DEPARTMENT OF
MEDICAL
EDUCATION
UKMMC

UNIVERSITI KEBANGSAAN MALAYSIA
The National University of Malaysia

CURRICULUM REVIEW

Dr Mohd Nasri Awang Besar

WORKSHOP ON OUTCOME- BASED EDUCATION,
KULIYYAH OF MEDICINE
7TH march 2023

Time	Topic
8.30 am – 8.45 am	Registration
8.45 am. – 9.00 am	Welcoming remark
9.00 am – 9.30 am	Overview of the curriculum review
9.30 am – 11.00 am	Malaysian Qualifications Framework (MQF 2.0)
11.00 am – 11.30 am	Morning break
11.30 am – 12.00 pm	Outcome Based Education (OBE) Vision, mission, PEO and PLO
12.00 pm – 12.45 pm	Course Learning Outcome Cognitive, Psychomotor and Affective Taxonomies
12.45 pm – 2.00 pm	Lunch and Zuhur prayer
2.00 pm – 5.00 pm	SLT calculation- common mistakes Table 4- What and Why Table 4- Do and don't
5.00 pm	End workshop

Who am I?

Why I am here today?

Who am I?

I am belong to the administrator/medical education unit/ coordinator (or a team) who develop/ monitor/ coordinate MY CURRICULUM

I am newbies in “my curriculum”

I am not newbies, but I was born from “other curriculum”..

Why I am here today?

I am belong to the administrator/medical education unit/ coordinator (or a team) who develop/ monitor/ coordinate MY CURRICULUM

- I want to know why I am doing this??
- This- preparing all the documents? Just to implement a medical curriculum

I am newbies in “my curriculum”

- Just to prepare my self to continue finishing all documents from my senior…

I am not newbies, but I was born form “other curriculum”..

- I want to know why current curriculum is more complex compare to my old days…

Curriculum review: Outline

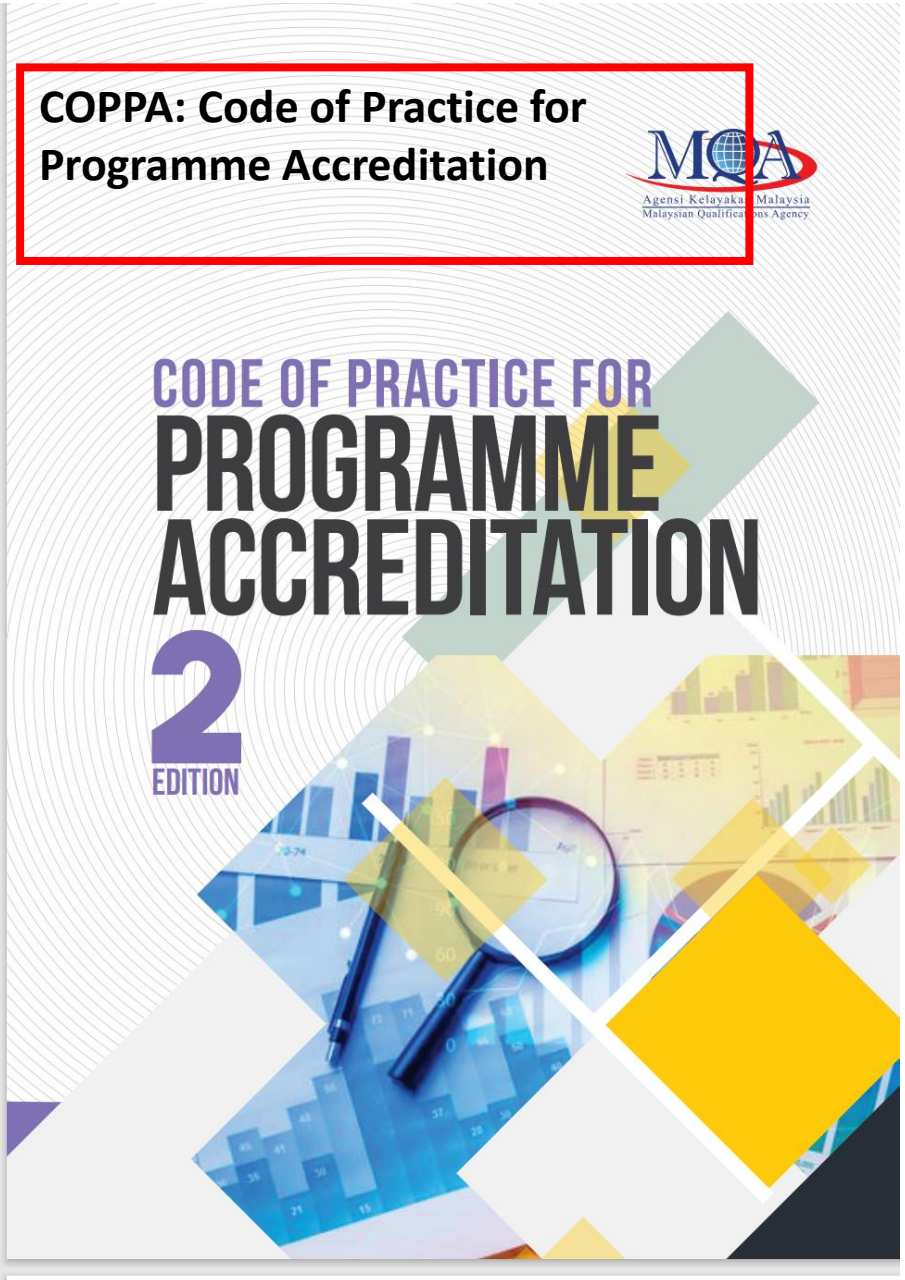
- Pre workshop
  - Curriculum, OBE, MMC standard,
  - preparation
- During workshop
- Post workshop

What is curriculum?

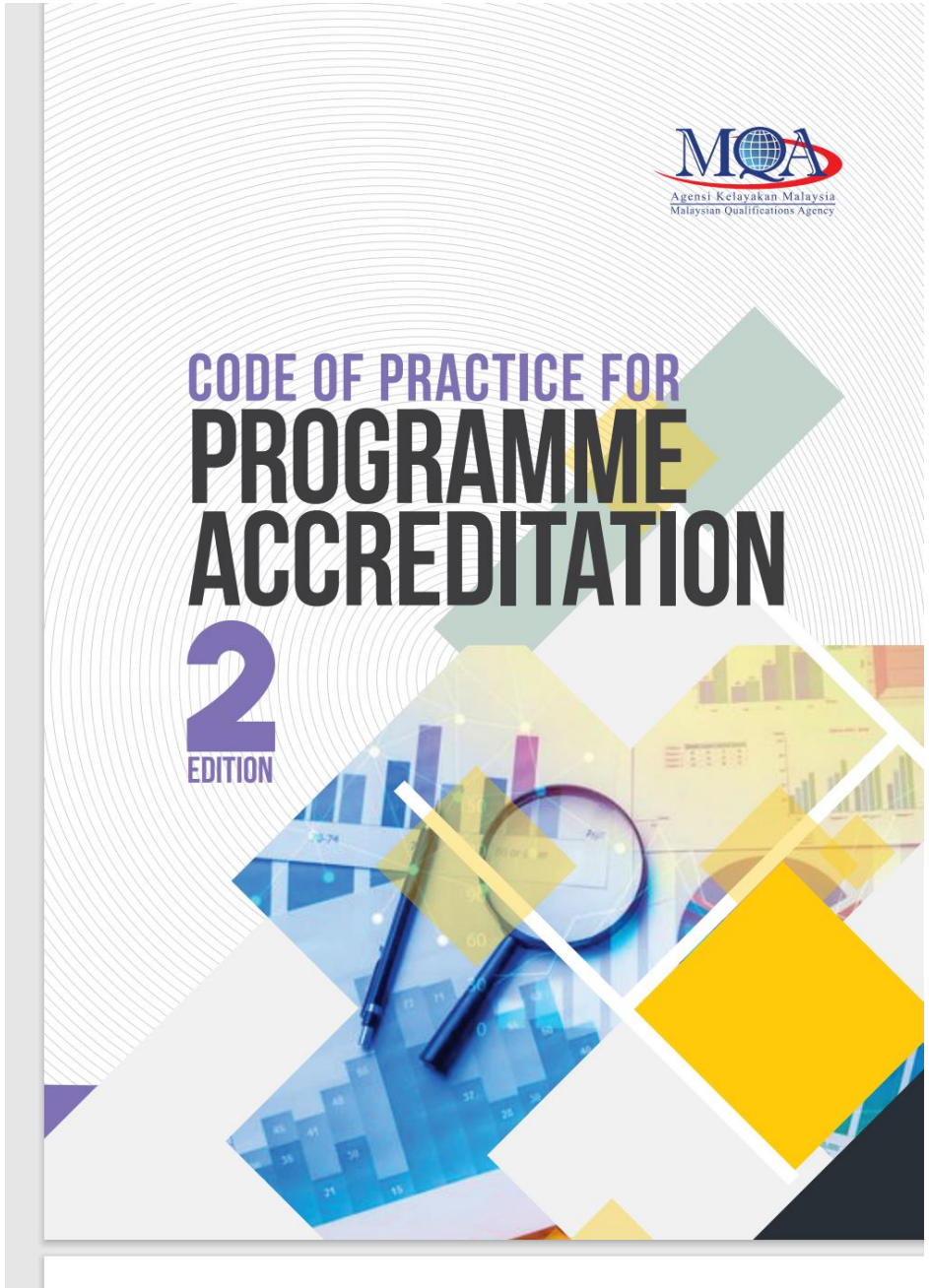
Harden (2001) defines the curriculum as

“a sophisticated blend of educational strategies, course content, learning outcomes, educational experiences, assessment, the educational environment and the individual students' learning style, personal timetable and programme of work”

COPPA: Code of Practice for Programme Accreditation



Section 2: Criteria and Standards for Programme Accreditation



STANDARDS FOR UNDERGRADUATE MEDICAL EDUCATION

Prepared by:

UNDERGRADUATE EDUCATION SUBCOMMITTEE,
MEDICAL EDUCATION COMMMITTEE, MALAYSIAN MEDICAL COUNCIL

Adopted by The
MALAYSIAN MEDICAL COUNCIL
28th May 2019
First Edition: 2019
Second Edition: 2022

AREA 1

OBE: Vision, mission, PEO, PLO, CLO, LO
Table 4: Mapping, TLA, Content, Constructive alignment

Programme Development and Delivery

AREA 2

Assessment of Student Learning

AREA 3

Student Selection and Support Services

AREA 4

Academic staff

AREA 5

Educational resources

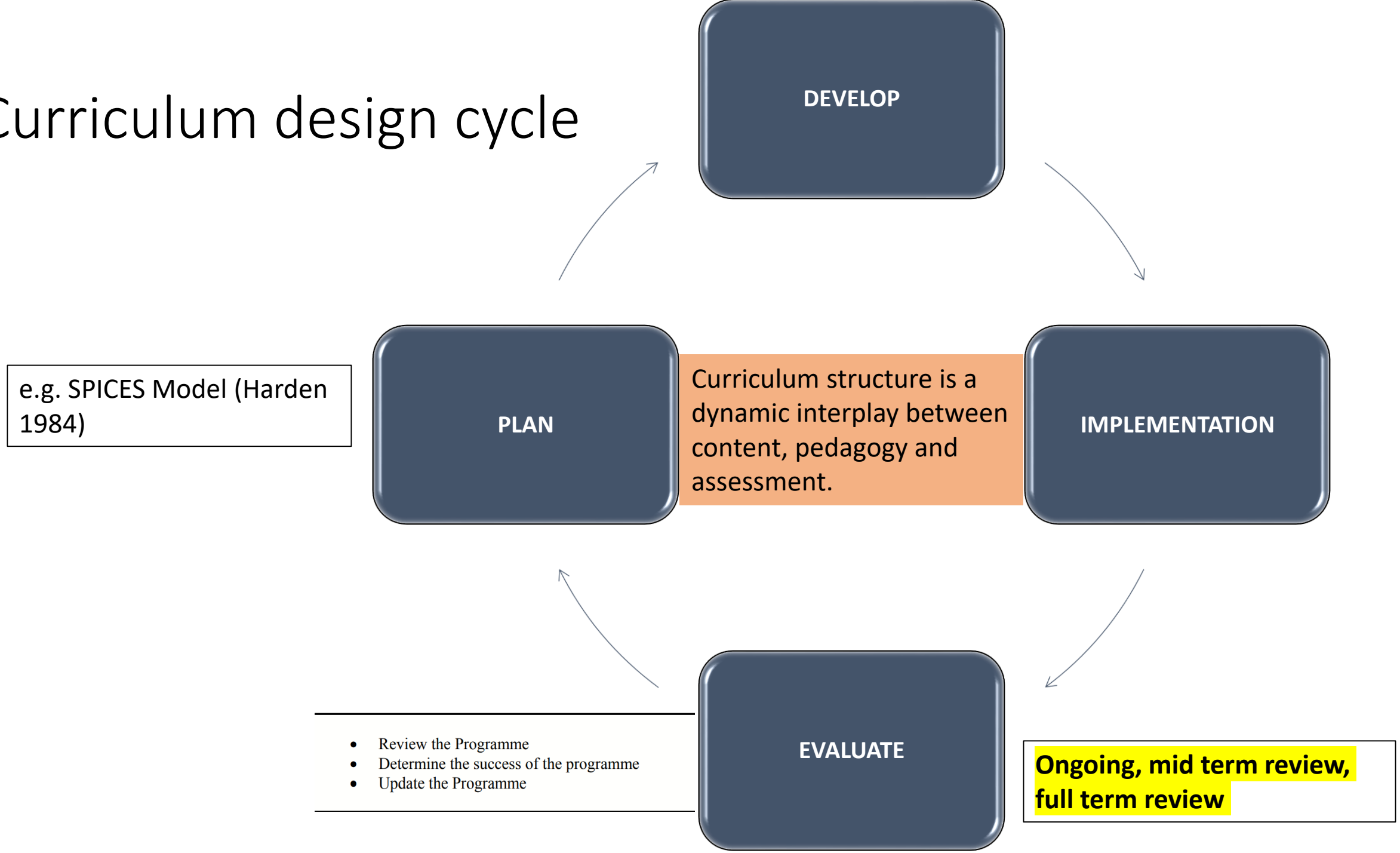
AREA 6

Programme management

AREA 7

Programme Monitoring, Review and Continual Quality Improvement

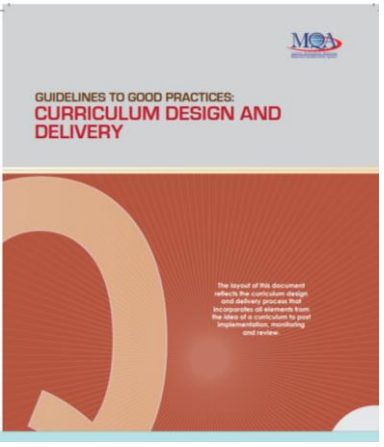
Curriculum design cycle



PRE WORKSHOP

Curriculum (Review) Committee

- A formal process of curriculum design involves a Curriculum Committee consisting of representatives that may include the academic and administrative staff of the HEP, government agencies, professional bodies and industries and other stakeholders.
- The Committee must be familiar with MQA and MOHE regulations on programme structures and admission requirements connected with the discipline or the field of study.



GUIDELINES TO GOOD PRACTICES: CURRICULUM DESIGN AND DELIVERY
MQA 2011

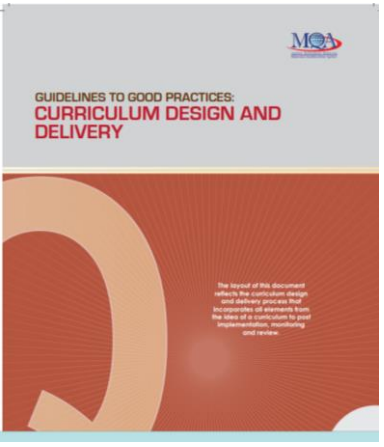
The curriculum must also conform to, among others:

(a) the regulations and laws, that deal with educational programmes at the tertiary level (e.g. inclusion of the compulsory subjects stipulated by Act 555);

(b) level of qualifications (MQF, Appendix 2), learning outcome domains (MQF, Paragraph 14) and Appendix 1 of this document: Eight MQF Learning Outcome Domains, student competencies (MQF, Appendix 1), and credit and academic load (MQF, Paragraphs 19-22);

(c) professional body/industry requirements; and

(d) internal / university policies and procedures.



GUIDELINES TO GOOD PRACTICES: CURRICULUM DESIGN AND DELIVERY
MQA 2011

Reference

MALAYSIAN QUALIFICATIONS FRAMEWORK (MQF)

2nd EDITION

2. In Malaysia, the importance of the role of higher education and training institutions is to contribute to the nation's social, economic and political development through the production of quality citizens, a highly skilled and talented workforce and new knowledge has been unambiguously acknowledged. These developments have been guided broadly by the National Education Philosophy. Empowering the actualization of the policy is the Malaysia Education Blueprint 2015-2025 (Higher Education)[1] which outlines the strategies, plans, key performance indicators, responsible departments, institutions and agencies within a number of strong enabling legal frameworks. The Malaysian Qualifications Framework (MQF)[2] which was approved under the Malaysian Qualifications Agency (MQA) Act, 2007, has a key role within these complex arrangements, i.e. to set qualification standards for all qualifications in the higher education and training sectors.

3. The milestone decision agreed by all stakeholders was made in 2007, to develop a national qualifications framework and establish the MQF. The MQA Act 2007 sets MQF as an overarching framework for all post-secondary qualifications, with a set of objectives to be served and serviced by MQA. The Framework is 'development-oriented', and enabled by strong government policies and regulations, centrally mandated for MQF, its stakeholders and in partnership with higher education and training institutions.

[1] Ministry of Education Malaysia (2015), *Malaysia Education Blueprint 2015-2025 (Higher Education)*. Putrajaya, Malaysia.
[2] Malaysian Qualifications Agency (2007), *Malaysian Qualifications Framework*. Petaling Jaya, Malaysia.

Reference

MALAYSIAN QUALIFICATIONS FRAMEWORK (MQF)
2nd EDITION

OBE Approaches

OBE is an approach of curriculum design that focuses on the end product, and defines what the learner is able to do.

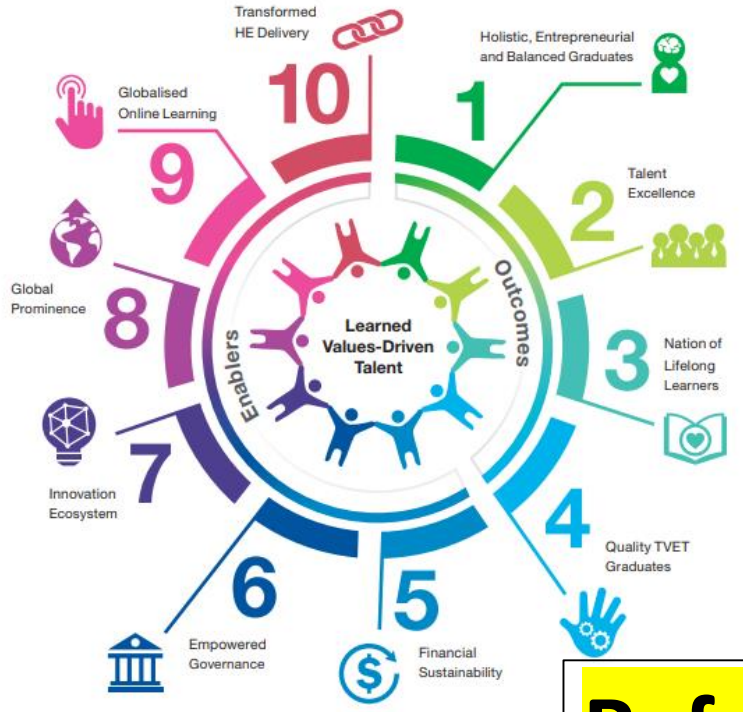
A comprehensive approach to organizing and operating an education system that is focused and defined by the **successful demonstrations of learning sought from each student**.

(Spady, 1994)

Reference

The 10 shifts in MEB 205-2025

The 10 Shifts



To achieve these system and student aspirations, the MEB (HE) outlines 10 Shifts that will spur continued excellence in the higher education system. All 10 Shifts address key performance issues in the system, particularly with regard to quality and efficiency, as well as global trends that are disrupting the higher education landscape.

The first four Shifts focus on outcomes for key stakeholders in the higher education system, including students in academic and TVET pathways, the academic community, as well as all Malaysians participating in lifelong learning. The other six Shifts focus on enablers for the higher education ecosystem, covering critical components such as funding, governance, innovation, internationalisation, online learning, and delivery.

