcome



- ❑ Constructive alignment involves designing teaching and learning activities and assessments that directly target learning goals, unlike traditional lectures and evaluations.
- ❑ The word "construct" refers to pupils' interpretation and conceptualization of learning content.
- ❑ The course owner creates an alignment environment for students to connect with learning goals and use the same verb in assessment tasks to evaluate learning effectiveness.
- ❑ The idea is that teaching techniques and assessment assignments match learning activities and expected results.

CONSTRUCTIVE ALIGNMENT

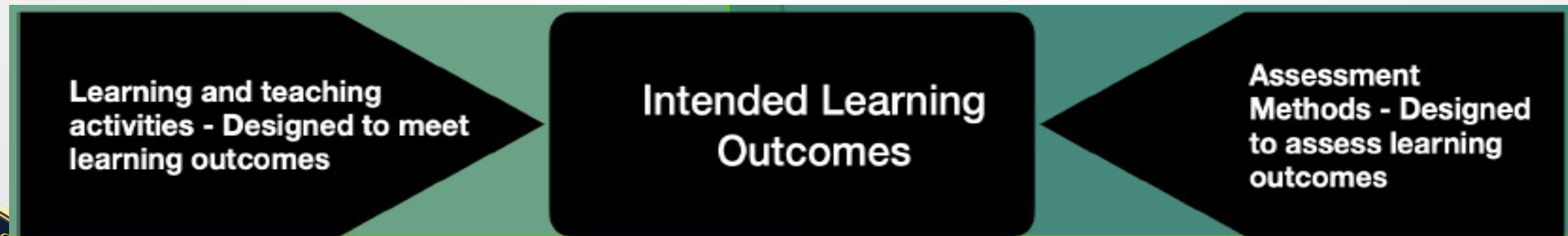
Designing teaching and learning activities so that students are optimally engaged in achieving these learning outcomes



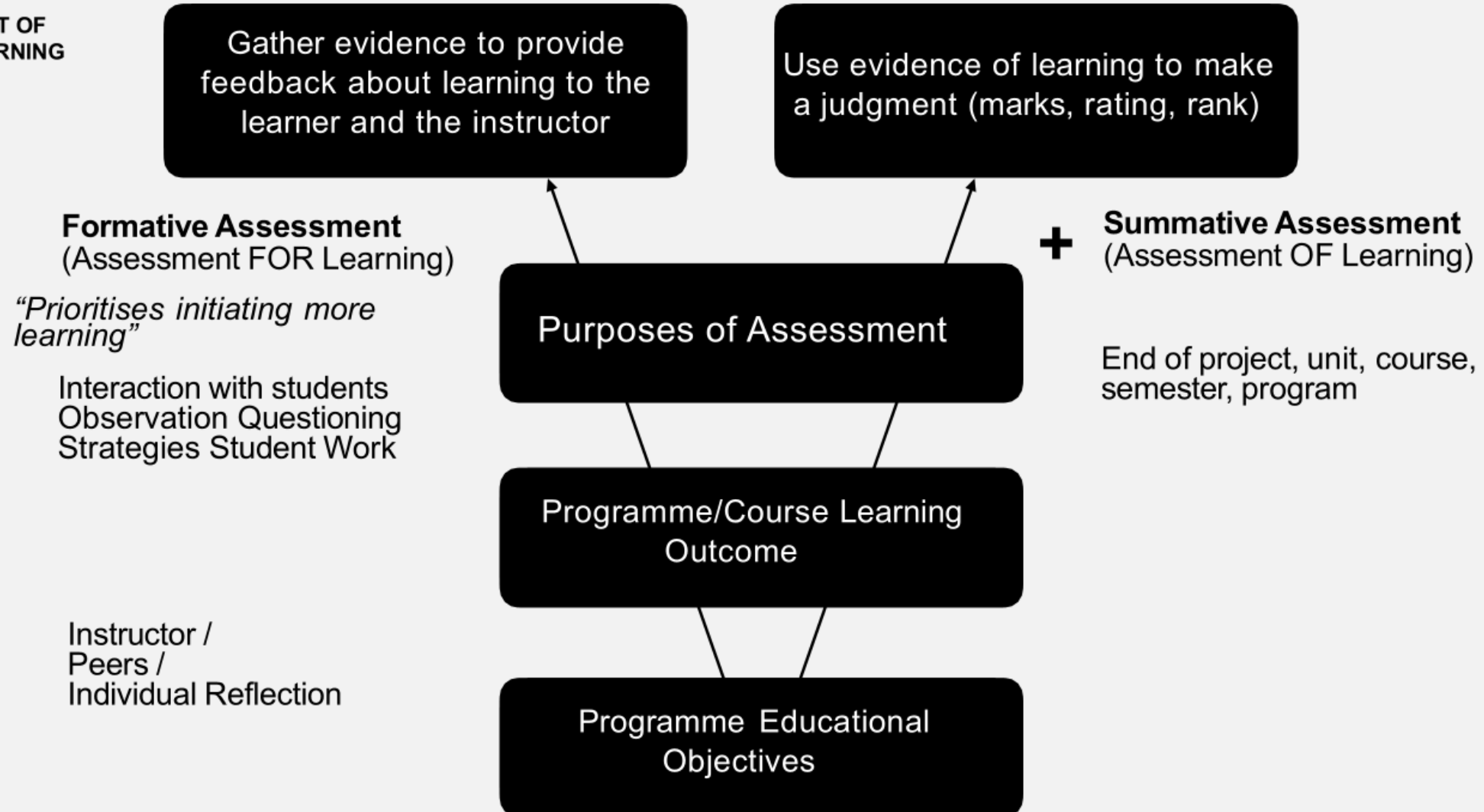
Students should learn and demonstrate their achievement based on the intended learning outcomes of the course, and through assessment and appropriated transfer of the Body of Knowledge.