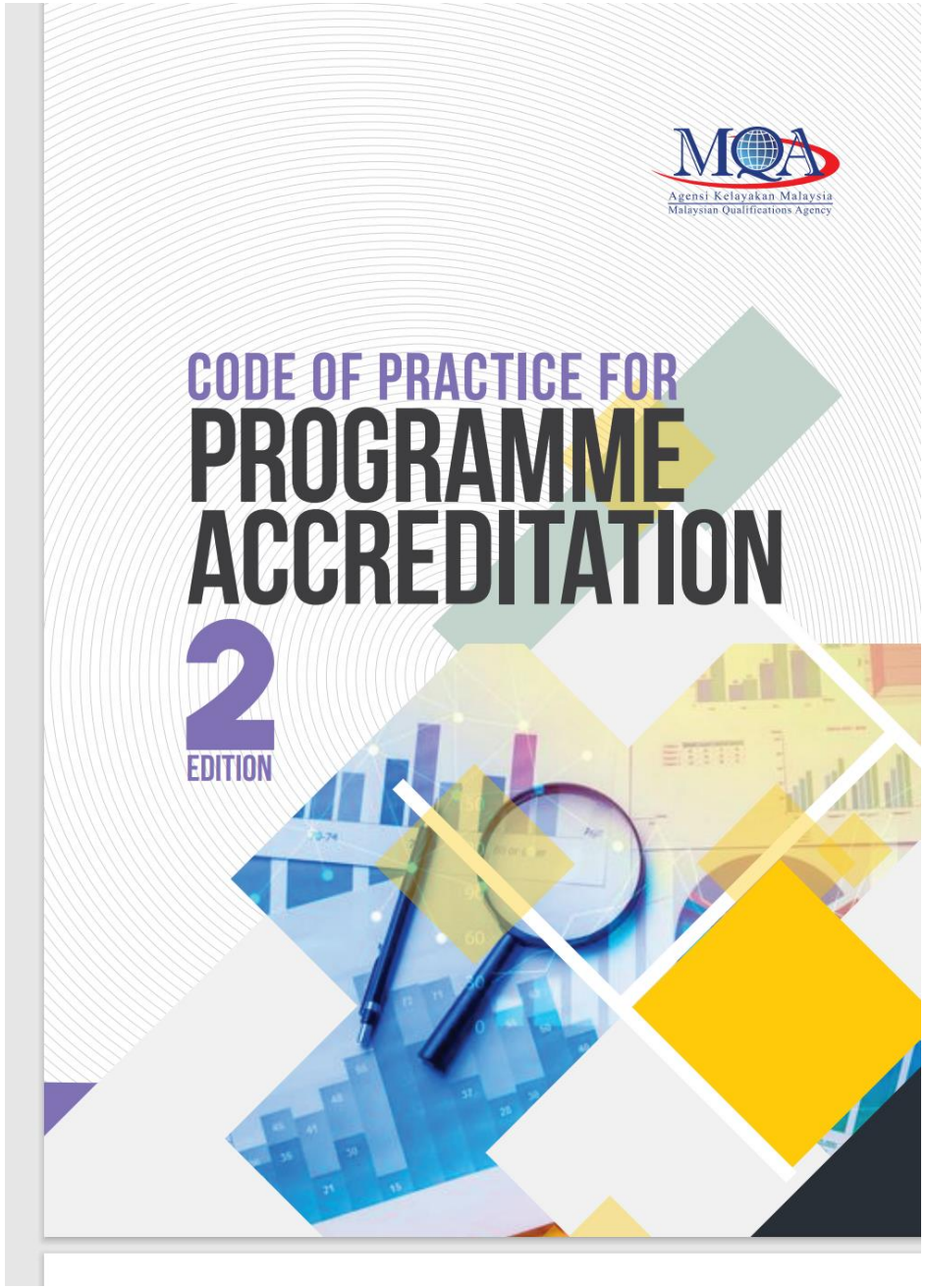
Reference

Kerangka Kurikulum Tersedia Masa Hadapan

Kerangka Kurikulum Tersedia Masa Hadapan merupakan model pembelajaran yang lentur dan organik bagi melahirkan graduan yang adaptif dan kalis masa hadapan seiring dengan cabaran abad ke-21.

Rajah 1: Kerangka Kurikulum Tersedia Masa Hadapan

Reference



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BASIC MEDICAL EDUCATION
WFME GLOBAL STANDARDS FOR
QUALITY IMPROVEMENT

The 2020 Revision

www.wfme.org admin@wfme.org

STANDARDS FOR PROGRAMME ACCREDITATION OF UNDERGRADUATE MEDICAL PROGRAMMES

CONTENTS

STANDARDS FOR UNDERGRADUATE MEDICAL EDUCATION 2nd Edition (2022)

SECTION 2

CRITERIA AND STANDARDS FOR PROGRAMME ACCREDITATION

SECTION 2: CRITERIA AND STANDARDS FOR PROGRAMME ACCREDITATION

AREA 1: PROGRAMME DEVELOPMENT AND DELIVERY

1.1.	**Statement of Educational Objectives of Academic Programme and Learning Outcomes**
1.1.1.	The medical school must: ▪ have its programme to be consistent with, and supportive of, the vision, mission and goals of the medical school. ▪ in its mission, outline the aims and the educational strategy resulting in a competent medical doctor. ▪ have a mission that encompasses the health needs of the community, the needs of the health care delivery system and other aspects of social accountability.
1.1.2.	A new medical programme shall be considered only after a needs assessment has indicated that there is a need for the programme to be offered.
1.1.3.	The medical school must: ▪ state its programme educational objectives, programme learning outcomes, teaching and learning strategies, and assessment, and ensure constructive alignment among them. ▪ define the programme learning outcomes that students should exhibit upon graduation in relation to their achievements regarding knowledge, skills, and attitudes; the appropriate foundation for a future career in any branch of medicine; their future roles in the health sector; their commitment to life-long learning; the health needs of the community and the needs of the health care delivery system.
1.1.4.	The programme learning outcomes must correspond to the Malaysian Qualifications Framework (MQF) level descriptors at Level 6 and the five clusters of MQF learning outcomes: 1. Knowledge and understanding 2. Cognitive skills 3. Functional work skills with focus on: a. Practical Skills b. Interpersonal skills c. Communication skills d. Digital skills e. Numeracy skills f. Leadership, autonomy and responsibility

AREA 1

OBE: Vision, mission, PEO, PLO, CLO, LO
Table 4: Mapping, TLA, Content,
Constructive alignment, Total credit hour

Programme Development and Delivery

AREA 2

Assessment of Student Learning

AREA 3

Student Selection and Support Services

AREA 4

Academic staff

AREA 5

Educational resources

AREA 6

Programme management

AREA 7

Programme Monitoring, Review and Continual Quality Improvement

A few update in MMC standard 2020

MMC CR-01

(Curriculum Review Undergraduate Medical Programme)

Requirement to submit MMC CR-01:

Medical school is required to submit database using MMC CR-01 form when the curriculum review involved major changes as shown below:

Criteria for Major and Minor Curriculum Review:

Item	Minor	Major
Change in Visions, Missions and Objectives		
Change in Higher Education Provider's Visions, Missions and Objectives		✓
Change in PEOs, PLOs and CLOs		
Editorial change in Programme Educational Objectives (PEO)	✓	
Change in number or learning domains of Programme Educational Objectives (PEO)		✓
Editorial change in Programme Learning Outcomes (PLO)	✓	
Change in number or learning domains of Programme Learning Outcomes (PLO)		✓
Editorial change in Course Learning Outcomes (CLO) (core subjects)	✓	
Change in number or learning domains of Course Learning Outcomes (CLO) for core subjects more than 30% from total CLO		✓
Change in Curriculum Structure		
Change in curriculum structure (e.g from traditional curriculum to integrated curriculum, PBL based etc)		✓
Change in number of years of study (e.g from 6 to 5 years)		✓
Change in total number of graduating credit		✓
Change in sequence of core subjects offered without any change in credit hour e.g. changing the course offered in Year 1 to Year 2	✓	
Change of programme content (core subject) >30%		✓
Change in Teaching and Learning Activity		
Changing from face-to-face to online delivery (theory component) limited to not more than 50%.	✓	
Changing from face-to-face to online delivery (clinical component)		✓
Change in Assessment Strategy		
Change in preclinical assessment method without any change of credit hours (core subjects)	✓	
Change in clinical assessment without any change of credit hours (core subjects) (e.g. from long case and short case to OSCE) **Must adhere strictly to the current guidelines issued by Malaysian Medical Council	✓	
Adding or Removing the number of major examinations *Major examination is examination that determine student's progression to the next year of study.*		✓

SECTION 4: Core Competencies

[Approved by Council on 21st May 2020]

TABLE OF CONTENTS:

DISCIPLINE: INTERNAL MEDICINE

Clinical Problems and Diseases: Level Descriptors

Level	Descriptors
1	Aware of the condition based on literature at the level of overview
2	Able to make provisional diagnosis based on Physical examination and basic investigations. Refer to the relevant specialist
3	Able to make provisional diagnosis based on Physical examination and basic investigations. Initiate initial treatment Refer to the relevant specialist
4	Able to make diagnosis based on Physical examination and basic investigations. Manage and solve the problem

1. List of Problems/Presentation

System: Respiratory

No	Problem (Respiratory)	Level
1	Haemoptysis	4
2	Cough	4
3	Stridor	4
4	Breathlessness	4

System: Gastroenterology

No	Problem (Gastroenterology)	Level
1	Anorexia	4
2	Vomiting	4
3	Diarrhoea	4

Development of Core Competencies

i. **List problems**: common problems that graduates will encounter both at **individual** and **community**
ii. **List of diseases**
iii. **List of clinical skills**- clinical skills that a graduate should be able to perform (History, Physical Examination and procedures)

Arrangement of posting- exposures, contents, assessment

APPENDIX 7

MINIMUM NUMBER OF ACADEMIC STAFF FOR EACH DISCIPLINE

Minimum number of academic staff for each discipline

For a school that is starting a new programme, there should be sufficient academic staff to support the first 2 (TWO) years of the programme. There must be a minimum of One (1) lecturer for each major discipline.

For the implementation of clinical phase, the minimum number of lecturers are as below:

Single intake per year

- *Major Discipline (Internal Medicine, Surgery, Orthopaedics, O&G and Paediatrics)* – 2 Lecturers for each discipline
- *Minor Discipline* –1 Lecturers for each discipline

Two intake per year

- *Major Discipline (Internal Medicine, Surgery, Orthopaedics, O&G and Paediatrics)* – 4 Lecturers for each discipline
- *Minor Discipline* – 2 Lecturers for each discipline

[Approved by Council on 22nd June 2021]

APPENDIX 9

GUIDELINE TO CALCULATE FULL-TIME EQUIVALENT (FTE)

Guideline to Calculate Full-time Equivalent (FTE)

Full-time staff workload

Normal Working hours 40 hrs/week (8hrs x 5 days)

Part-Time staff

Preparation time

1 hour Bedside teaching: add 1 hour preparation time

1 hour Lecture: add 2 hours preparation time

Example 1: One part-time lecturer teaching 5 hours bedside/week

5 hours bedside teaching + 5 hrs preparation= 10 hrs/week

FTE= 10/40=0.25

Example 2: One part-time lecturer teaching 4 hours bedside/week and 1 hour Lecture/week

4 hours BST + 1 hour lecture: (4+4) + (1+2) = 11hrs/week

FTE= 11/40=0.275

[Approved by Council on 25th May 2021]

Table 2: Components of the programme and its credit value

Minimum Graduating Credit: 200

	Course Classification		Minimum Credit Value	Existing Credit Value	Propose Credit Value
1.	*Compulsory courses/modules**		*10*		
2.	***Core Courses***	• ***Basic Sciences***	*60*		
		• ***Clinical training*** • ***Projects*** ***Dissertation***	*110*		
3.	*Optional/Elective courses***		*2*		
4.	*Others (specify)*				

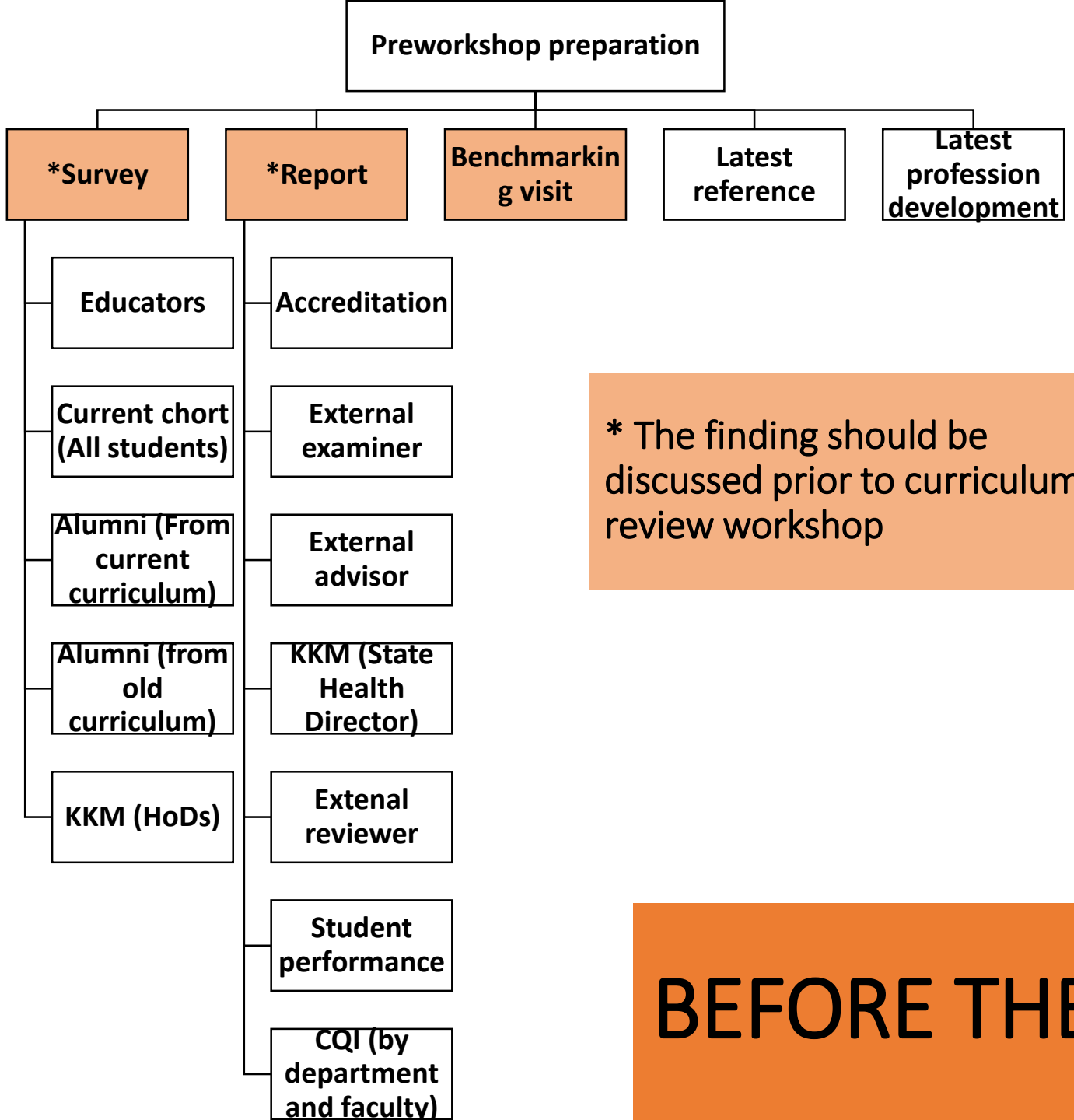
Note:

* Compulsory courses/modules refers to *Mata Pelajaran Umum* (MPU) and other courses required by the HEP.

** Optional/elective courses refer to courses where students can exercise choice.

Curriculum content and structure is kept abreast with current development in the field of study.

- Interprofessinal education/learning
- Patient safety
- Digital health
- Patient centered approach



* The finding should be discussed prior to curriculum review workshop

BEFORE THE WORKSHOP

DURING THE WORKSHOP

- Presentation, group work, group presentation, conclusion
- Possibility of follow up workshop

- Stakeholder invitation (*may involve presentation)
  - *Students
  - *Parents
  - Alumni
  - Community- *selected NGOs
  - *MOH
  - *MMC
  - MQA

43.	Stakeholders	A person, group or organization that has interest or concern in an organization. This includes all parties that are directly affected by the success or failure of an educational system, as well as those indirectly affected
44.	Stakeholders: Principal Stakeholders	Include the dean, the faculty board / council, the curriculum committee, representatives of staff and students, alumni, the university leadership and administration, relevant governmental authorities and regulatory bodies.
45.	Stakeholders: Other Stakeholders	Include representatives of other health professions, patients, the community and public (e.g. users of the health care delivery systems, including patient organisations). Other stakeholders would also include other representatives of academic and administrative staff, education and health care authorities, professional organisations, medical scientific societies and postgraduate medical educators.

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POST WORKSHOP

SECTION 6

DATA SUBMISSION FOR CURRICULUM REVIEW (MMC CR-01 CURRICULUM REVIEW UNDERGRADUATE MEDICAL PROGRAMME)

MMC CR-01

(Curriculum Review Undergraduate Medical Programme)

Requirement to submit MMC CR-01:

Medical school is required to submit database using MMC CR-01 form when the curriculum review involved major changes as shown below:

Criteria for Major and Minor Curriculum Review:

Item	Minor	Major
Change in Visions, Missions and Objectives		
Change in Higher Education Provider's Visions, Missions and Objectives		✓
Change in PEOs, PLOs and CLOs		
Editorial change in Programme Educational Objectives (PEO)	✓	
Change in number or learning domains of Programme Educational Objectives (PEO)		✓
Editorial change in Programme Learning Outcomes (PLO)	✓	
Change in number or learning domains of Programme Learning Outcomes (PLO)		✓
Editorial change in Course Learning Outcomes (CLO) (core subjects)	✓	
Change in number or learning domains of Course Learning Outcomes (CLO) for core subjects more than 30% from total CLO		✓
Change in Curriculum Structure		
Change in curriculum structure (e.g from traditional curriculum to integrated curriculum, PBL based etc)		✓
Change in number of years of study (e.g from 6 to 5 years)		✓
Change in total number of graduating credit		✓
Change in sequence of core subjects offered without any change in credit hour e.g. changing the course offered in Year 1 to Year 2	✓	
Change of programme content (core subject) >30%		✓
Change in Teaching and Learning Activity		
Changing from face-to-face to online delivery (theory component) limited to not more than 50%.	✓	
Changing from face-to-face to online delivery (clinical component)		✓
Change in Assessment Strategy		
Change in preclinical assessment method without any change of credit hours (core subjects)	✓	
Change in clinical assessment without any change of credit hours (core subjects) (e.g. from long case and short case to OSCE) **Must adhere strictly to the current guidelines issued by Malaysian Medical Council	✓	
Adding or Removing the number of major examinations *Major examination is examination that determine student's progression to the next year of study.*		✓

Part B MQA

PART B: PROGRAMME DESCRIPTION

1. Name of the programme (as in the scroll to be awarded):

Bachelor of Medicine and Bachelor of Surgery (M. B., B. S.)
Ijazah Sarjana Muda Perubatan dan Pembedahan

2. MQF level:

6

3. Graduating credit: (as stated in the licence and new graduating credit)

The current curriculum has 216 graduating credits. In the approval letter from MOHE, the number of graduating credits is stated as "Memenuhi keperluan jam kredit yang ditetapkan oleh Majlis Perubatan Malaysia"

The new curriculum has 213 graduating credits

4. Has this programme been accredited by MQA for other premises?
If yes, please provide the following details:

No.

No.	Name and Location of the Premises (main campus / branch campuses / regional centre)	Mode of Delivery	Accreditation Status
			Full
1.	NIL		
2.			
3.			

5. Type of award (e.g., single major, double major, etc.):

Bachelor's Degree

6. Field of study and National Education Code (NEC):

NEC 0912

7. Language of instruction:

8.

i) Type of programme (e.g., own, collaboration, external, joint award / joint degree, etc.)

Own.

ii) Mode of study:

Full time.

iii) Frequency of curriculum review:

Every FIVE (5) years and as and when required.

iv) Date of last review:

This is the first major curriculum review for the MBBS program. This major curriculum review took place from 2021/2022 and was completed in April 2022.

Reviews before this were minor reviews carried out throughout the years especially during 2020 and 2021 to accommodate to the Movement Control Order during the COVID-19 pandemic. The last minor review was carried out in 2021.

v) Briefly summarise the major changes in the previous curriculum review

There were no major changes in the previous curriculum review as this is the first major curriculum review for the MBBS program. Previous reviews in 2020 and 2021 mainly involved changes in the curriculum to accommodate the Movement Control Order during the COVID-19 pandemic. Some of these changes include adaptations in the mode of delivery and adaptations in methods of assessment during MCO.

vi) Duration of study

The table below summarised the number of weeks, semesters and years for the new curriculum.

	Full time	
	Long semester	Short semester

Part C MQA

Please submit the completed documents to MQA. The documents should include but not limited to:

1. Table of Content;
2. List of appendices (if relevant);
3. Summary of major changes and its rational
4. Answers to all questions in Area 1 and Area 2. For each question, highlight changes made to the proposed new curriculum and its justifications.;
5. Table 3.1 should include differences in learning outcomes, curricular contents and assessment of students learning- where relevant.;
6. Existing and proposed Table 4;
7. Feedback from stakeholders - Summarise the findings and relate the input from stakeholders that were taken in the development of the proposed new curriculum.;
8. Verification by the HEP Quality Unit; and
9. Approval by the University Senate

their academic performance to ensure that they have sufficient time to undertake remedial measures.

c) How are results made available to the students for purposes of feedback on performance, review and corrective measures?

d) Specify whether students have the right to appeal. Provide information on the appeal policy and processes. How are appeals dealt with?

e) Explain the mechanism to review and implement new methods of assessment. Explain the processes in making changes to the assessment method.

2.2.4. How are the changes in assessment made known to the students?

2.3. Management of Student Assessment

2.3.1. Explain the roles, rights and power of the medical school and the academic staff in the management of student assessment.

2.3.2. Describe how the confidentiality and security of student assessment documents as well as academic records are ensured.