Creating assessments that will allow students to demonstrate their attainment of the learning outcomes and allow instructors to discern how well these outcomes have been achieved.

Aligning Learning Outcomes, Learning and Teaching Activities and Assessment

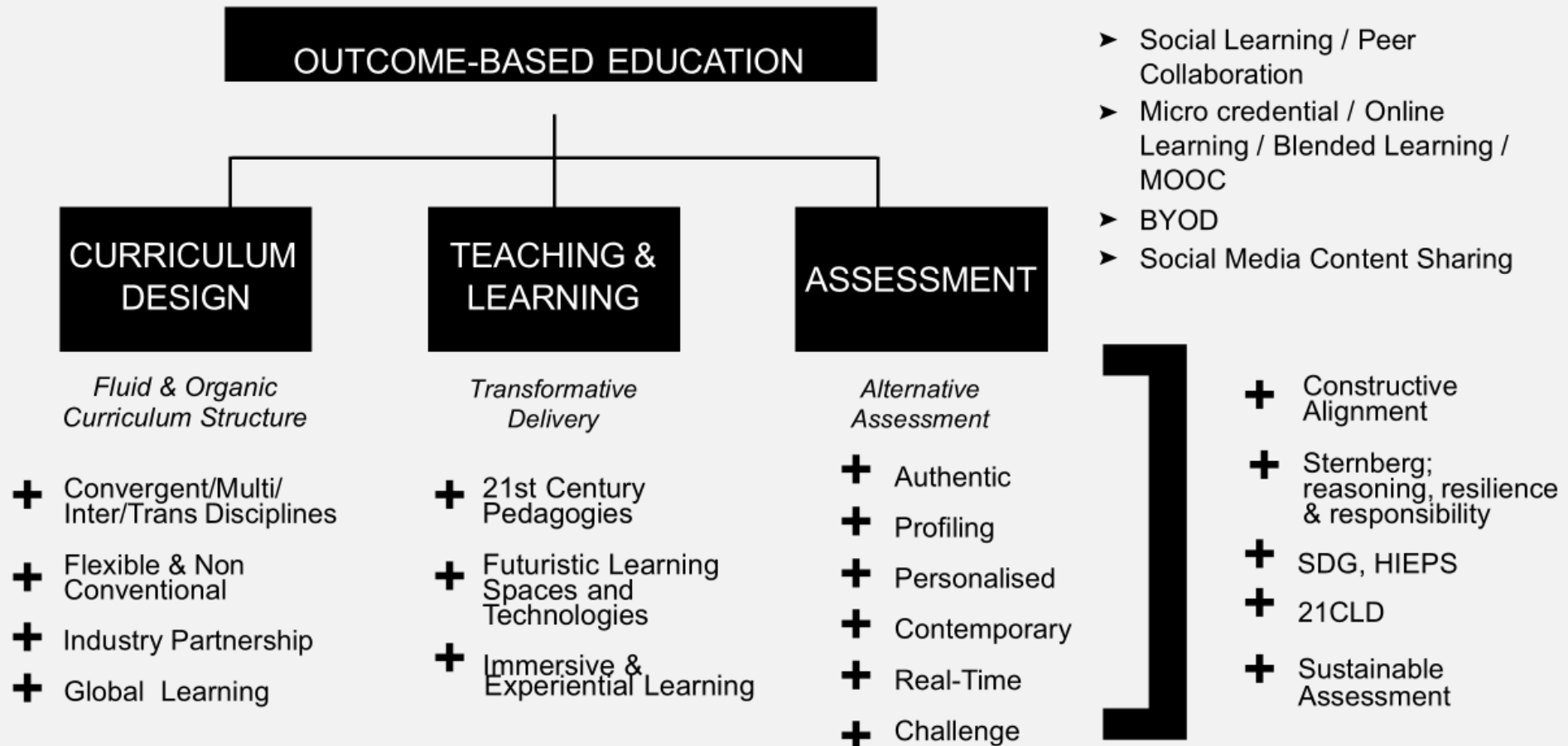


Formative & Summative Assessment