2.3.3. Explain how and when continuous and final assessments results are made available to students.

2.3.4. What guidelines and mechanisms on students' appeal against course results are in place?

2.3.5. Explain how the medical school periodically reviews the management of student assessment and measures it take to address the issues highlighted by the review.

ANY OTHER RELEVANT INFORMATION RELATES TO THE REVISED CURRICULUM (Example- staff development programme, bench marking visit to other institution etc)

Part C MQA

- **Most** of the questions in **AREA 1 and AREA 2** are identical with MQA 02

4. Answers to all questions in Area 1 and Area 2. For each question, highlight changes made to the proposed new curriculum and its justifications.;

1.2.2. Describe the processes involved in reviewing the curriculum and the procedure to approve the revised curriculum.

1.2.3. a) Who and how are the stakeholders consulted in the curriculum review?
b) Explain the involvement of educational experts (medical educationist) in this curriculum review.

Table 2: Components of the programme and its credit value

Minimum Graduating Credit: 200

	Course Classification		Minimum Credit Value	Existing Credit Value	Propose Credit Value
1.	*Compulsory courses/modules**		*10*		
2.	***Core Courses***	• ***Basic Sciences***	*60*		
		• ***Clinical training*** • ***Projects*** ***Dissertation***	*110*		
3.	*Optional/Elective courses***		*2*		
4.	*Others (specify)*				

Note:

* Compulsory courses/modules refers to *Mata Pelajaran Umum* (MPU) and other courses required by the HEP.

** Optional/elective courses refer to courses where students can exercise choice.

c) Provide a brief description for each course offered in the programme. Please arrange the courses by year and semester as in Table 3.

Table 3: Brief description of courses offered in the programme

No.	Semester/ Year Offered	Name and Code of Course	Classification (Compulsory Major/Minor/ Elective)	Credit Value	Programme Learning Outcomes (PLO)					Prerequisite/ co-requisite	Name(s) of Academic Staff
					PLO1	PLO2	PLO3	PLO4	PLO5		
1.											
2.											
3.											
4.											
5.											
6.											
7.											

8.											
9.											
10											

d) Indicate new courses introduced in the revised curriculum as well as courses in the existing curriculum that has been removed.

Table 3.1: Comparison between the existing curriculum and the proposed revised curriculum

	Existing Curriculum	Proposed (New) Curriculum	Justification for the changes
1.			
2.			
4.			
5.			

e) Provide the information for each course as existing Table 4 and proposed Table 4.

Table 4: Course information (**a template in Excel format is provided separately for HEP to fill in. Please download the latest version from MQA website**)

1.	Name and Code of Course:
2.	Synopsis:
3.	Name(s) of academic staff:
4.	Semester and year offered:
5.	Credit value:
6.	Prerequisite/co-requisite (if any):

MMC CR-01

(Curriculum Review Undergraduate Medical Programme)

Table 3.1

Criteria for Major and Minor Curriculum Review:

Item	Existing	Proposed	Justifcation for the changes
Change in Visions, Missions and Objectives			
Change in Higher Education Provider's Visions, Missions and Objectives			
Change in PEOs, PLOs and CLOs			
Editorial change in Programme Educational Objectives (PEO)			
Change in number or learning domains of Programme Educational Objectives (PEO)			
Editorial change in Programme Learning Outcomes (PLO)			
Change in number or learning domains of Programme Learning Outcomes (PLO)			
Editorial change in Course Learning Outcomes (CLO) (core subjects)			
Change in number or learning domains of Course Learning Outcomes (CLO) for core subjects more than 30% from total CLO			
Change in Curriculum Structure			
Change in curriculum structure (e.g from traditional curriculum to integrated curriculum, PBL based etc)			
Change in number of years of study (e.g from 6 to 5 years)			
Change in total number of graduating credit			
Change in sequence of core subjects offered without any change in credit hour e.g. changing the course offered in Year 1 to Year 2			
Change of programme content (core subject) >30%			
Change in Teaching and Learning Activity			
Changing from face-to-face to online delivery (theory component) limited to not more than 50%.			
Changing from face-to-face to online delivery (clinical component)			
Change in Assessment Strategy			
Change in preclinical assessment method without any change of credit hours (core subjects)			
Change in clinical assessment without any change of credit hours (core subjects) (e.g. from long case and short case to OSCE) **Must adhere strictly to the current guidelines issued by Malaysian Medical Council			
Adding or Removing the number of major examinations *Major examination is examination that determine student's progression to the next year of study.*			

Area of change	Existing Curriculum	Proposed (New) Curriculum	Justifications/ Remarks
Change in PEOs, PLOs, AND CLOs			
Programme Educational Objectives (PEO)	7 PEOs	4 PEOs	
Program learning outcomes (PLO)	11 PLOs	11 PLOs	
Course Learning Outcomes			
Total Course Learning Outcomes	Total CLOs are	Total CLOs are	
Change in curriculum structure			
Total graduating credits			
Change in sequence of core subjects without any change in credit hour			
Change of the program content			
Number of total weeks (including revision & exams/ excluding break and remedial)			Realignment of number of weeks for each academic year to meet program standards and to ensure each academic year does not exceed 46 weeks. Appendix 1.2.4iv Academic calendar for current and new curriculum
Changes in teaching and learning method			
Teaching and learning method			
Changes in assessment method			
Assessment methods	No changes		

Example Table 3.1

APPENDIX 10

Table 4

EVALUATION FORM

Table 4 Evaluation Form (For POA only) to be submitted with full report

Name of Program & Program Code:	
Faculty/School:	
Name of Panel Assessor:	

Guideline for POA:

1. Arrangement of courses must tally with Table 3
2. **Synopsis:** Brief summary of the course, teaching-learning approaches and assessment.
3. **Course Learning Outcomes** (CLO) are statements on what a student should know, understand and can do upon the completion of the course. The action verbs should match the learning domain (C 1-6, P1-7 or A1-5) and at the appropriate level.
4. **Mapping** of Course Learning Outcomes (CLO) to relevant Programme Learning Outcomes (PLO) and students should have the opportunity to learned and being assessed.
5. **Student Learning Time** (SLT) is the amount of time that a student is expected to spend on the teaching-learning activities, including assessment to achieve the CLO. The estimation of SLT should consider the difficulty level, time required by students to perform self-study and practice. Use SLT estimation guideline in Appendix 3

No	Item 1: Name of the Course and course code[1]	Item 2: Synopsis[2]	Item 4: Year and Semester match with Table 3	Item 7: CLO[3]	Item 8: Mapping [4] *(i)CLO to PLO, TL & Assessment* *(ii)CLO to MQF Cluster of LO*	Item 10: Course Content Outline & Subtopics	Item 10: Teaching-learning activities, assessment and SLT[5]	Item 11 & 12: Special requirements & References	Others: e.g.- pre-requisite *(Please specify)*	Remarks
1										
2										
3										
4										
5										

Thank you

DEPARTMENT OF
MEDICAL EDUCATION
FACULTY OF MEDICINE, UKMMC

UNIVERSITI
KEBANGSAAN
MALAYSIA
National University of Malaysia

Malaysian Qualifications Framework (MQF)

Mohd Nasri Awang Besar

WORKSHOP ON OUTCOME- BASED EDUCATION
KULIYYAH OF MEDICINE
7TH march 2023

MQA
Agensi Kelayakan Malaysia
Malaysian Qualifications Agency

MALAYSIAN QUALIFICATIONS FRAMEWORK (MQF)
2nd EDITION

Outline

- What
- How
- Who
- When
- Why
- What if
- What is inside MQF

What is MQF?

16. The framework is defined as *'...an instrument that develops and classifies qualifications based on a set of criteria that is agreed nationally and benchmarked with international practices, and which clarifies the academic levels learning outcomes and credit system based on student academic load'.* (MQF, 2007). It is an intended as a comprehensive, overarching and integrated national qualifications framework. The Framework provides a set of levels and descriptors covering all sectors, which uses the set of levels and outcomes with the intention to bring progression and pathways together, and accommodate all forms of learning. They are related to study and/or work context to make it applicable for academic and TVET type qualifications and purposes.

How they develop MQF?

2. In Malaysia, the importance of the role of higher education and training institutions is to contribute to the nation's social, economic and political development through the production of quality citizens, a highly skilled and talented workforce and new knowledge has been unambiguously acknowledged. These developments have been guided broadly by the National Education Philosophy. Empowering the actualization of the policy is the Malaysia Education Blueprint 2015-2025 (Higher Education) [1] which outlines the strategies, plans, key performance indicators, responsible departments, institutions and agencies within a number of strong enabling

MQA and MQF

Roles and responsibilities of Malaysian Qualifications Agency

14. MQA derives its powers from an Act of Parliament (Act 679) which gives it powers to implement the Malaysian Qualifications Framework, to accredit higher educational programmes and qualifications, to supervise and regulate the quality and standards of higher education providers, to establish and maintain the Malaysian Qualifications Register and to provide for related matters. Thus it proposes, advises, guides, administers and regulates the higher education and training sectors with specific reference to quality assurance.

Role of MQA

15. The main protocol mandated is the implementation of the MQF through subsection 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."* (MQA Act 679, 2007).

When is the MQF be implemented?

Frameworks are only as good as the vigour with which they are applied. This requires the full support and cooperation of all those actively involved in the promotion and sustenance of the systems. This will include government, policy makers and higher education providers. MQA has full confidence that this will be done, just as it was done when the first edition of the MQF was introduced in 2007 and implemented in 2011.

The curriculum must also conform to, among others:

(a) the regulations and laws, that deal with educational programmes at the tertiary level (e.g. inclusion of the compulsory subjects stipulated by Act 555);

(b) level of qualifications (MQF, Appendix 2), learning outcome domains (MQF, Paragraph 14) and Appendix 1 of this document: Eight MQF Learning Outcome Domains, student competencies (MQF, Appendix 1), and credit and academic load (MQF, Paragraphs 19-22);

(c) professional body/industry requirements; and

(d) internal / university policies and procedures.

GUIDELINES TO GOOD PRACTICES: CURRICULUM DESIGN AND DELIVERY MQA 2011

Why I must use MQF as a guideline?

2. MALAYSIAN QUALIFICATIONS FRAMEWORK AND QUALITY ASSURANCE SYSTEM

10. MQF is an integral part of the QA practice of MQA. The programme design, objectives and learning outcomes, teaching, learning and assessment methodologies, support resources and systems for delivery and improvement are embedded in the quality assurance standards. Learning outcomes are verified and evaluated when higher education providers (HEPs) submit their programmes for provisional accreditation, full accreditation and continuous maintenance through the periodic audit cycles. (COPPA)

Should I follow MQF ?

4. All programmes and qualifications within the higher education and training sectors are expected to be in compliance with the MQF as required by relevant national policies since 2011. This Framework is the instrument which sets national classifications of qualifications, levels of learning achievements based on learning outcomes, prescribed academic load at each level and is associated with the title of a named qualification. *"No programme will be accredited unless it is in compliance with the Framework"* as set in the legislation. The legislation underpins the quality assurance (QA) system practised by MQA, and acting as the guardian and custodian of MQF.

What happen if my program is not accreditate?

Malaysian Qualifications Register

12. All accredited qualifications are registered on the Malaysian Qualifications Register (MQR). Basic information of the qualifications, programmes and awarding institutions are stated in the Register to assist students and other parties, local and abroad, to obtain key information of a programme.

What is inside MQF?

4. All programmes and qualifications within the higher education and training sectors are expected to be in compliance with the MQF as required by relevant national policies since 2011. This Framework is the instrument which sets national classifications of qualifications, levels of learning achievements based on learning outcomes, prescribed academic load at each level and is associated with the title of a named qualification. *"No programme will be accredited unless it is in compliance with the Framework"* as set in the legislation. The legislation underpins the quality assurance (QA) system practised by MQA, and acting as the guardian and custodian of MQF.

APPENDIX 1

Malaysian Qualifications Framework (MQF) 2nd Edition

MQF Level	Minimum Graduating Credit	Academic Sector	TVET Sector
8	No credit rating	PhD by Research	
	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	5
4	90	Diploma	4
3	60	Certificate	3
2	30	Certificate	2
1	15	Certificate	1

* Inclusive of 6 credits from general studies subjects.

Five domains/clusters of learning outcomes

MALAYSIAN QUALIFICATIONS FRAMEWORK (MQF) 2nd EDITION

Knowledge and understanding

Cognitive skills

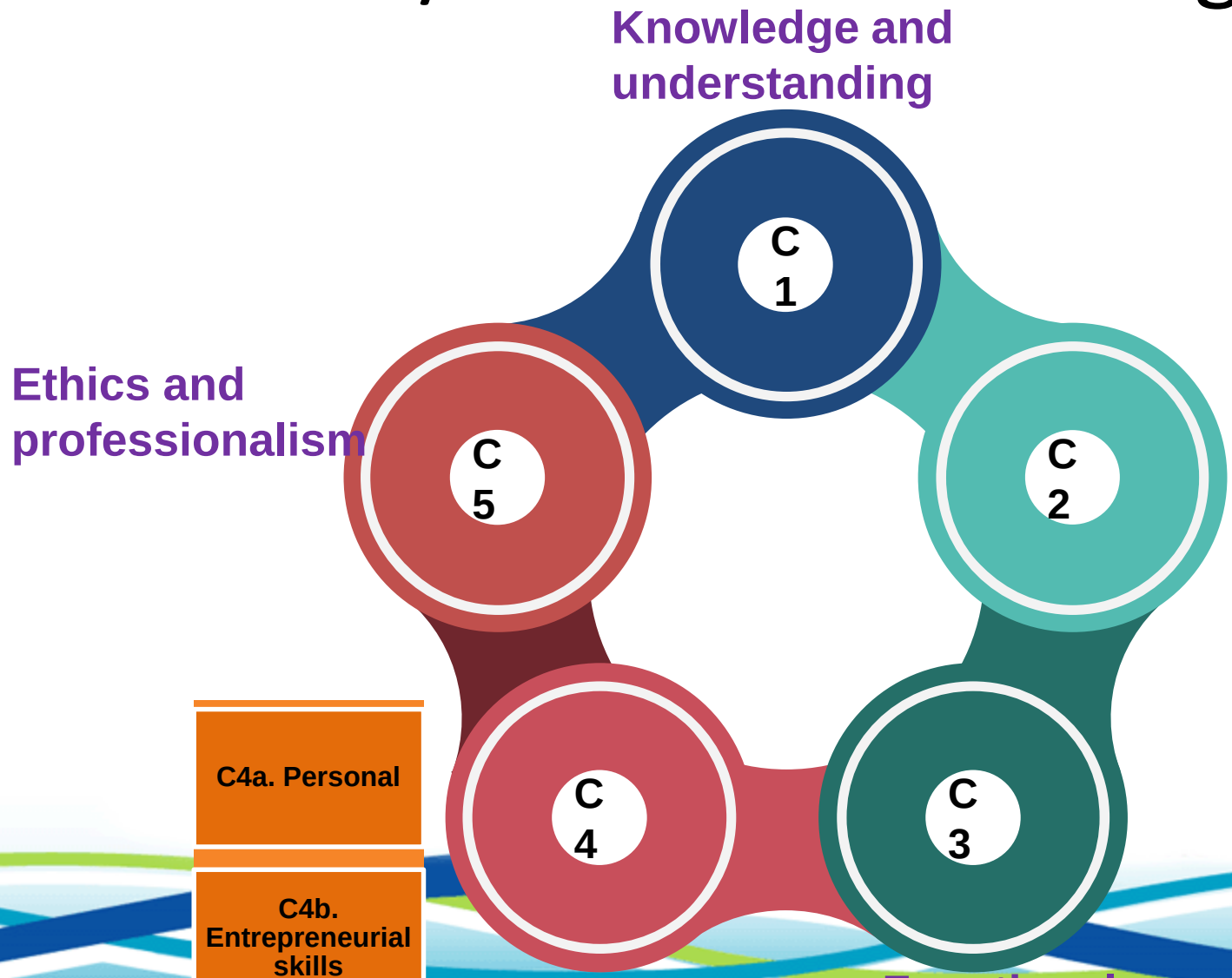
Functional work skills

Personal and entrepreneurial skills

Ethics and professionalism

Five domain/clusters of learning outcomes

MALAYSIAN QUALIFICATIONS FRAMEWORK (MQF) 2nd EDITION



Level of descriptor

QF 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		
6 ELOR UATE FICATE/ OMA	Learners will demonstrate a thorough comprehension of broad based and coherent body of knowledge and skills for para and full professional work embedding research, innovation and creativity in specialized areas. Demonstrate professionalism, resilience commitment to an ethical work culture, sustainability issues and an awareness of global citizenship in alignment with national aspirations.	Describe advanced and comprehensive, theoretical and technical knowledge and demonstrate relevant skills in a specialized field, or of a multidisciplinary nature related to the field of study, work and/or practice	Demonstrate intellectual independence in the application of knowledge within specific field(s) by applying critical, analytical and evaluation skills in the field of study/work/practice. Manage, resolve complex applications and handle unpredictable issues with creative and innovative solution(s). Apply skill/ knowledge to a range of approaches in the field of study/work/practice.	Apply a range of essential methods and procedures to solving a broad range of complex problems. Review, make adjustments and supervise related practices and processes concerning field of specialization.	Convey ideas both in written or oral forms using appropriate and different forms of presentation, confidently, accurately and coherently in appropriate context in a well-structured manner to a diversity of audiences. Work together with different people in diverse learning and working communities as well as other groups locally and internationally.	Use a broad range of information, media and technology applications to support study and/or work. Use and combine numerical and graphical/visual data for study/work.	Work autonomously, and show leadership and professionalism in managing responsibilities within broad organizational parameters. Undertake significant levels of work related responsibilities of others as well as self. Demonstrate decision making capacities and professionalism by working towards pre-determined goals and outcomes Demonstrate accountabilities, especially in professional fields.	Engage effectively in self-directed lifelong learning and professional pathways. Demonstrate entrepreneurial competency with selected project(s). Demonstrate an appreciation of broader socio-political economic and cultural issues at local/national and regional level.	Demonstrate adherence, and ability to identify ethical issues, make decision ethically, and act professionally within the varied social and professional environment and practice. Demonstrate a deep familiarity and knowledge of local and global issues relating to science, technology, business, social and environmental issues.

APPENDIX 1

Malaysian Qualifications Framework (MQF) 2nd Edition

MQF Level	Minimum Graduating Credit	Academic Sector	TVET Sector
8	No credit rating	PhD by Research	
	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	5
4	90	Diploma	4
3	60	Certificate	3
2	30	Certificate	2
1	15	Certificate	1

* Inclusive of 6 credits from general studies subjects.

Thank you

DEPARTMENT OF
MEDICAL EDUCATION
FACULTY OF MEDICINE, UKMMC

UNIVERSITI
KEBANGSAAN
MALAYSIA
National University of Malaysia

Outcome Based Education

Mohd Nasri Awang Besar

WORKSHOP ON OUTCOME- BASED EDUCATION
KULIYYAH OF MEDICINE
7TH march 2023

Outline

- Definition of OBE
- The Principles of OBE
- Curriculum mapping (MQF 2.0,PEO, PLO,CLO)
- Linkages between LO, TLA and assessment (Constructive alignment)

Evidence based Medicine

Outcome based Education

What is OBE?

What is OBE?

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.

Outcome based education

"An outcome is a culminating demonstration of learning; it is what the student should be able to do at the end of the course"

Spady 1993

AMEE Guide No. 14: Outcome-based education: Part 1-An introduction to outcome-based education

R. M. HARDEN

Pages 7-14 | Published online: 03 Jul 2009

Download citation https://doi.org/10.1080/01421599979969

Abstract

Outcome-based education, a performance-based approach at the cutting edge of curriculum development, offers a powerful and appealing way of reforming and managing medical education.The emphasis is on the product-what sort of doctor will be produced-rather than on the educational process. In outcome-based

What is Learning Outcomes?

Statements on what a learner should know, understand and can do upon the completion of a period of study.

OBJECTIVES vs OUTCOMES

Objectives	Outcomes
Objectives describe WHAT A TEACHER NEEDS TO DO TO TEACH, AND WHAT NEEDS TO BE PLANNED TO TEACH.	Outcomes describes WHATSTUDENTS SHOULD KNOW,UNDERSTAND AND CAN DO UPON THE COMPLETION OF A STUDY PERIOD.
Objectives require the use of BASIC THINKING SKILLS SUCH AS KNOWLEDGE, COMPREHENSION, AND APPLICATION.	Outcomes require the use of HIGHER THINKING SKILLS SUCH AS ANALYSIS, SYNTHESIS, AND EVALUATION (as described in Bloom's Taxonomy)
Objectives DO NOT NECESSARILY RESULT IN A PRODUCT. OFTEN, THEY ARE SYNTHESIZED OR COMBINED TO PRODUCE SOMETHINGTHAT MEASURES AN OUTCOME.	Outcomes result in a PRODUCT THAT CAN BE MEASURED AND ASSESSED.