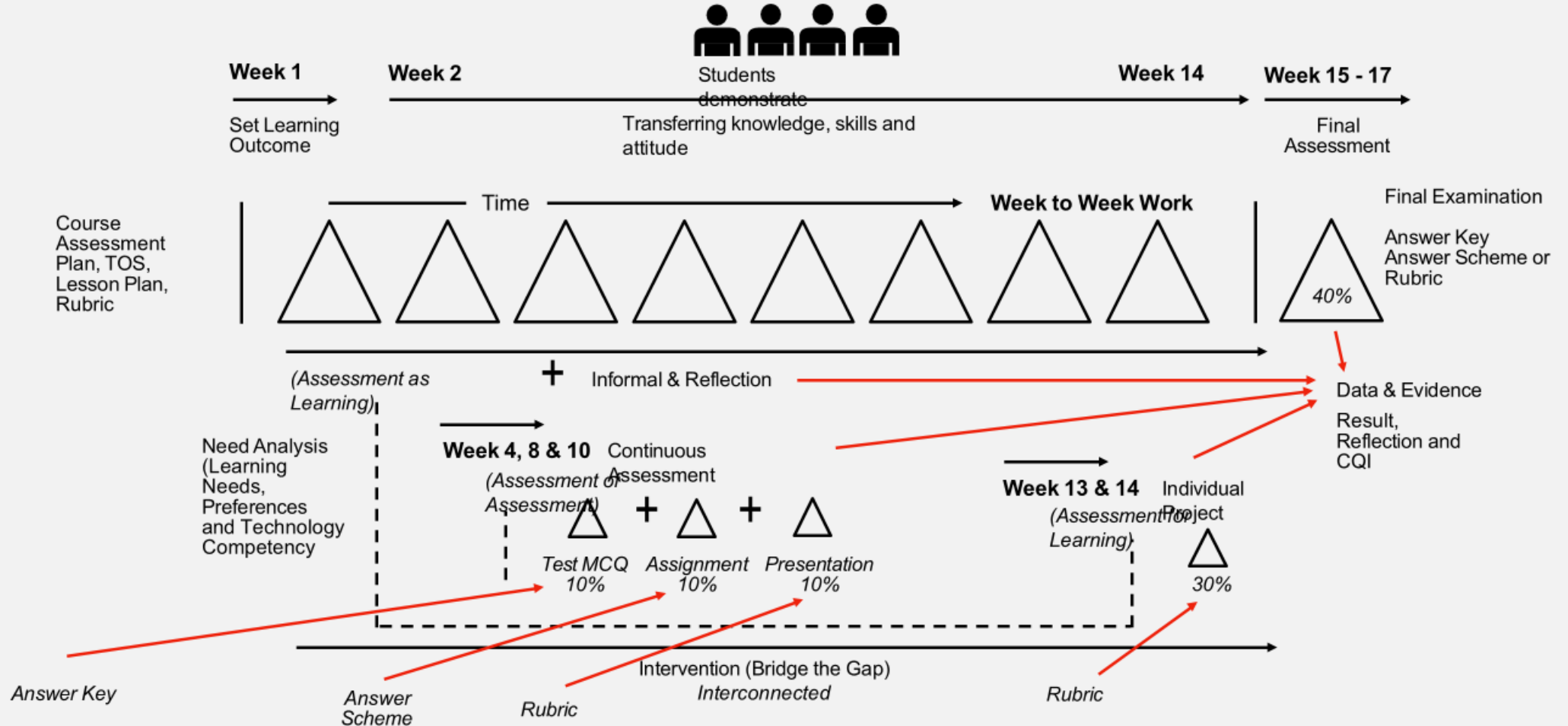


Formative & Summative Assessment

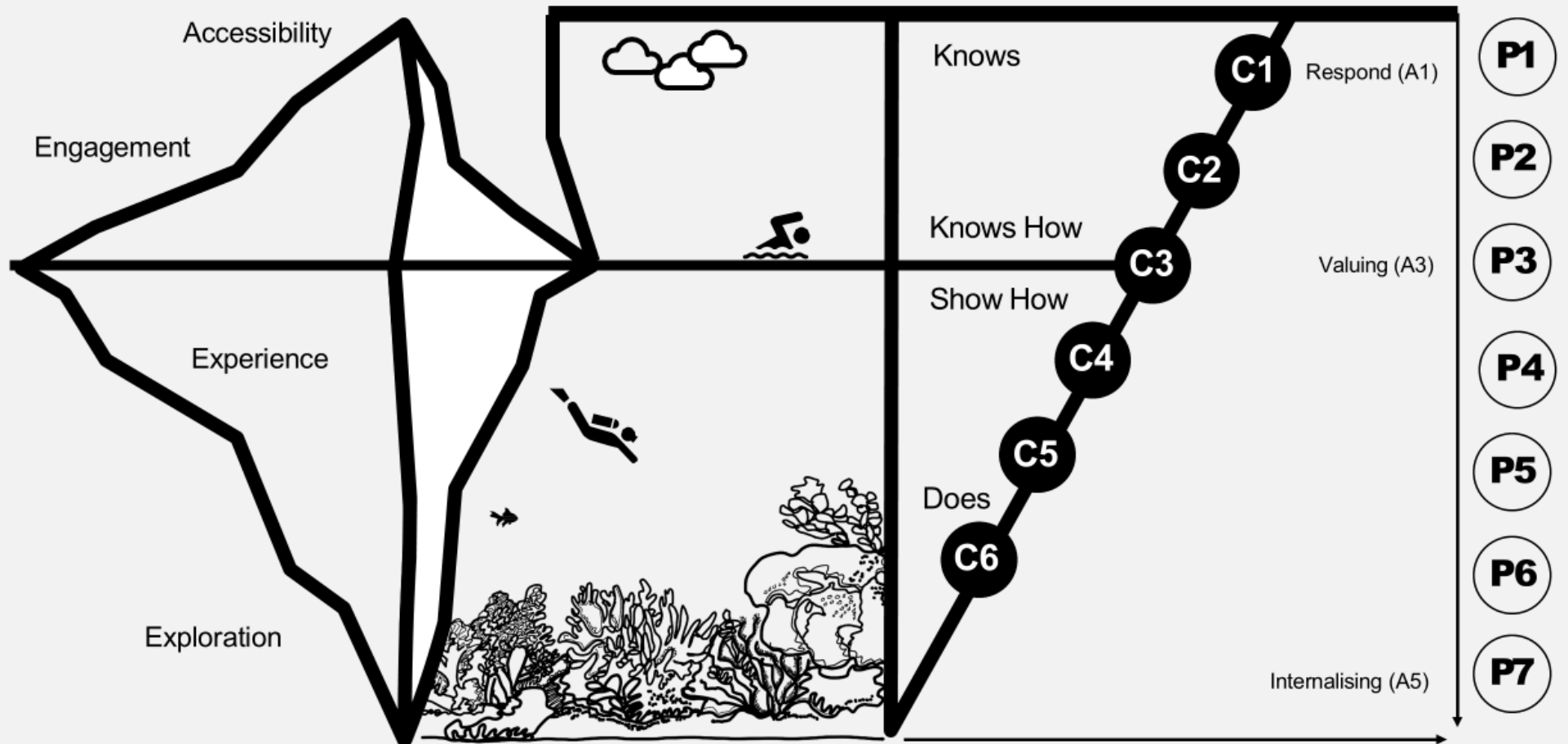
- + National Education Philosophy
- + PPPM-PT 2015-2025
- + MQF2.0 Framework



Formative & Summative Assessment



Learning Taxonomy



Course Assessment Table/ Plan

No	Course Learning Outcomes	PLO	MQF2.0	Taxonomy Domain	Teaching and Learning Activity				Specific Task	HIEPS
						Reflective Writing	Case Analysis	Individual Project		
1	Discuss the concept, principles, issues and challenges in visual art assessment and evaluation.	2	2	C5	Interactive Lecture	20%			Reflective writing (20%) marks is to deliberate the issues, trends and challenges related to assessment and evaluation from preschool until HLI.	E-Portfolio
2	Evaluate quantitative and qualitative data in measuring learning outcome through assessment and evaluation.	6	6	C5				20%	Individual Project (20%) marks to assess the HOTS in formulating the best practices in assessment and evaluation	E-Portfolio
3	Integrate digital technologies and appropriate software for diagnostic, formative and summative assessment and evaluation	7	7	A4			20%	20%	Use competency analysing data (quantitative and qualitative)	E-Portfolio



Course Assessment Table/ Plan

DETERMINE BLOOM'S LEVEL FOR EACH CLO STATEMENTS BASED ON VERBS USED IN THE CLOS

LO Domain	Bloom	Course Learning Outcomes	Bloom's	Topics	TLA	F2F	NF2F	SLT	Assessment	%
Cognitive Skills (PLO2)	Cognitive	Discuss the concept, principles, issues and challenges in visual art assessment and evaluation.	C5							
Numeracy Skills (PLO6)	Cognitive	Evaluate quantitative and qualitative data in measuring learning outcome through assessment and evaluation.	C5							
Digital Skills (PLO7)	Affective	Integrate digital technologies and appropriate software for diagnostic, formative and summative assessment and evaluation	A4							



Course Assessment Table/ Plan

DETERMINE TEACHING AND LEARNING ACTIVITIES (TLA) FOR EACH CLO STATEMENTS BASED PLOS DETERMINED FOR EACH CLOS

LO Domain	Bloom	Course Learning Outcomes	Bloom's	Topics	TLA	F2F	NF2 F	SLT	Assessment	%
Cognitive Skills (PLO ₂)	Cognitive	Discuss the concept, principles, issues and challenges in visual art assessment and evaluation.	C ₅	TOPIC ₂ Assessment, Evaluation and Measurement	Interactive Lecture					
Numeracy Skills (PLO ₆)	Cognitive	Evaluate quantitative and qualitative data in measuring learning outcome through assessment and evaluation.	C ₅							
Digital Skills (PLO ₇)	Affective	Integrate digital technologies and appropriate software for diagnostic, formative and summative assessment and evaluation	A ₄							