Paradigm Shift in the Education

TE

- From teacher-centered (TCL)
- Traditional teaching teacher owns" the knowledge and convey it to the students.
- Teacher brings the content and the answers into the classroom/ training room with him / her

OBE

- to a student-centered (SCL)
- SCL Based teaching : students (trainee) to learn as much as possible.
- teacher as a coach who asks questions and provides guidelines for the acquisition of knowledge

STUDENT CENTRED

Teacher-centred (Teaching activities)

- Lecture
- Tutorial
- Demonstration
- Simulation
- Material: Class notes

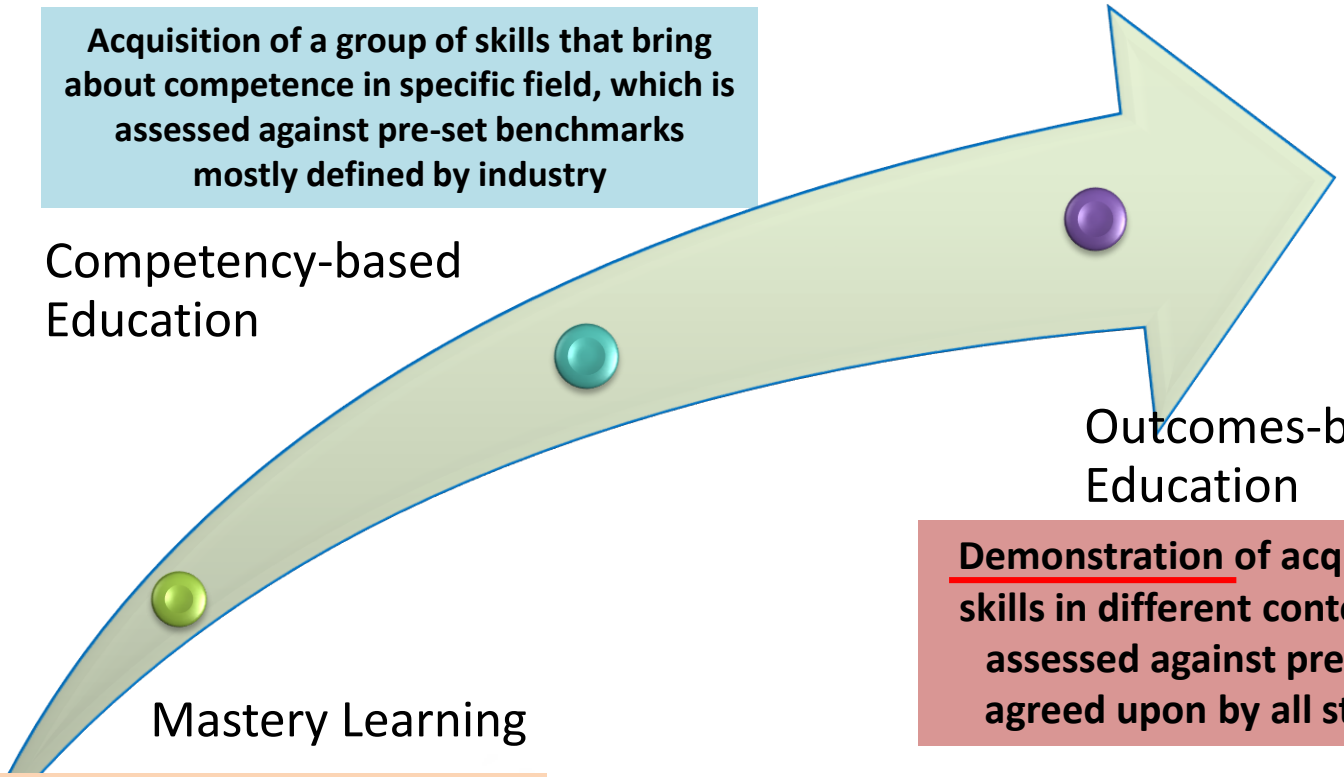
STUDENT-CENTRED (LEARNING ACTIVITIES)

- PBL
- TBL
- Role play
- Presentation
- Interaction: offline (meeting), online (forum)
- Interactive learning material (digital based)

Development Of Outcomes-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

Competency-based Education



Outcomes-based Education

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

(Robert E. Gerber, 19

Mastery Learning

Acquisition of cognitive, affective and psychomotor skills under appropriate conditions

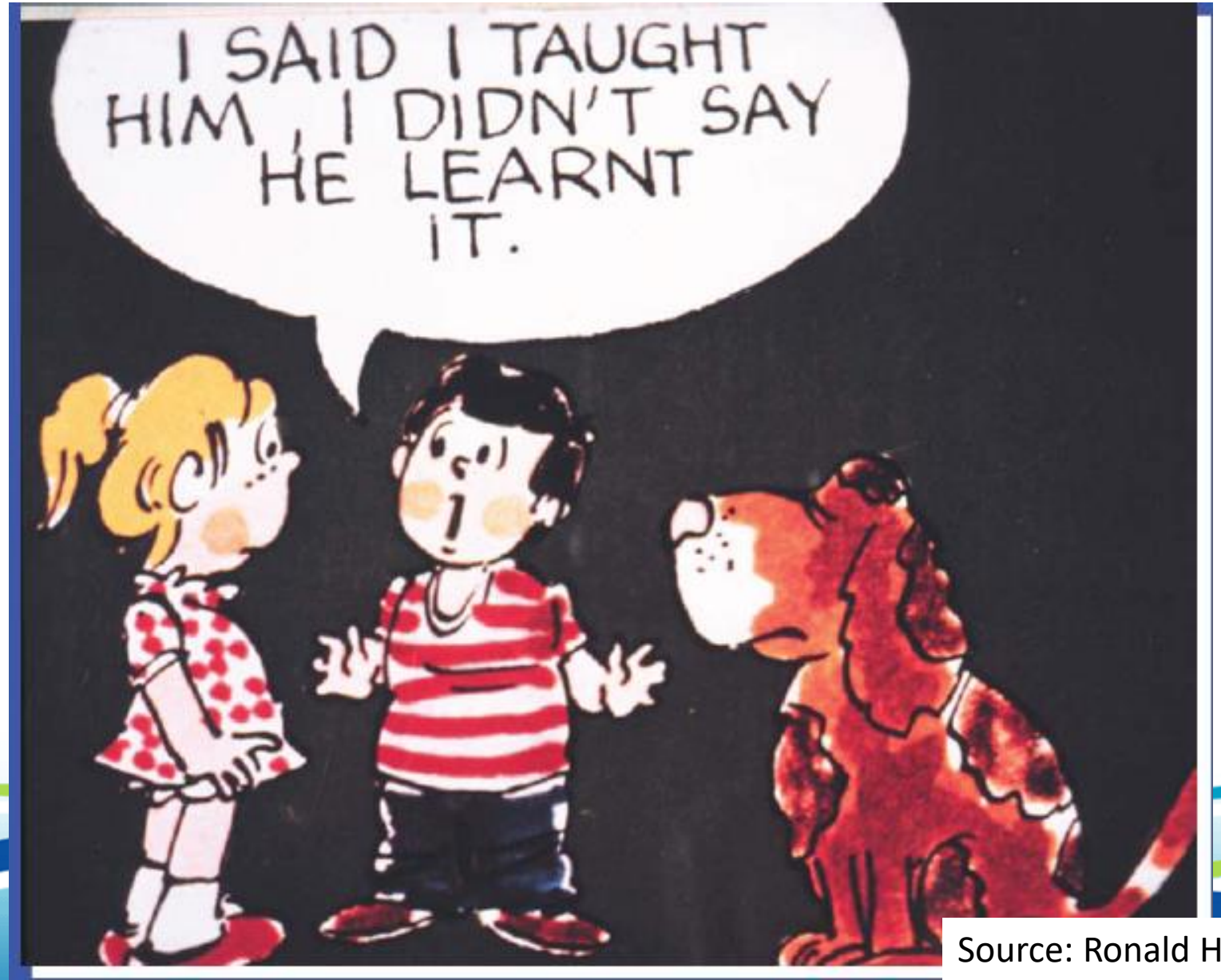
the process of gradually learning something or gaining something such as a skill:

Principles of OBE

Principles of OBE

Source: Ronald Harden

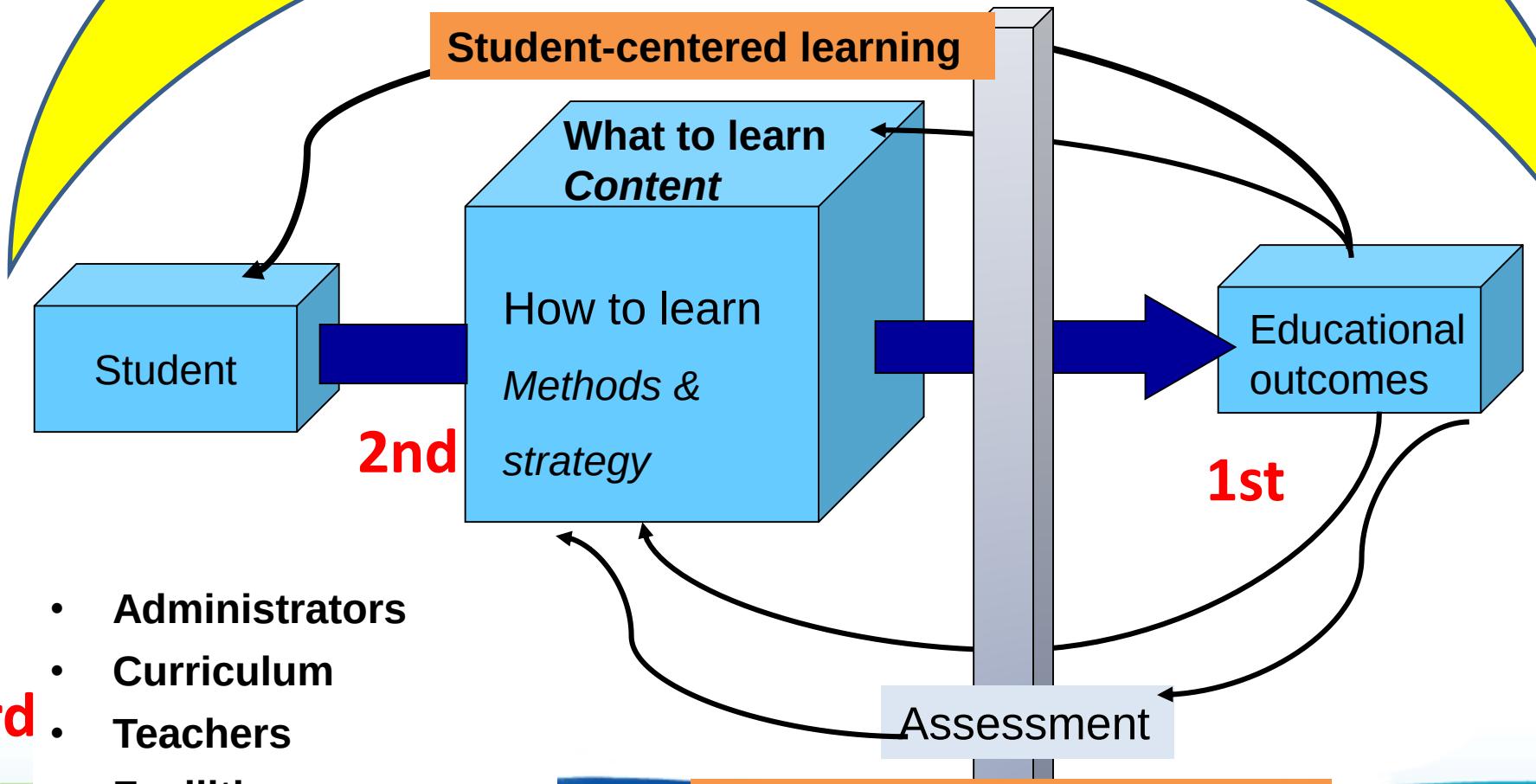
Principles of OBE



Source: Ronald Harden

Principles of OBE

Learning Environment



- Administrators
- Curriculum
- Teachers
- Facilities

3rd

It requires that students demonstrate tha they have learne the required skil and content

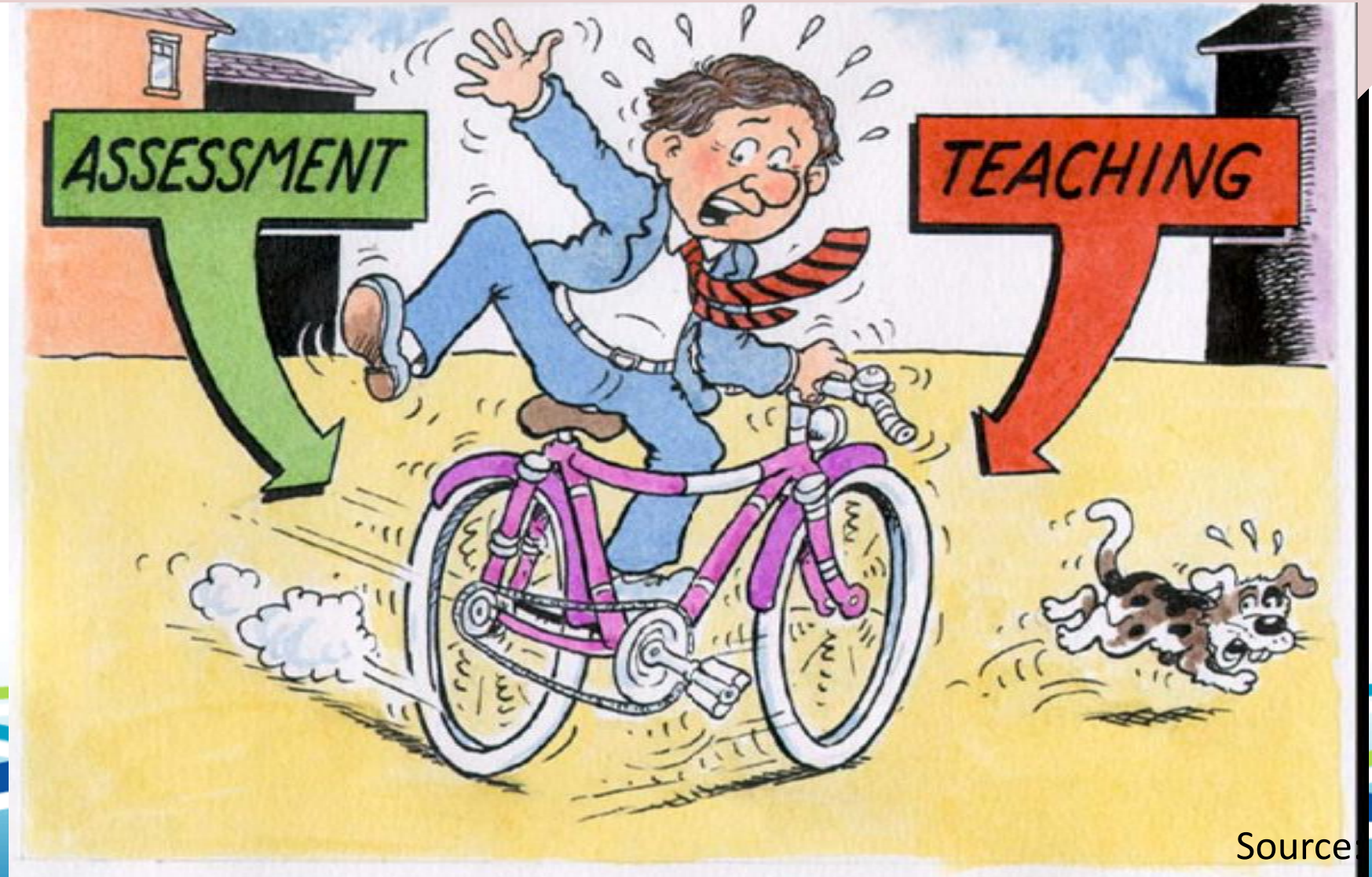
Empirically measuring student performance, which are called *outcomes*

Assessment

The curriculum instructs teachers what to teach;
The exam instruct students what to learn

Donald Meinick, 1991

Assessment X Learning X Teaching

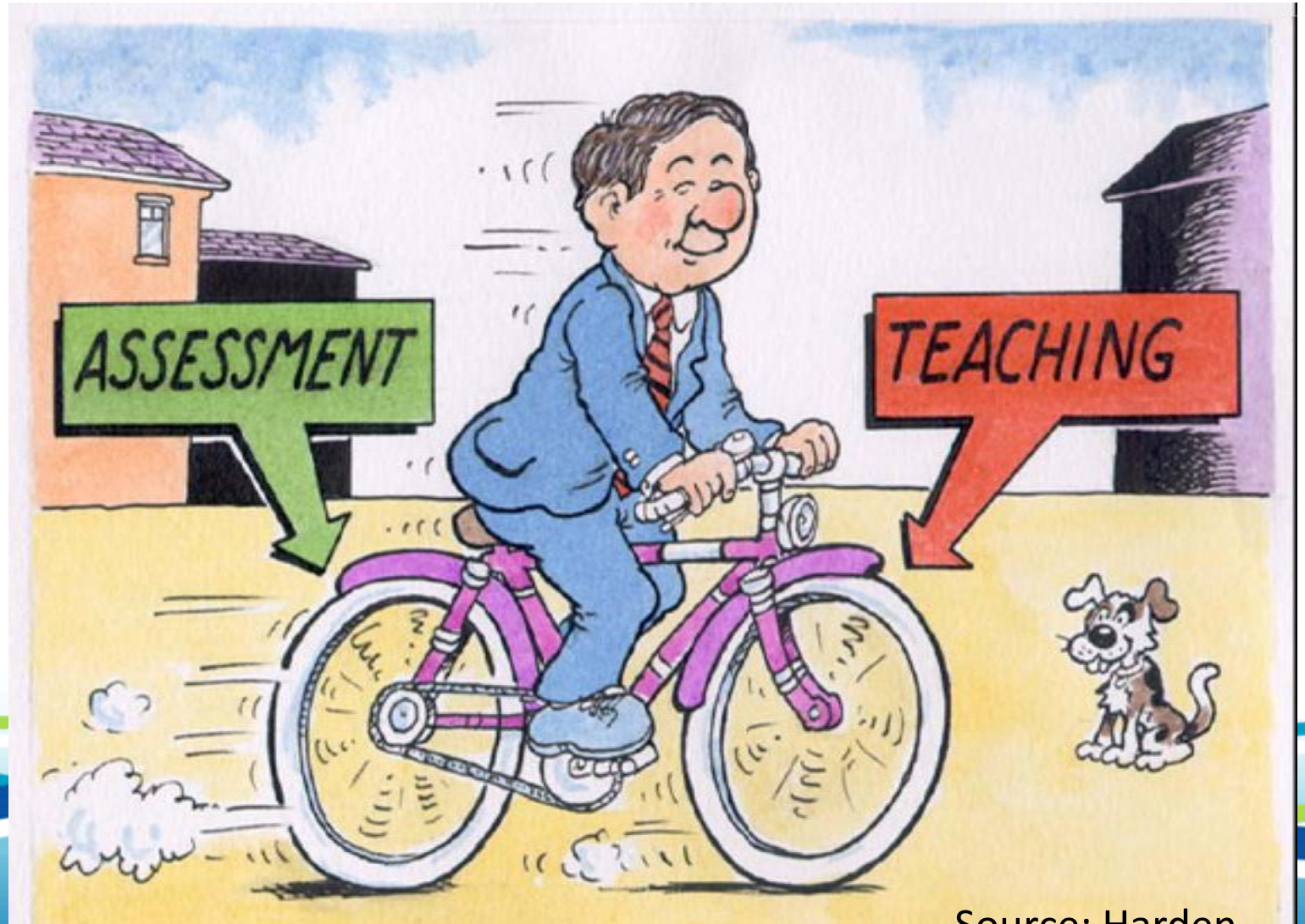


Source: Harden

Assessment

Learning

Teaching



Source: Harden

Principles of OBE

Lecturer-Centred to Student-Centred

(incorporating SLT)

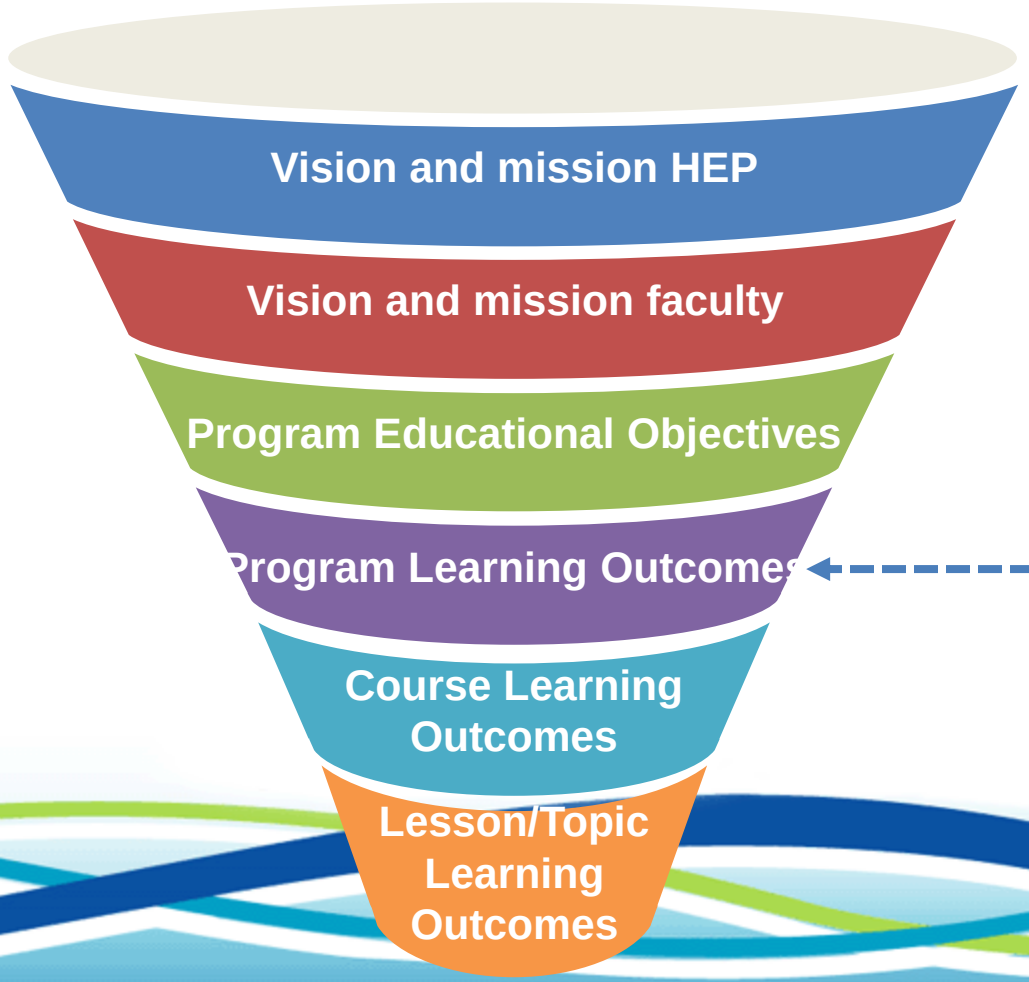
15

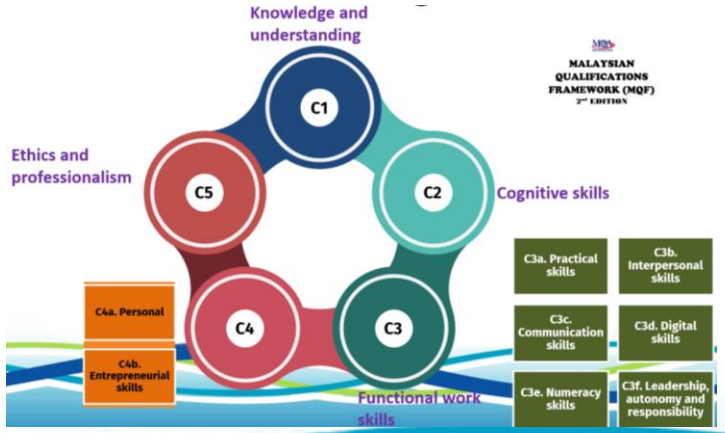
	Academic Activity (some examples)	Face 2 Face	Student Self-Learning*	Total
1	Lecture	1	2	3
2	Tutorial	1	2	3
3	Laboratory/Practical	3	2	5
4	Assignment - 2000 words	0	20	20
5	Presentation	1	4	5
	Total	**6**	**30**	**36**

Unaccounted for in the present system

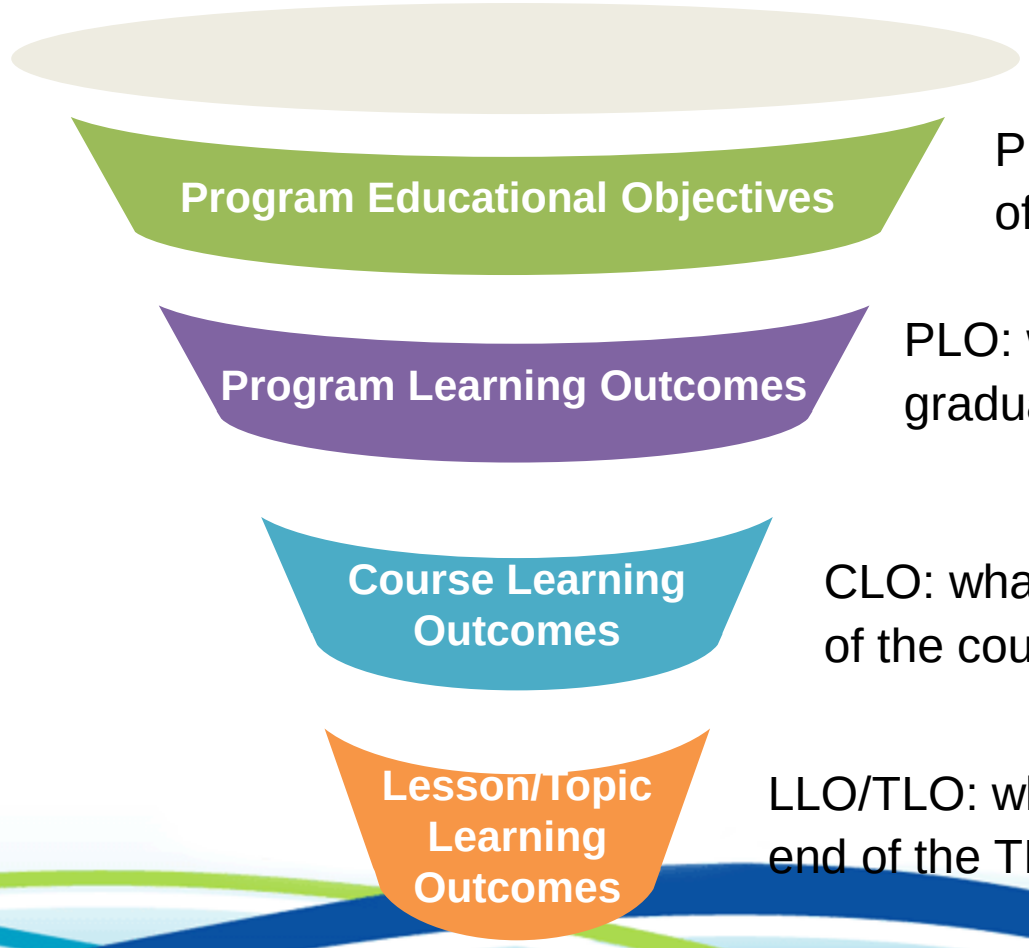
* *Using the Proposed student independent learning in relation (Slide 17)*

Principles of OBE





Important terms



PEO: expected achievements of graduates in the early yea of their careers after graduation.

PLO: what students are expected to know and do at time of graduation

CLO: what students are expected to know and do at the end of the course/module

LLO/TLO: what students are expected to know and do at the end of the TLM

Curriculum Learning Outcomes

Utilize knowledge and clinical skills of emergency medicine based on scientific principles

Apply knowledge and clinical skills to immediately assess, triage, and manage patient with various emergencies conditions.

Demonstrate knowledge and skills to initiate immediate management of emergency cases in the pre hospital care setting

Perform the techniques of patient assessment in PHC setting

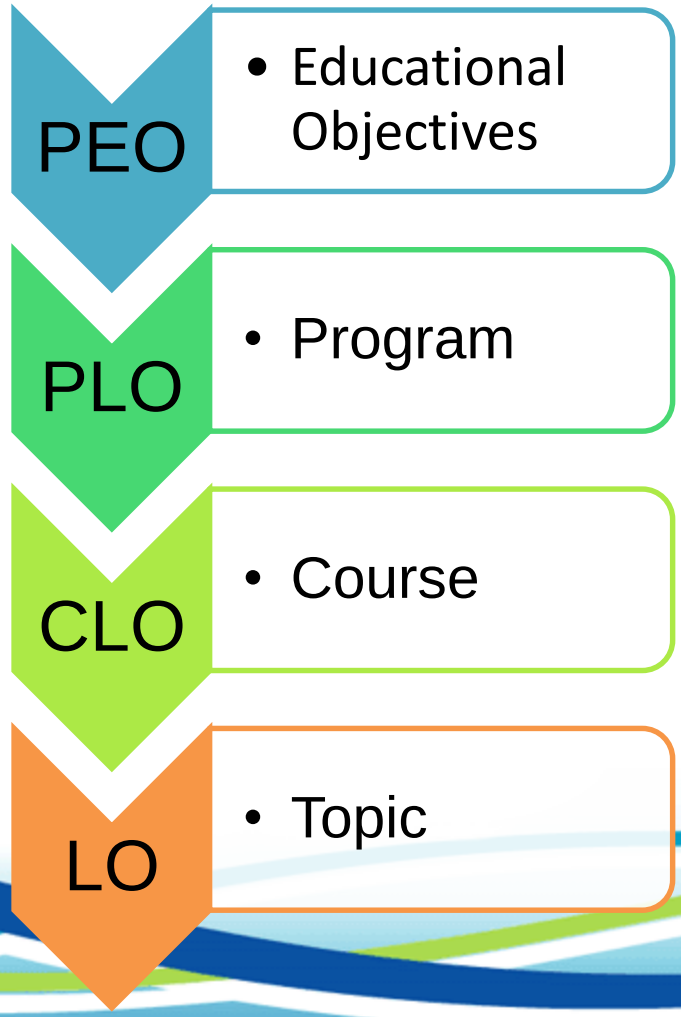


Table 1: mapping PEO and PLO

1.1.3 a) State the programme educational objectives, programme learning outcomes, teaching and learning strategies, and assessment of the programme.

b) Map the programme learning outcomes against the programme educational objectives. (Provide information in Table 1).

AREA 1

Table 1: Matrix of Programme Learning Outcomes (PLO) against the Programme Educational Objective (PEO).

Programme Learning Outcomes (PLO)	Programme Educational Objectives (PEO)			
	PEO1	PEO2	PEO3	PEO4
PLO 1				
PLO 2				
PLO 3				
PLO 4				
PLO 5				

Mapping PLO with MQF learning outcomes

Table 1.1: Matrix of Programme Learning Outcomes (PLO) against Malaysian Qualification learning domain (MQF).

Programme Learning Outcomes (PLO)	Malaysian Qualification Framework (MQF) learning outcomes									
	1. Knowledge & understanding	**2. Cognitive Skills**	**3. Functional Work Skills:**						**4. Personal & Entrepreneurial Skills**	**5. Ethics & Professionalism**
			a) Practical Skills	b) Interpersonal Skills	c) Communication Skills	d) Digital Skills	e) Numeracy Skills	f) Leadership, Autonomy & Responsibility		
PLO 1										
PLO 2										
PLO 3										
PLO 4										
PLO 5										

AREA 1

Mapping PLO with MQF learning outcomes

8 Mapping of the Course Learning Outcomes to the Programme Learning Outcomes, Teaching Methods and Assessment Methods

Course Learning Outcomes	Programme Learning Outcomes (PLO)												Teaching Methods	Assessment Methods
	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6	PLO 7	PLO 8	PLO 9	PLO 10	PLO 11			
CLO1														
CLO2														
CLO3														
Mapping with MQF Cluster of Learning Outcomes	C1	C2	C3 B	C3 B	C3 B	C3 A	C3 B	C5	C3 D	C2	C1			
	C3 A		C3 F	C3 F	C5	C3 F	C3 C		C3 F	C3 C	C4 A			

Indicate the primary causal link between the CLO and PLO by ticking '√' in the appropriate box.

C1 = Knowledge & Understanding, **C2** = Cognitive Skills, **C3A** = Practical Skills, **C3B** = Interpersonal Skills, **C3C** = Communication Skills, **C3D** = Digital Skills, **C3E** = Numeracy Skills, **C3F** = Leadership, Autonomy & Responsibility, **C4A** = Personal Skills, **C4B** = Entrepreneurial Skills, **C5** = Ethics & Professionalism

AREA 1: Table 4 MQA

Mapping CLO with PLO

8 Mapping of the Course Learning Outcomes to the Programme Learning Outcomes, Teaching Methods and Assessment Methods

Course Learning Outcomes	Programme Learning Outcomes (PLO)												Teaching Methods	Assessment Methods
	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6	PLO 7	PLO 8	PLO 9	PLO 10	PLO 11			
CLO1														
CLO2														
CLO3														

AREA 1: table
4 MQA

Mapping Topic with CLO

10 Distribution of Student Learning Time (SLT)
Note: This SLT calculation is designed for home grown programme only.

	Course Content Outline and Subtopics	CLO*	Learning and Teaching Activities**									Total SLT
			Face-to-Face (F2F)								NF2F Independent Learning (Asynchronous)	
			Physical				Online/ Technology-mediated (Synchronous)					
			L	T	P	O	L	T	P	O		
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
											SUB-TOTAL SLT:	
			Face-to-Face (F2F)								NF2F Independent Learning	

AREA 1: table 4 MQA

Mapping CLO with level of learning taxonomies

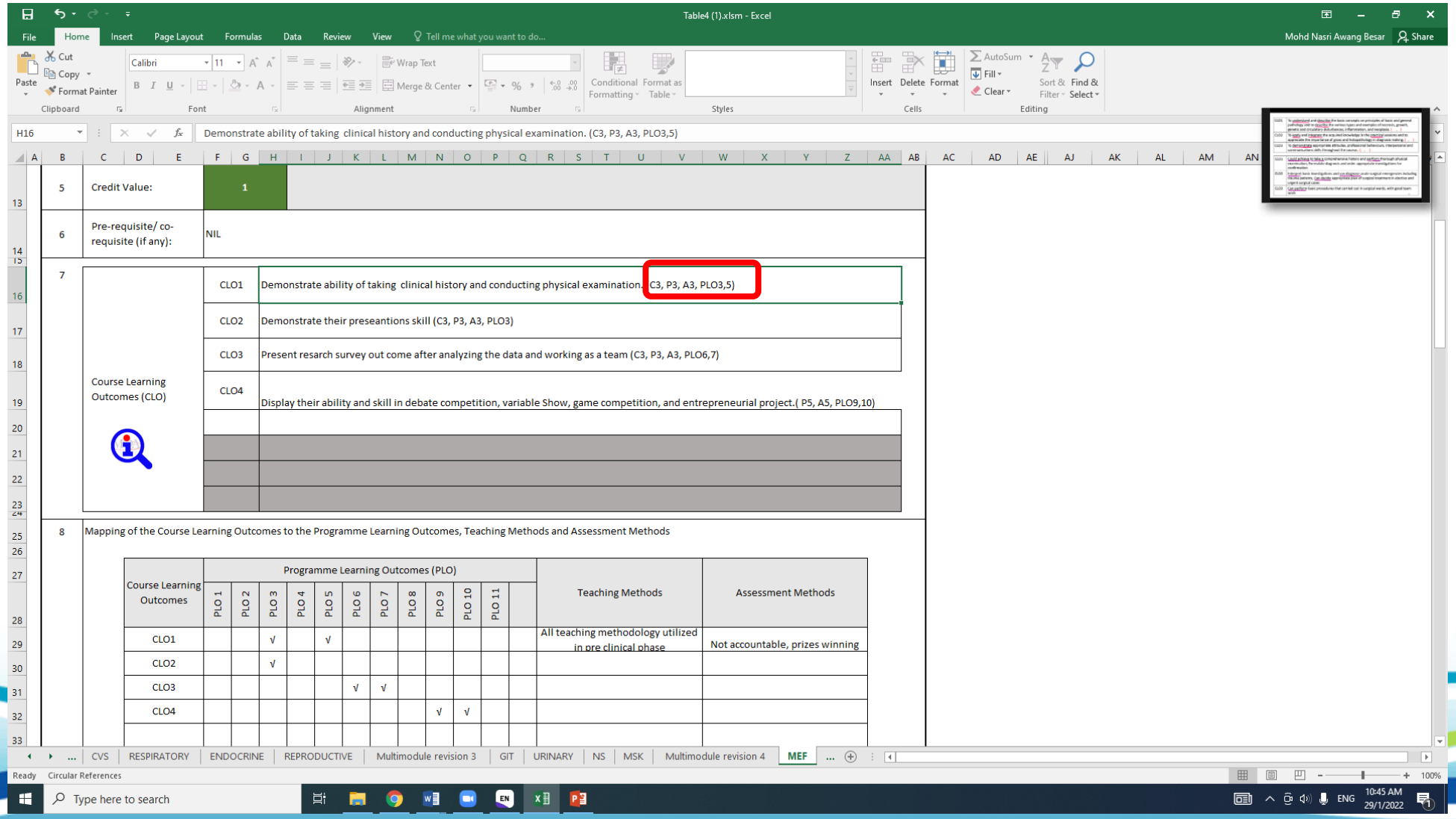


Table4 (1).xlsm - Excel

H16: Demonstrate ability of taking clinical history and conducting physical examination. (C3, P3, A3, PLO3,5)

5	Credit Value:	1
6	Pre-requisite/ co-requisite (if any):	NIL

7	Course Learning Outcomes (CLO)	CLO1 Demonstrate ability of taking clinical history and conducting physical examination. (C3, P3, A3, PLO3,5)
		CLO2 Demonstrate their preseantions skill (C3, P3, A3, PLO3)
		CLO3 Present resarch survey out come after analyzing the data and working as a team (C3, P3, A3, PLO6,7)
		CLO4 Display their ability and skill in debate competition, variable Show, game competition, and entrepreneurial project.(P5, A5, PLO9,10)

8 Mapping of the Course Learning Outcomes to the Programme Learning Outcomes, Teaching Methods and Assessment Methods

Course Learning Outcomes	Programme Learning Outcomes (PLO)											Teaching Methods	Assessment Methods
	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6	PLO 7	PLO 8	PLO 9	PLO 10	PLO 11		
CLO1			√		√							All teaching methodology utilized in pre clinical phase	Not accountable, prizes winning
CLO2			√										
CLO3						√	√						
CLO4									√	√			

Sheet tabs: CVS | RESPIRATORY | ENDOCRINE | REPRODUCTIVE | Multimodule revision 3 | GIT | URINARY | NS | MSK | Multimodule revision 4 | MEF