Course Assessment Table/ Plan

DETERMINE TEACHING AND LEARNING ACTIVITIES (TLA) FOR EACH CLO STATEMENTS BASED PLOS DETERMINED FOR EACH CLOS

LO Domain	Bloom	Course Learning Outcomes	Bloom's	Topics	TLA	F2F	NF2 F	SLT	Assessment	%
Cognitive Skills	Cognitive	Discuss the concept, principles, issues and challenges in visual art assessment and evaluation.	C5	2.1.1 Purpose of Educational Assessment, Evaluation and Measurement	Interactive Lecture					
				2.1.2 Principles of Assessment and Evaluation						
				2.1.3 Characteristic of Assessment and Evaluation						
				2.1.4 State of the Assessment and Evaluation						
				2.1.5 Values and Attitudes about Assessment and Evaluation						
				2.1.5 The Nature Passive and Active Assessment in Visual Art Education						

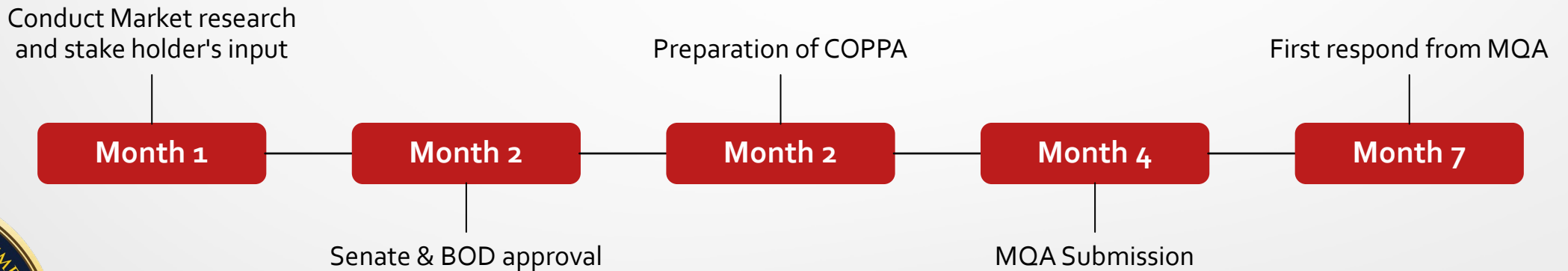


Course Assessment Table/ Plan

DETERMINE STUDENT LEARNING TIME(SLT) FOR EACH TEACHING AND LEARNING ACTIVITIES IN EACH CLO

LO Domain	Bloom	Course Learning Outcomes	Taxonomy Level	Topics	TLA	F2F	NF2F	SPT	SLT	Assessment	%
 Cognitive Skills (PLO1)	Cognitive	Discuss the concept, principles, issues and challenges in visual art assessment and evaluation.	C5	2.1.1 Purpose of Educational Assessment, Evaluation and	Interactive Lecture	9	9	18	36	Test	30%
				2.1.2 Principles of Assessment and Evaluation							
				2.1.3 Characteristic of Assessment and Evaluation							
				2.1.4 State of the Assessment and Evaluation							
				2.1.5 Values and Attitudes about Assessment and Evaluation							
				2.1.5 The Nature Passive and Active Assessment in Visual Art							
Education											

Timeline Program Development



“

"Outcome-Based Education empowers learners by focusing not merely on what is taught, but on what is ultimately achieved. It is a commitment to purposeful learning, measurable results, and continuous improvement."

”

Ts Dr Rozita Husain

**THANK YOU FOR YOUR
COOPERATION**