Ready | Circular References | 100%

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AREA 1: table 4 MQA

LEARNING TAXONOMIES: THREE LEARNING DOMAINS

Cognitive
The Head

Six major categories

Affective
The Heart

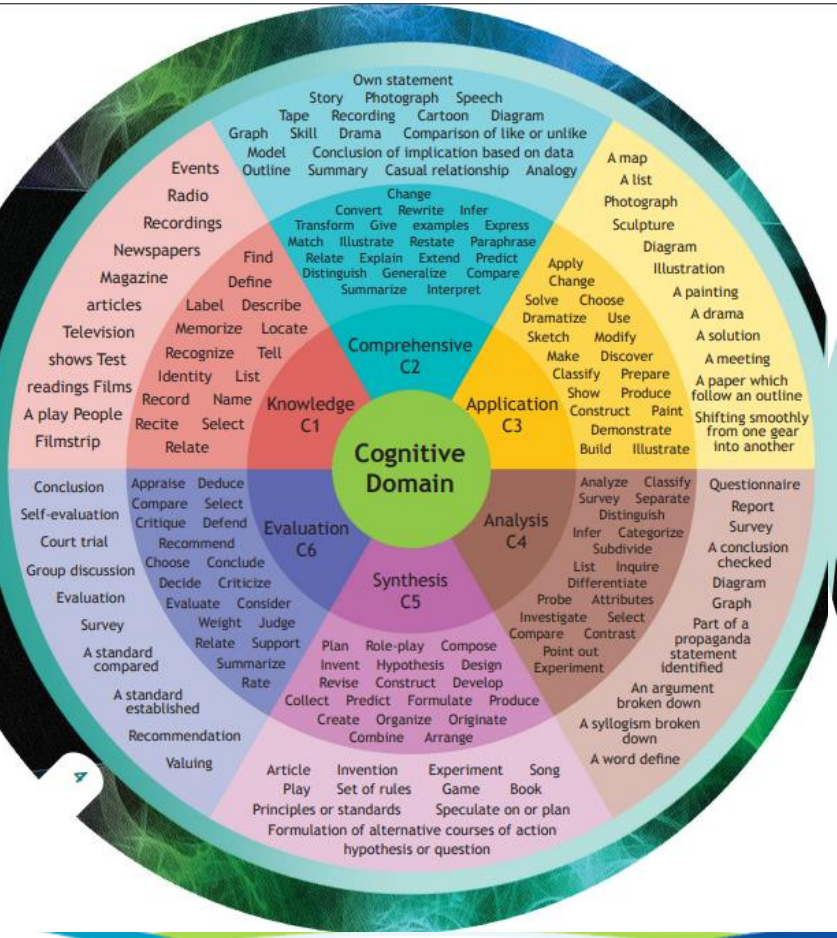
Five major categories

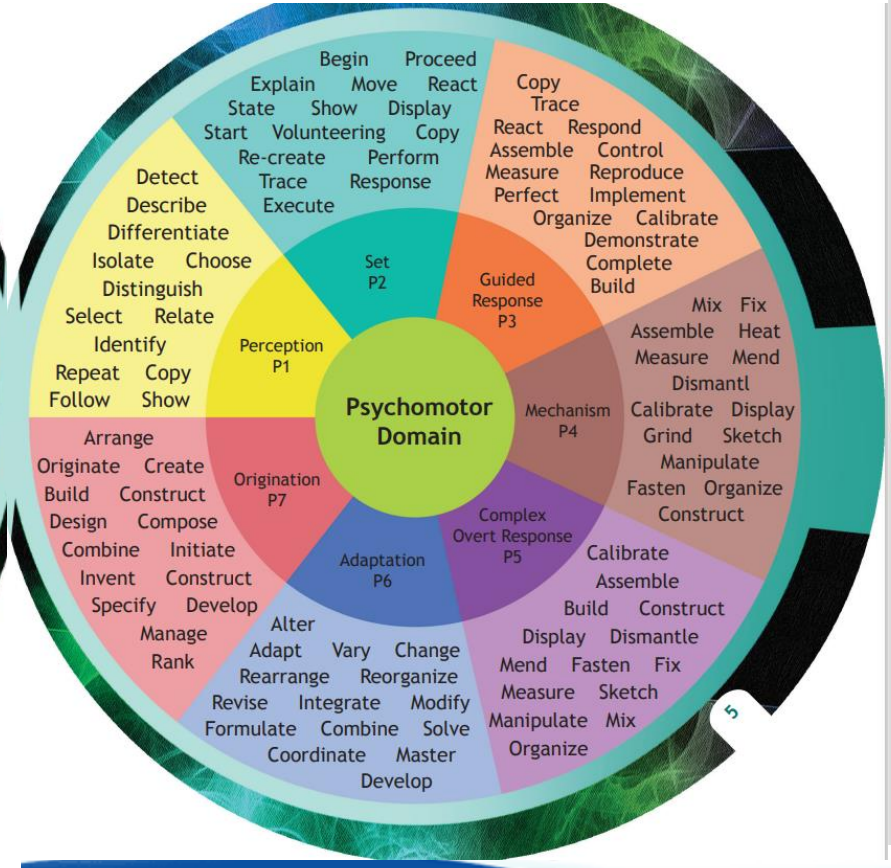
Psychomotor
The Hand

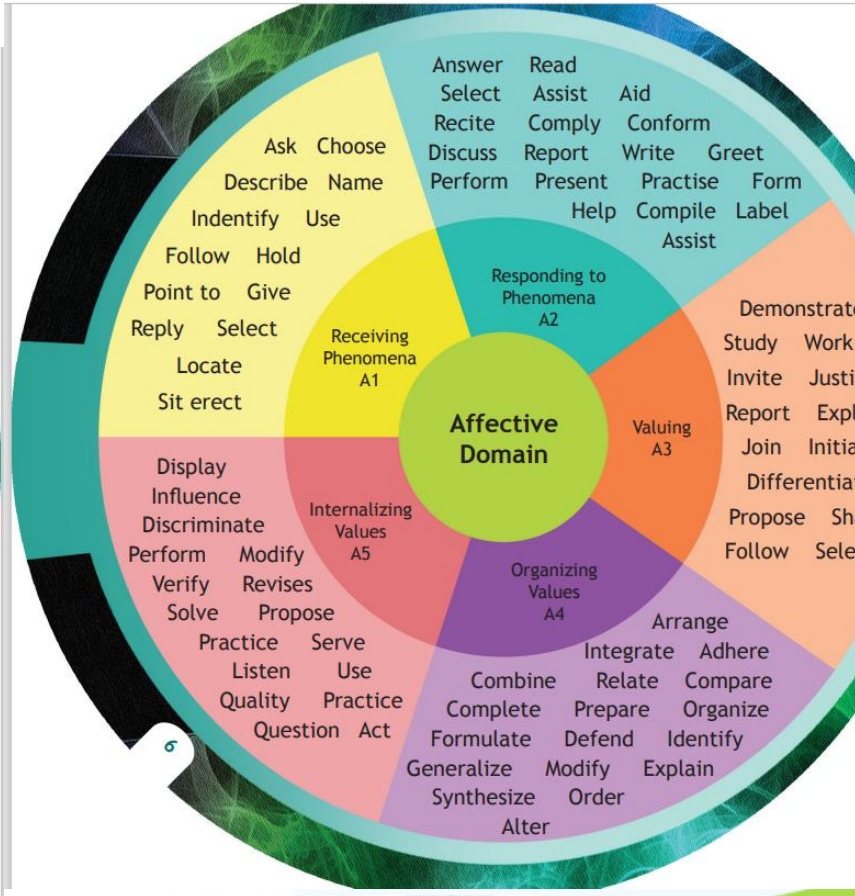
Five major categories

3H

How to select the best learning domain…







Constructive alignment

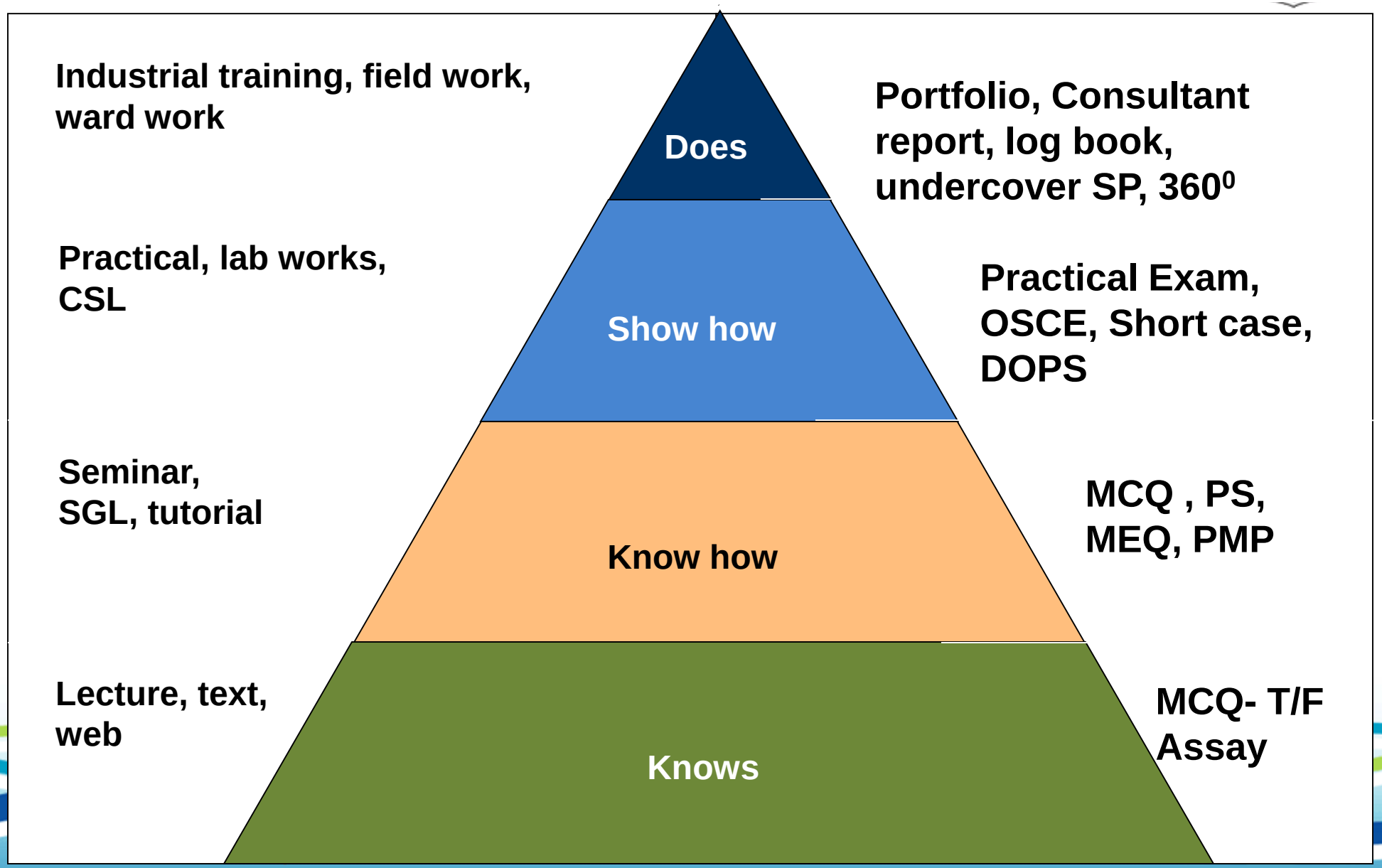
Principles of OBE

CLO → **T&L** → **ASSESSMENT**

Learning activities

Outcomes

Method of Assessment



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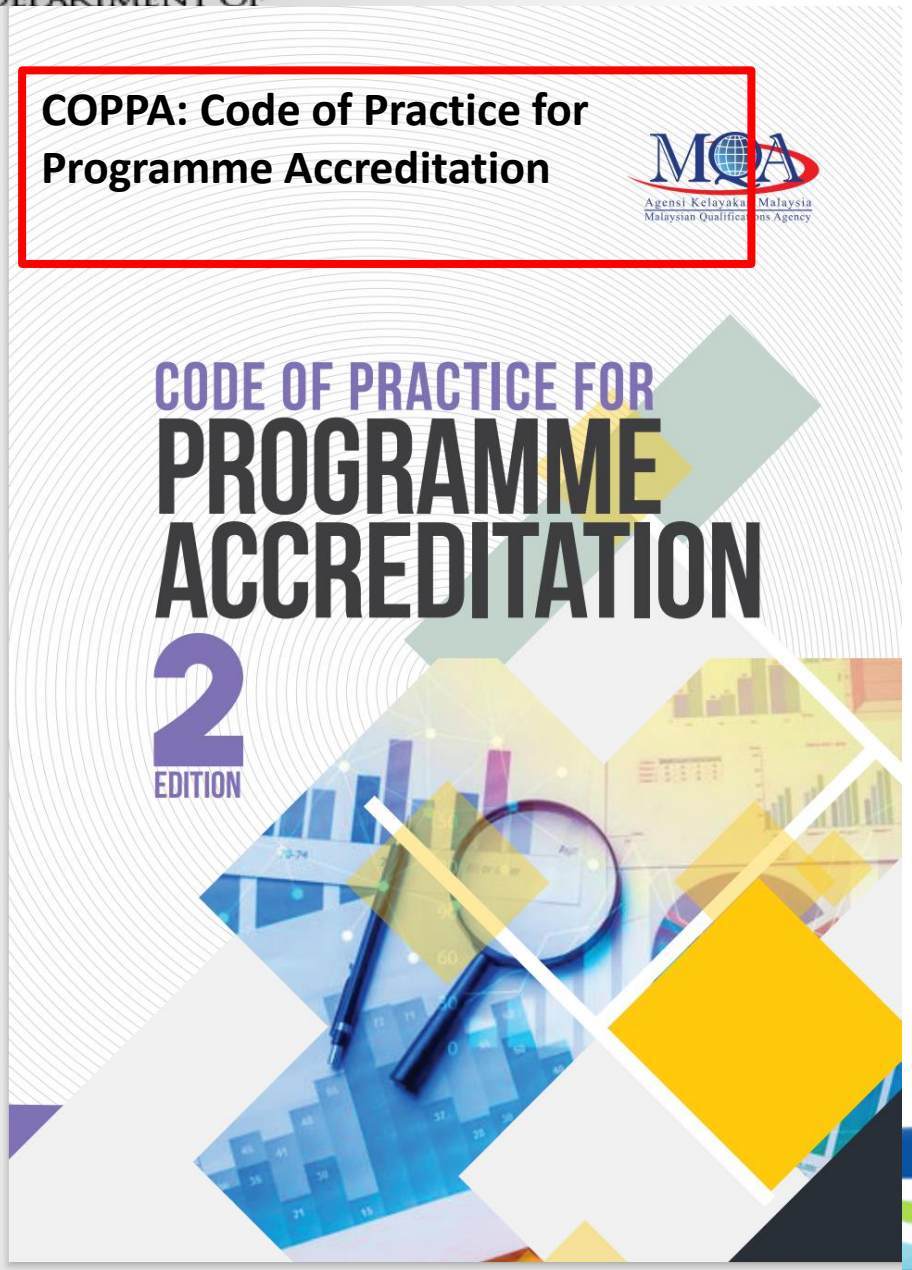
COPPA: Code of Practice for Programme Accreditation



Section 2: Criteria and Standards for Programme Accreditation

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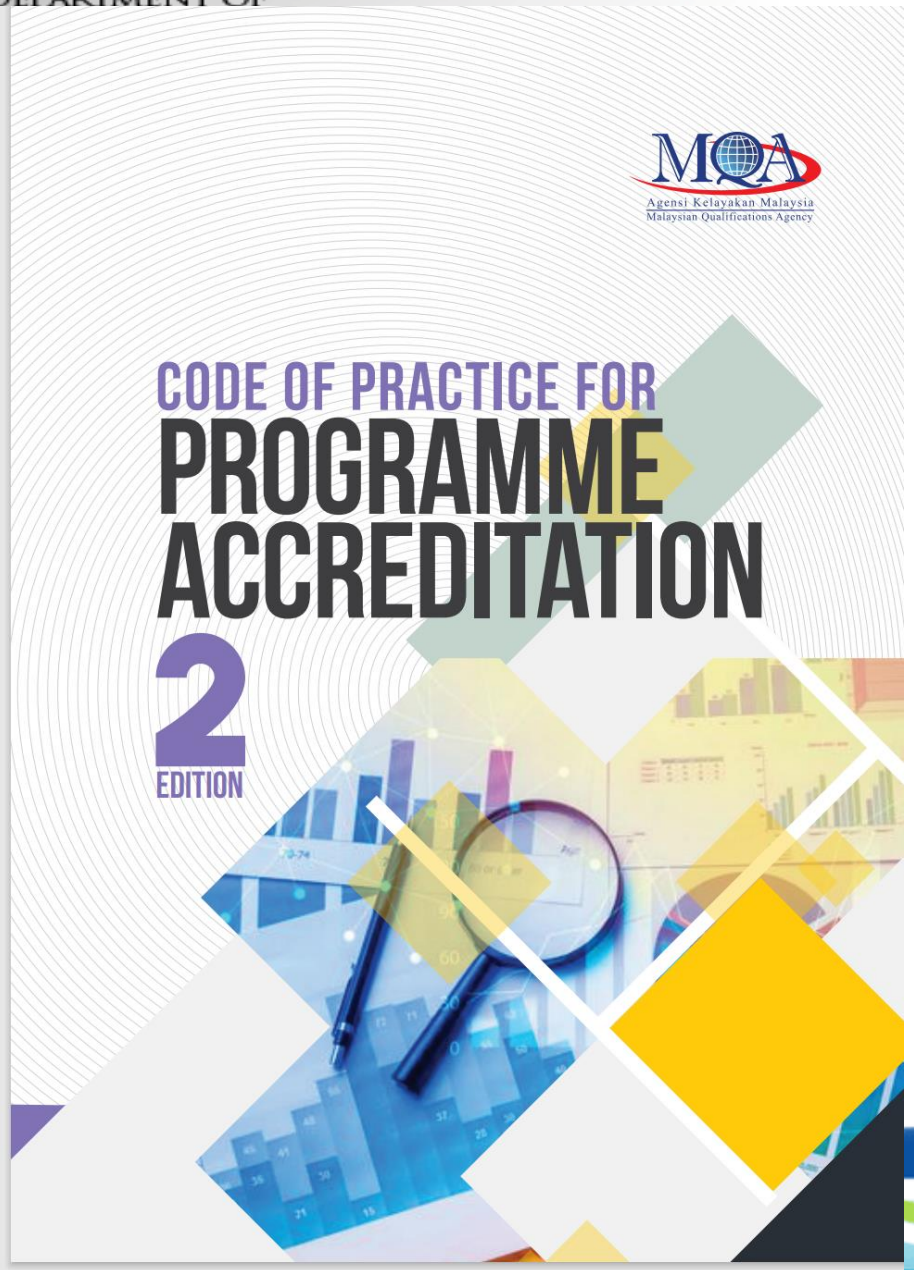


MALAYSIAN MEDICAL COUNCIL
MAJLIS PERUBATAN MALAYSIA

STANDARDS FOR UNDERGRADUATE MEDICAL EDUCATION

Prepared by:

UNDERGRADUATE EDUCATION SUBCOMMITTEE,
MEDICAL EDUCATION COMMMITTEE, MALAYSIAN MEDICAL COUNCIL

Adopted by The
MALAYSIAN MEDICAL COUNCIL
28th May 2019
First Edition: 2019
Second Edition: 2022

AREA 1

OBE: Vision, mission, PEO, PLO, CLO, LO
Table 4: Mapping, TLA, Content,
Constructive alignment

Programme Development and Delivery

AREA 2

Assessment of Student Learning

AREA 3

Student Selection and Support Services

AREA 4

Academic staff

AREA 5

Educational resources

AREA 6

Programme management

AREA 7

Programme Monitoring, Review and Continual Quality Improvement

References

- Spady, W.G. (1993). ACSA Report no. 5: Outcome-based Education. (Australian Curriculum Studies Association, Belconnen, ACT 2616).
- Harden RM (2007) Outcome-based education – the ostrich, the peacock or the beaver. Medical Teacher; 29: 666 — 671
- Harden RM (2007) Learning outcomes as a tool to assess

  Progression. Medical Teacher; 29: 678–682
- Harden RM (2009) AMEE Guide No. 14: Outcome-based education:

  Part 1-5 Outcome-based education

Assoc. Prof. Dr Jaafar Jantan, Outcome-based Education, Towards Work Place Competence, Towards Workplace Competence in Healthcare Professions Seminar, 23rd November 2016, CUCMS

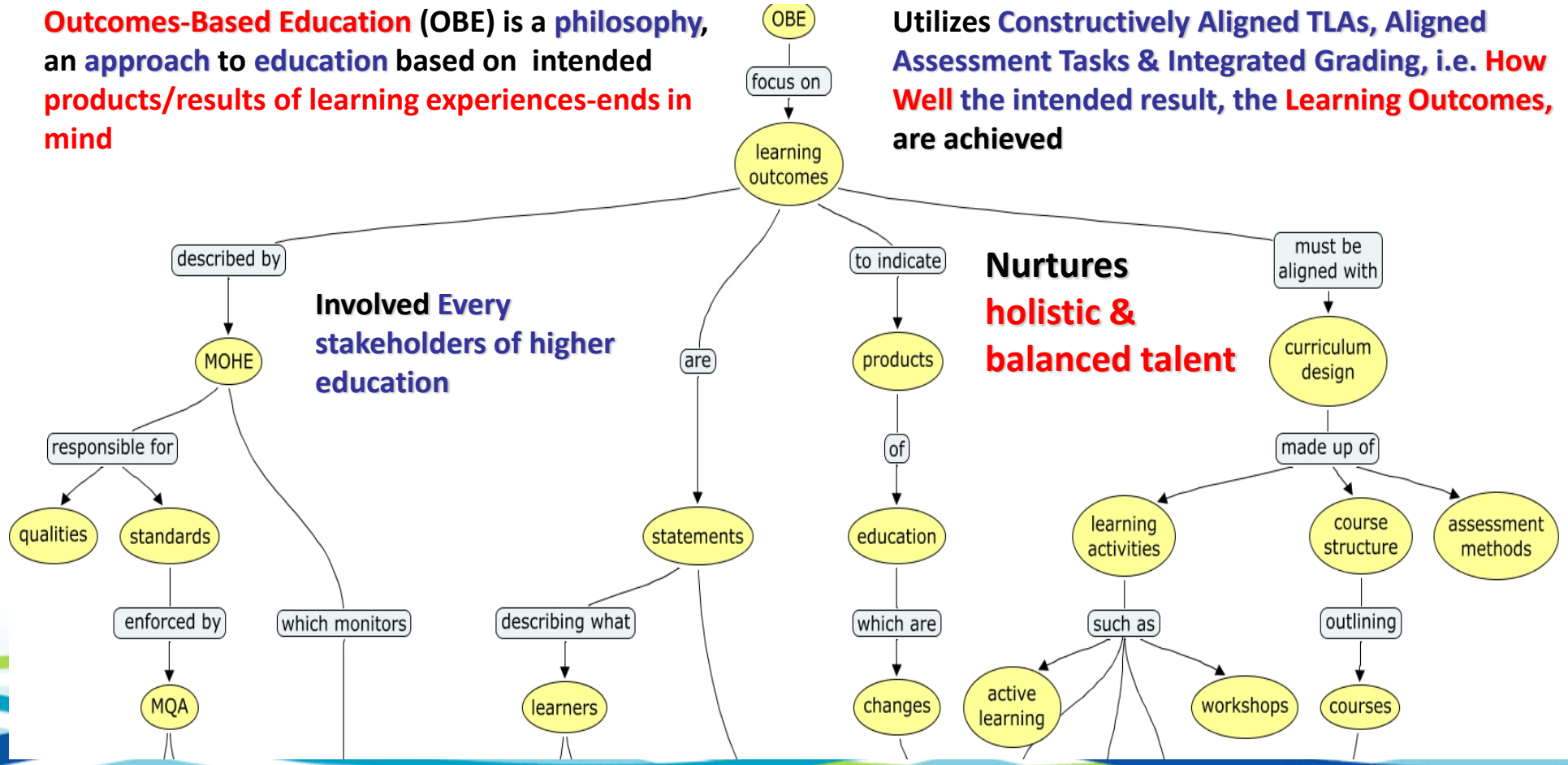
Thank you

Outcomes-Based Curriculum Design & its Aligned Assessment

What is OBE??

Outcomes-Based Education (OBE) is a **philosophy**, an **approach** to **education** based on intended **products/results of learning experiences-ends in mind**

Utilizes Constructively Aligned TLAs, Aligned Assessment Tasks & Integrated Grading, i.e. How Well the intended result, the Learning Outcomes, are achieved



Involved Every stakeholders of higher education

Nurtures holistic & balanced talent

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MALAYSIA
National University of Malaysia

Outcome Based Education

Construction of Course Learning Outcome

WORKSHOP ON OUTCOME- BASED EDUCATION

KULIYYAH OF MEDICINE

7TH march 2023

Outline

- Learning taxonomy
  - Bloom
  - Krathwohl
  - Simpson
- Facts to consider while writing LO
- Common mistake in constructing CLOs

What is Learning Outcomes?

Statements on what a learner should know, understand and can do upon the completion of a period of study.

Why do you write learning outcomes ?

1. **Inform participants/students:**

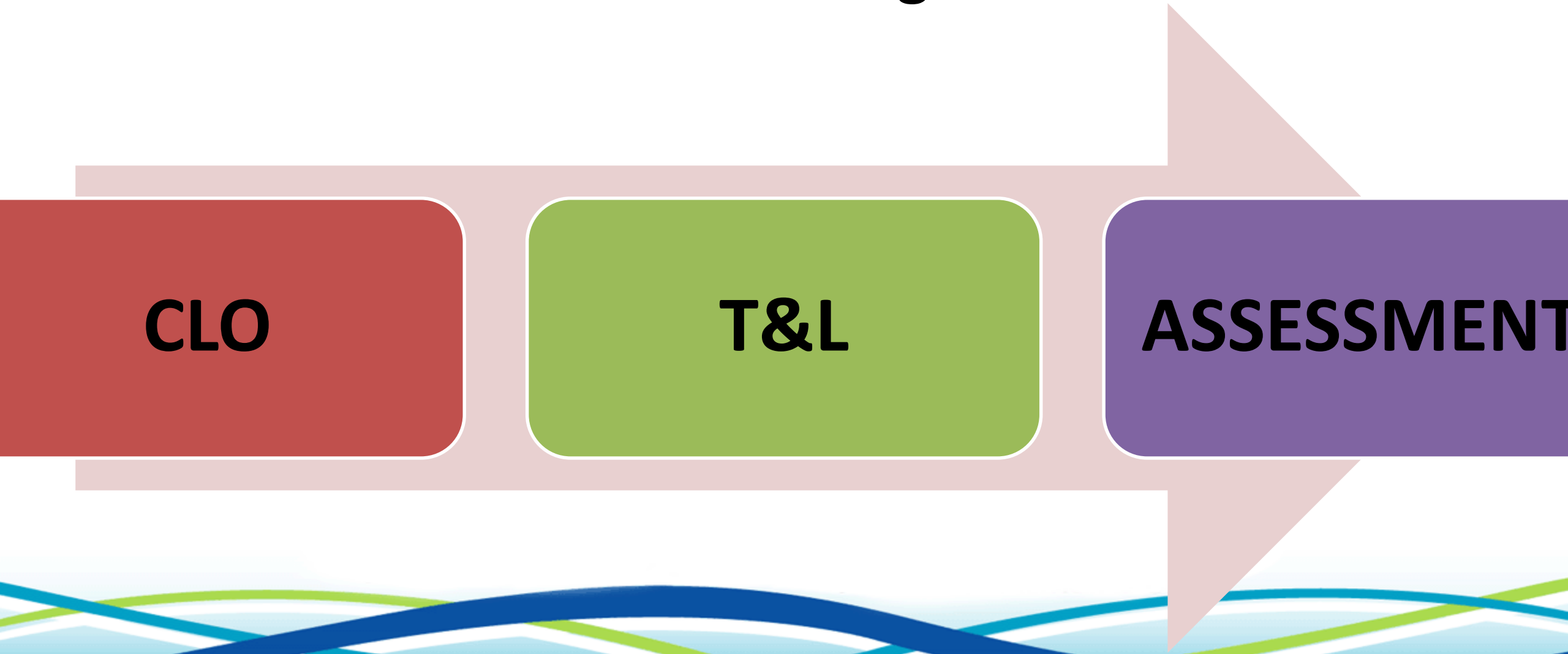
- ✓ What they will learn during the course or during the session
- ✓ The level of performance expected of them at the end of the learning experience

Why do you write learning outcomes?

2. **Inform lectures/facilitators/resource persons** what the participants are expected to **learn so that they can:**

- Plan the learning experience accordingly
- Assess whether participants have acquired the expected level of competencies

Constructive alignment



Why do you write learning outcomes?

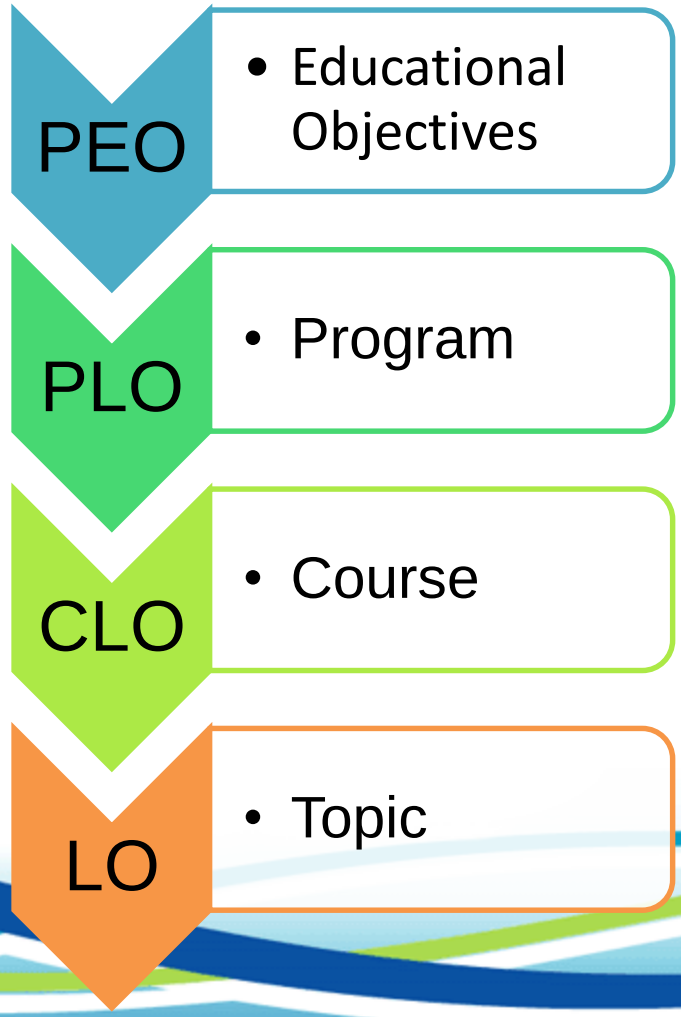
Rajah 1.1: Perkaitan di antara Misi, Wawasan dan Matlamat Pendidikan dengan objektif pendidikan program dan hasil pembelajaran program

Utilize knowledge and clinical skills of emergency medicine based on scientific principles

Apply knowledge and clinical skills to immediately assess, triage, and manage patient with various emergencies conditions.

Demonstrate knowledge and skills to initiate immediate management of emergency cases in the pre hospital care setting

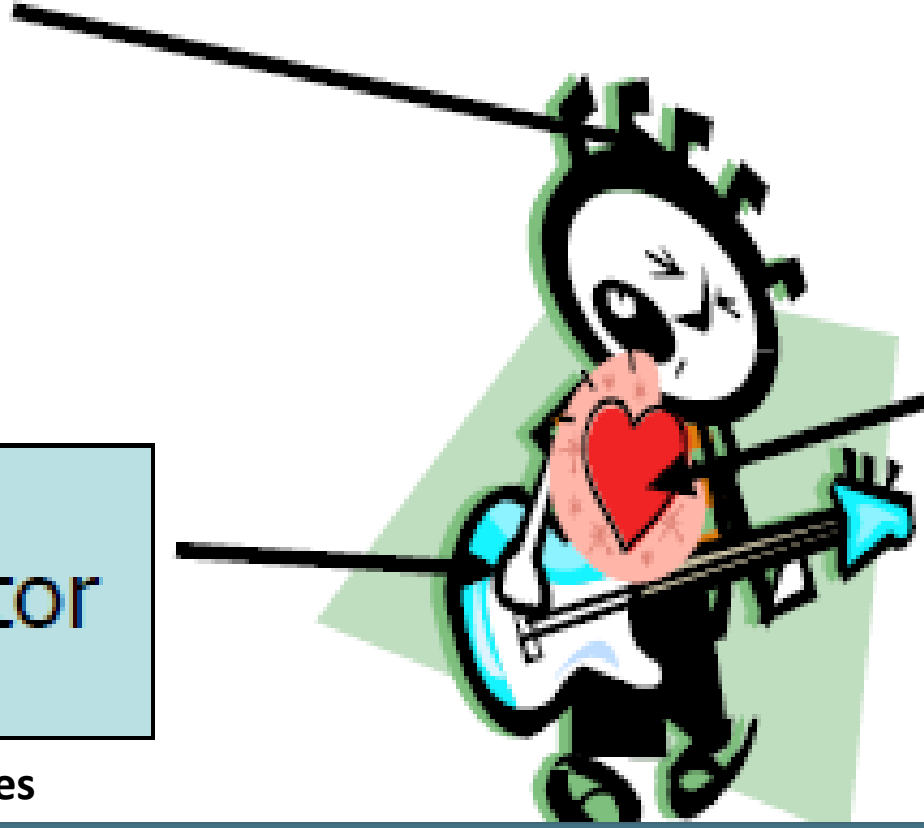
Perform the techniques of patient assessment in PHC setting



THREE LEARNING DOMAINS

Cognitive
The Head

Six major categories



Affective
The Heart

Five major categories

Psychomotor
The Hand

Five major categories

3H

HOW TO CONSTRUCT CLO

1. uses action verbs that specify definite, observable behaviors.
2. uses simple language.
3. describes student rather than teacher behaviors.
4. describes an outcome rather than a learning process.
5. focuses on end-of-instruction behavior rather than subject matter coverage.
6. indicates a single outcome per objective.
7. can be assessed by one or more indicators (methods).
   is clearly linked to a goal.
8. is realistic and attainable.
9. is not simple when complexity is needed.
10. is clear to people outside the discipline.
11. is validated by departmental colleagues.

HOW TO CONSTRUCT CLO

- **SMART O**
- Specific,
- Measurable,
- Achievable,
- Relevant,
- Time Bound,
- Observable

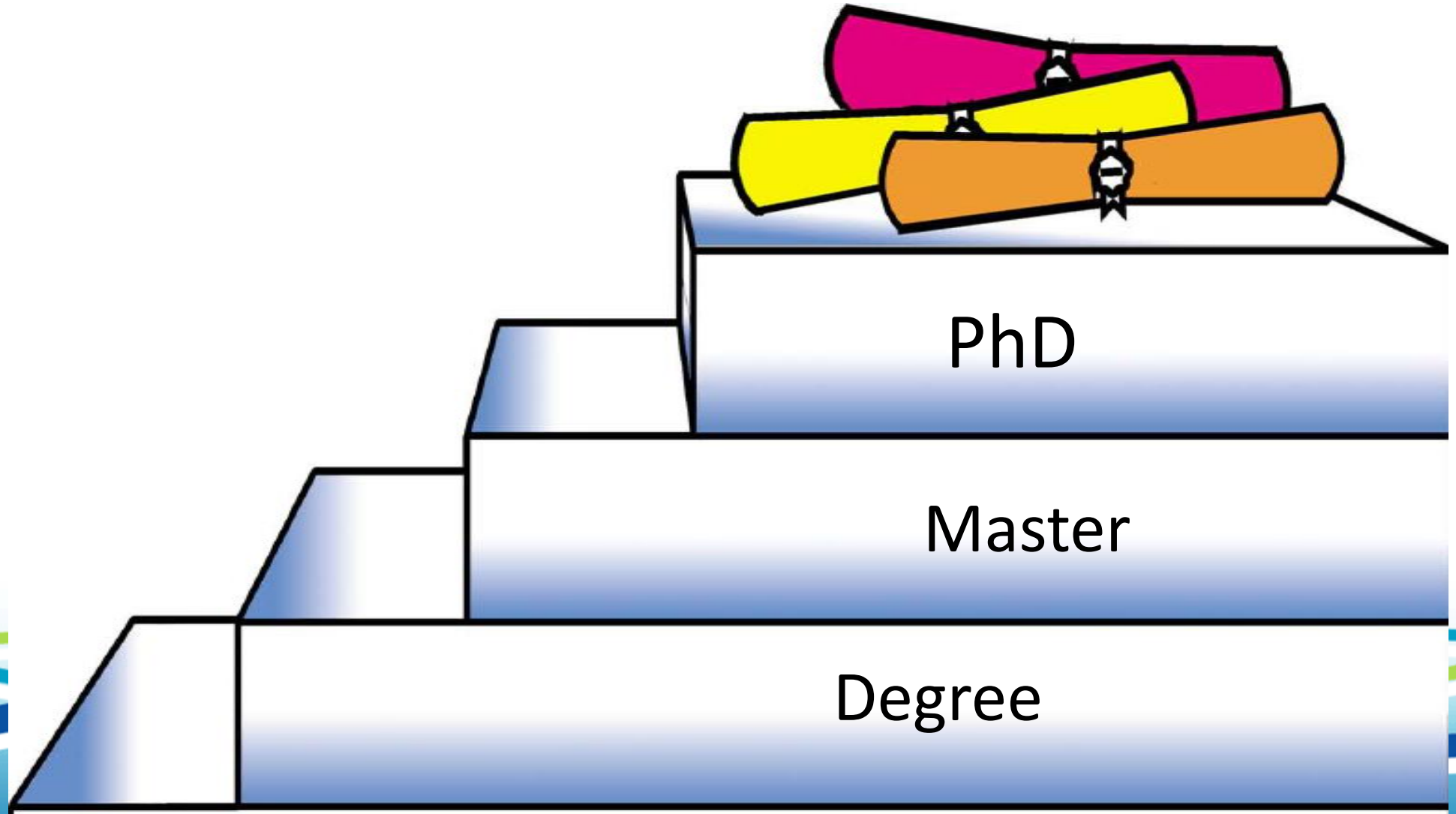
- Common wrong CLOs
  - To show
  - To understand

Anatomy of Learning Outcomes

Demonstrate knowledge and skills to initiate immediate management of emergency cases in the pre hospital care setting

Behaviour	Concept	Context

Facts to consider while writing LO



Jadual 1.9 : Panduan Penentuan Aras Domain Mengikut Tahap Kelayakan

Program Pengajian	Tahap Kelayakan MQF	Purata Aras Domain Taksonomi[5]
Asasi	-	C2-C3
Sarjana muda	6	C4
Sarjana/Diploma Pascasiswazah	7	C4-C5
Kedoktoran	8	C5-C6

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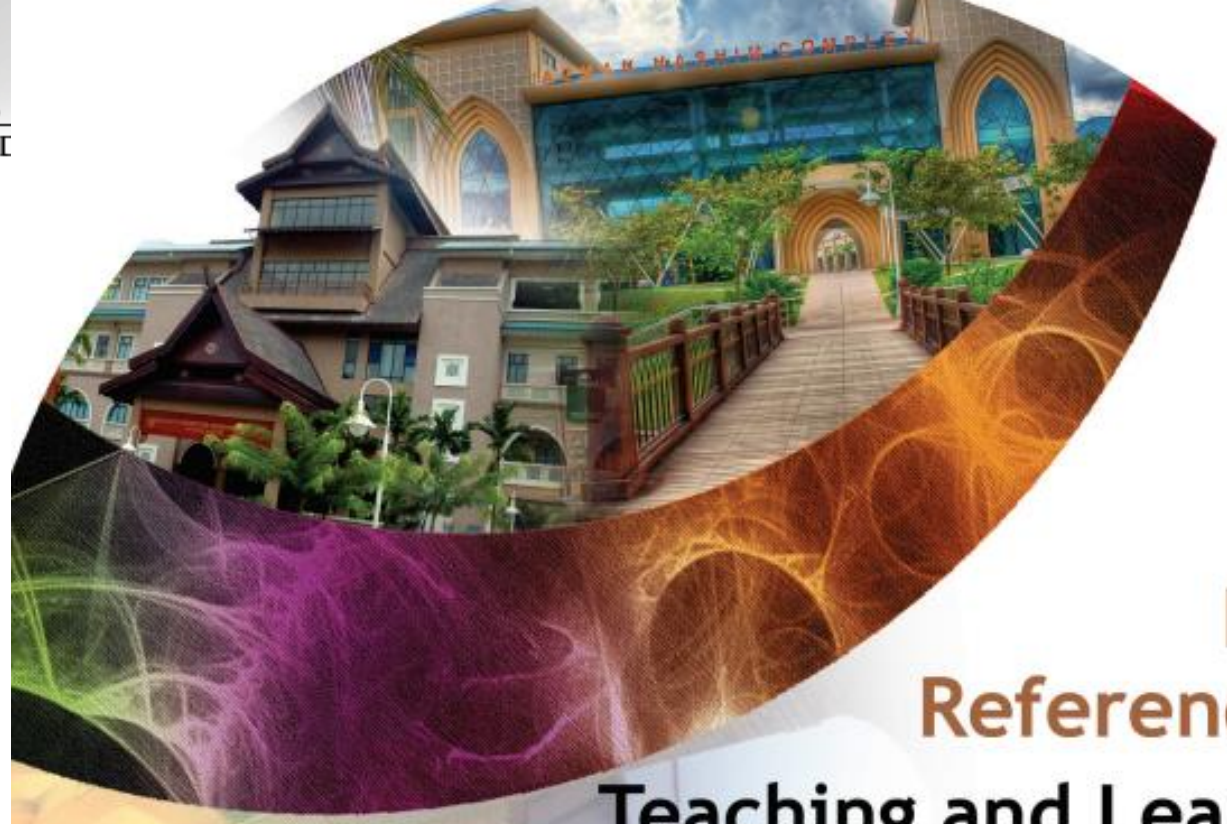


Easy Reference to Teaching and Learning TAXONOMY & SOFT SKILLS Elements

INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA

Garden of Knowledge and Virtue

TAXONOMY VERBS

You can use these verbs which cover the span of the taxonomy from LOTS (lower-order thinking skills) to HOTS (higher-order thinking skills). It begins with *Remembering* and ends with *Creating*. Listed beneath are the power verbs that apply to each stage.

LOTS → HOTS

REMEMBERING

Remembering is when memory is used to produce definitions, facts, or lists or to retrieve information.

UNDERSTANDING

Understanding is all about constructing meaning from many different types of functions, be they written or graphic.

APPLYING

Applying refers to situations where the learned material is used in products such as diagrams, models, interviews, simulations, and presentations.

ANALYZING

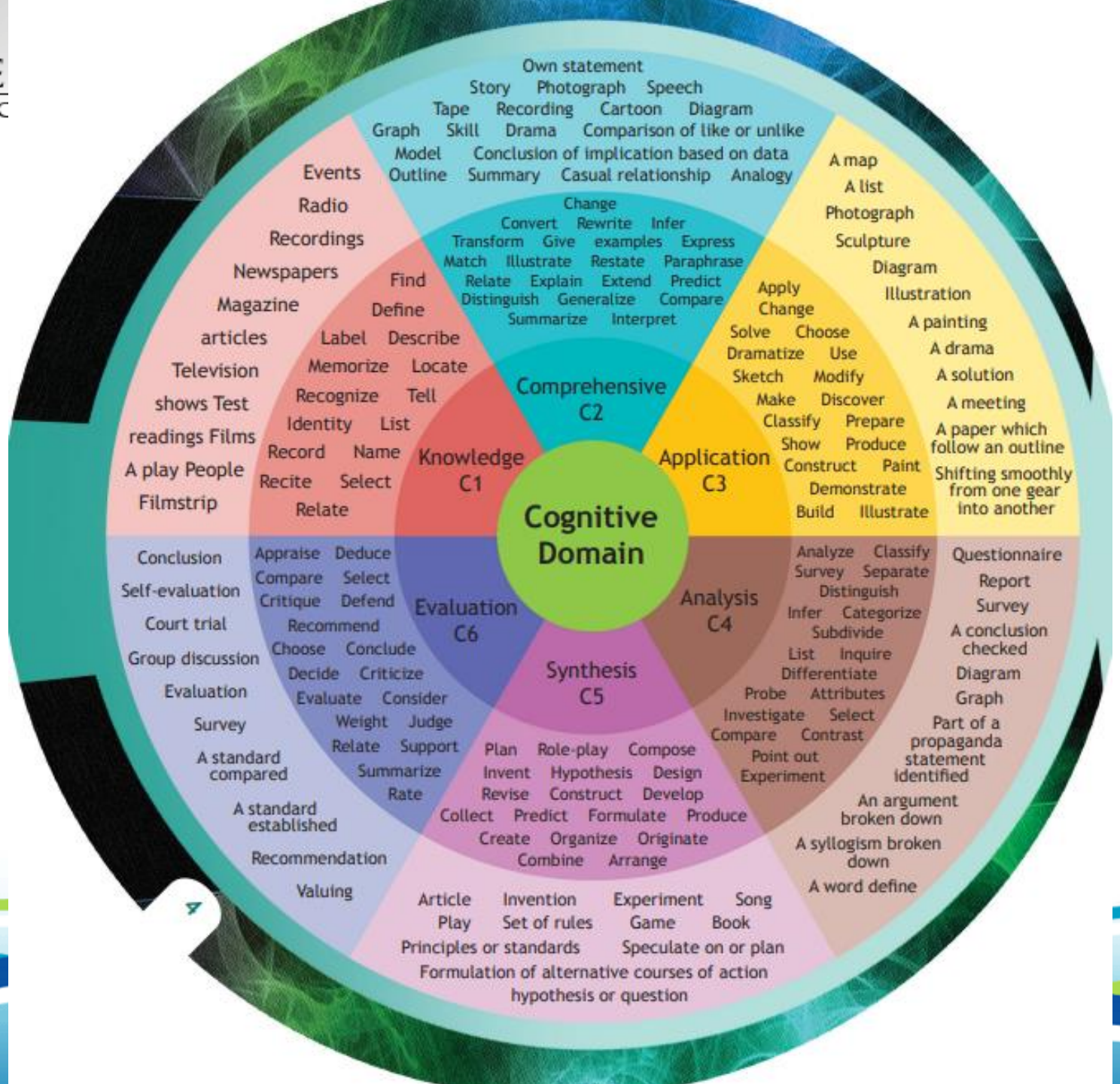
Analyzing is about breaking materials into parts, and then determining how the parts interrelate to each other or to an overall structure or purpose.

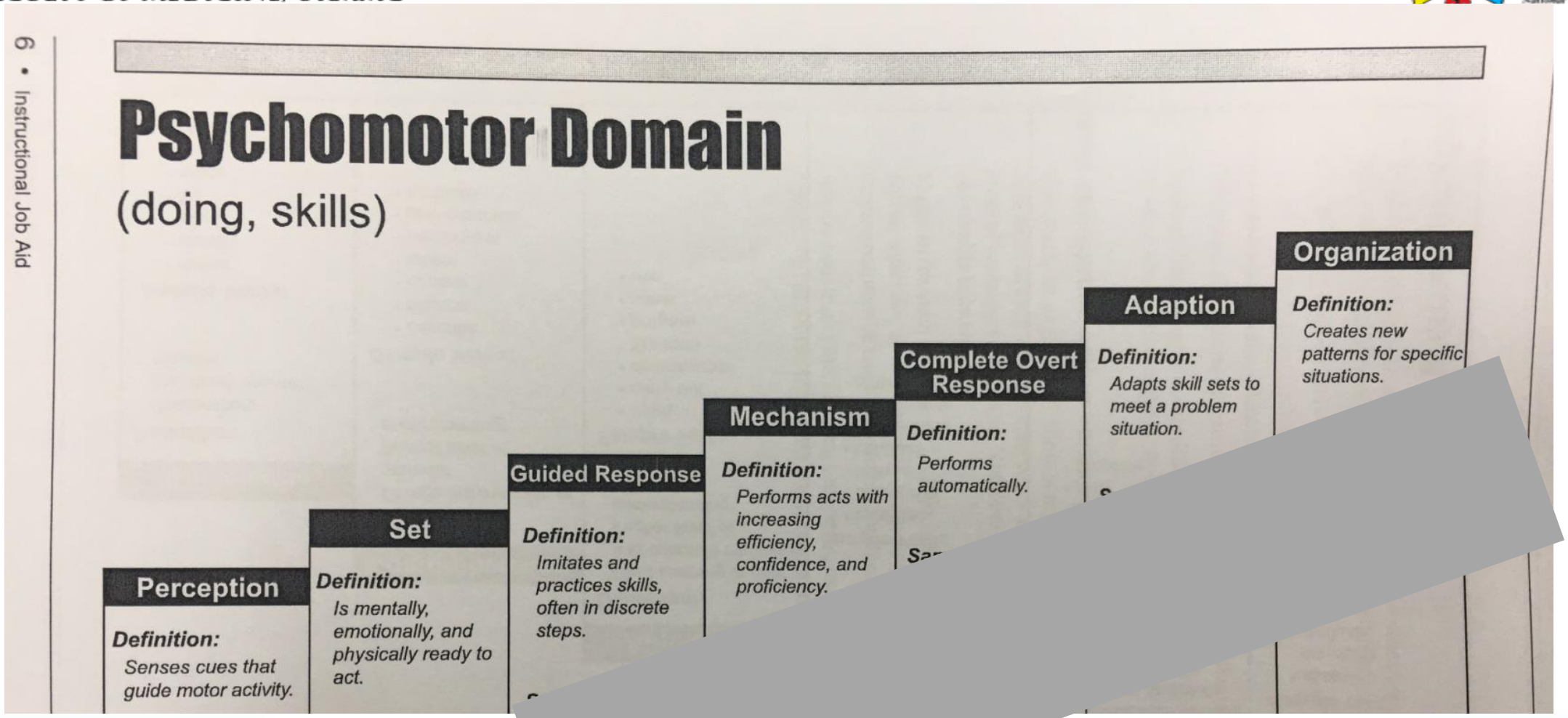
EVALUATING

Evaluating is about making judgements based on criteria and standards through checking and critiquing.

CREATING

Creating is about combining elements to form a whole, and also reorganizing elements into new structures or patterns by planning and producing.


Cognitive Domain
Knowledge C1
Comprehensive C2
Application C3
Analysis C4
Synthesis C5
Evaluation C6
Own statement
Story Photograph Speech
Tape Recording Cartoon Diagram
Graph Skill Drama Comparison of like or unlike
Model Conclusion of implication based on data
Outline Summary Casual relationship Analogy
Change
Convert Rewrite Infer
Transform Give examples Express
Match Illustrate Restate Paraphrase
Relate Explain Extend Predict
Distinguish Generalize Compare
Summarize Interpret
A map
A list
Photograph
Sculpture
Diagram
Illustration
A painting
A drama
A solution
A meeting
A paper which follow an outline
Shifting smoothly from one gear into another
Apply
Change
Solve Choose
Dramatize Use
Sketch Modify
Make Discover
Classify Prepare
Show Produce
Construct Paint
Demonstrate
Build Illustrate
Events
Radio
Recordings
Newspapers
Magazine
articles
Television
shows Test
readings Films
A play People
Filmstrip
Find
Define
Label Describe
Memorize Locate
Recognize Tell
Identity List
Record Name
Recite Select
Relate
Questionnaire
Report
Survey
A conclusion checked
Diagram
Graph
Part of a propaganda statement identified
An argument broken down
A syllogism broken down
A word define
Analyze Classify
Survey Separate
Distinguish
Infer Categorize
Subdivide
List Inquire
Differentiate
Probe Attributes
Investigate Select
Compare Contrast
Point out
Experiment
Plan Role-play Compose
Invent Hypothesis Design
Revise Construct Develop
Collect Predict Formulate Produce
Create Organize Originate
Combine Arrange
Article Invention Experiment Song
Play Set of rules Game Book
Principles or standards Speculate on or plan
Formulation of alternative courses of action
hypothesis or question
Appraise Deduce
Compare Select
Critique Defend
Recommend
Choose Conclude
Decide Criticize
Evaluate Consider
Weight Judge
Relate Support
Summarize
Rate
Conclusion
Self-evaluation
Court trial
Group discussion
Evaluation
Survey
A standard compared
A standard established
Recommendation
Valuing



6 • Instructional Job Aid

Psychomotor Domain

(doing, skills)

Perception

Definition:
Senses cues that guide motor activity.

Set

Definition:
Is mentally, emotionally, and physically ready to act.

Guided Response

Definition:
Imitates and practices skills, often in discrete steps.

Mechanism

Definition:
Performs acts with increasing efficiency, confidence, and proficiency.

Complete Overt Response

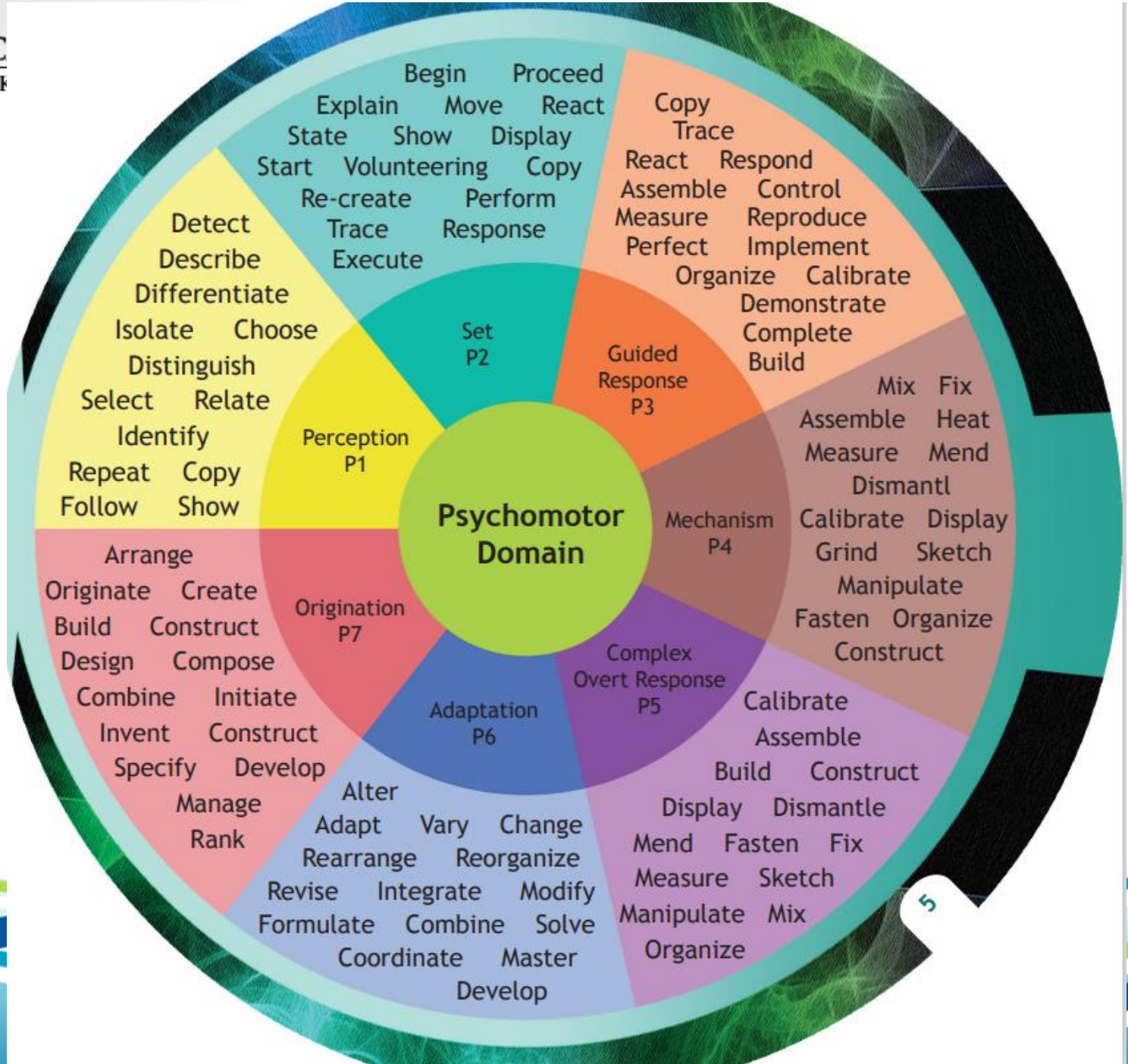
Definition:
Performs automatically.

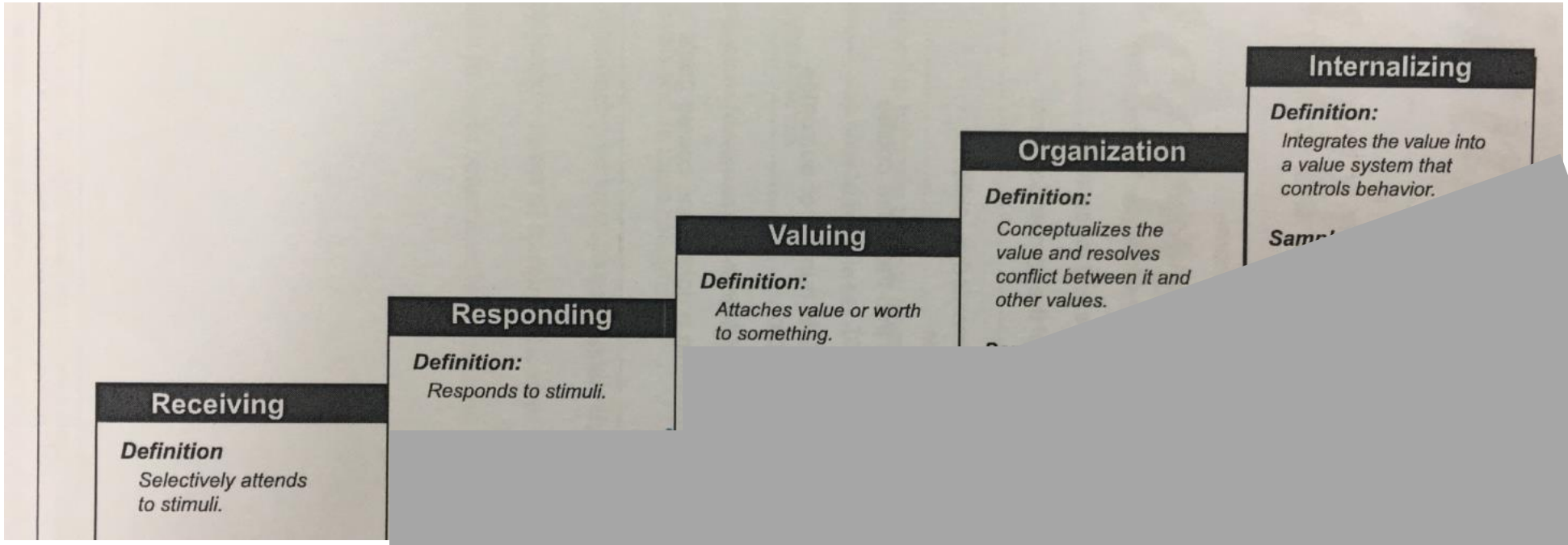
Adaption

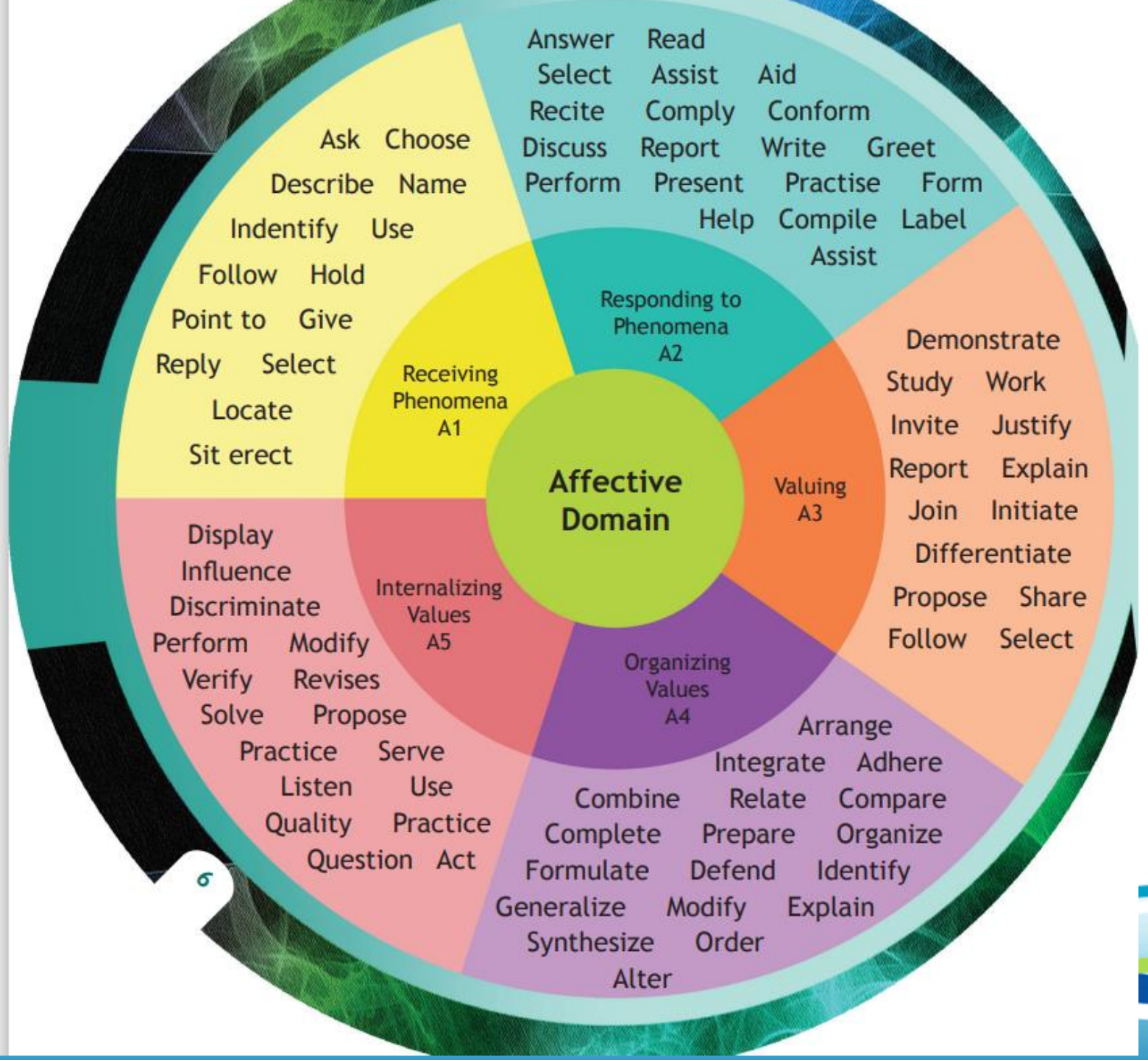
Definition:
Adapts skill sets to meet a problem situation.

Organization

Definition:
Creates new patterns for specific situations.


Psychomotor Domain
Perception P1
Detect
Describe
Differentiate
Isolate Choose
Distinguish
Select Relate
Identify
Repeat Copy
Follow Show
Set P2
Begin Proceed
Explain Move React
State Show Display
Start Volunteering Copy
Re-create Perform
Trace Response
Execute
Guided Response P3
Copy
Trace
React Respond
Assemble Control
Measure Reproduce
Perfect Implement
Organize Calibrate
Demonstrate
Complete
Build
Mechanism P4
Mix Fix
Assemble Heat
Measure Mend
Dismantl
Calibrate Display
Grind Sketch
Manipulate
Fasten Organize
Construct
Complex Overt Response P5
Calibrate
Assemble
Build Construct
Display Dismantle
Mend Fasten Fix
Measure Sketch
Manipulate Mix
Organize
Adaptation P6
Alter
Adapt Vary Change
Rearrange Reorganize
Revise Integrate Modify
Formulate Combine Solve
Coordinate Master
Develop
Origination P7
Arrange
Originate Create
Build Construct
Design Compose
Combine Initiate
Invent Construct
Specify Develop
Manage
Rank


Receiving
Definition
Selectively attends to stimuli.
Responding
Definition:
Responds to stimuli.
Valuing
Definition:
Attaches value or worth to something.
Organization
Definition:
Conceptualizes the value and resolves conflict between it and other values.
Internalizing
Definition:
Integrates the value into a value system that controls behavior.


Affective Domain
Receiving Phenomena A1
Ask Choose
Describe Name
Indentify Use
Follow Hold
Point to Give
Reply Select
Locate
Sit erect
Responding to Phenomena A2
Answer Read
Select Assist Aid
Recite Comply Conform
Discuss Report Write Greet
Perform Present Practise Form
Help Compile Label
Assist
Valuing A3
Demonstrate
Study Work
Invite Justify
Report Explain
Join Initiate
Differentiate
Propose Share
Follow Select
Organizing Values A4
Arrange
Integrate Adhere
Combine Relate Compare
Complete Prepare Organize
Formulate Defend Identify
Generalize Modify Explain
Synthesize Order
Alter
Internalizing Values A5
Display
Influence
Discriminate
Perform Modify
Verify Revises
Solve Propose
Practice Serve
Listen Use
Quality Practice
Question Act

Common mistake in constructing CLOs

Item 7

CLO1	Describe epidemiology, aetio-pathogenesis and clinical manifestations of common medical disorders and emergencies (C2,PLO1)
CLO2	Outline national programmes relating to general adult health including screening and health promotion (C1,PLO1) **1. Wrong level of Cognitive**
CLO3	Recognize a critically ill patient and describe the principles of management (C1,PLO3,7) **2. More than ONE action word**
CLO4	Elicit relevant history, perform comprehensive physical examination of patients with medical problems and request basic relevant investigations (C5,PLO2) **2. More than ONE action word**
CLO5	Synthesize the data derived from the history, physical examination and investigations to formulate a provisional / final diagnosis by adopting a problem orientated approach (C5,PLO2,3) **4. Not a learning domain**
CLO6	Manage common medical illnesses and social problems (C4,PLO3) **3. Difficult to achieve**
CLO7	Advise about the prevention of common medical illnesses (e.g cardiovascular disease, airway disease) (C6,PLO4) **4. Not a learning domain**
CLO8	Guide patients and their family on good nutrition and a healthy lifestyle (C6,PLO4) **4. Not a learning domain**
CLO9	Explain and advocate patient's rights (introduction into safeguarding vulnerable adults) (C2,PLO3) **2. More than ONE action word**
CLO10	Provide care to patients and their family with empathy (C3,PLO4) **4. Not a learning domain**
CLO11	Perform core clinical procedures safely and effectively on medical patients (C2,PLO2) **5. Inaccurate taxonomy domain**

Overalll

1. **Too many C5 and C6**
2. **Excessive CLOs**

Credit Value :	1
Prerequisite/co-requisite: (if any)	None
Course Learning Outcomes (CLO) : At the end of the course the students will be able to: (example) - explain the basic principles of immunisation (C2,PLO1)	
CLO1	Describe the formation and development of embryo (embryogenesis); (C2, PLO 1)
CLO2	Define and describe aetiology of congenital abnormalities (C1, PLO 1)
CLO3	Correlate embryological information to the structural organization of human body and interpret the developmental reason for common birth defects; (C4, PLO 1)
CLO4	Explain the mechanism of action of causative factors for congenital abnormalities.(C2, PLO 1)
CLO5	Demonstrate the ability to identify the organ primordia in laboratory embryology models to appreciate the basis of organization of structures in the adult. (C3, PLO 1)
CLO6	Identify the factors responsible for common birth defects and the methods of prevention of such occurrences.(C1, PLO 1)
CLO7	Demonstrate the ability for interpersonal communication and understanding of other people, which is essential for close teamwork. (C3, PLO 4)

H16 Demonstrate ability of taking clinical history and conducting physical examination. (C3, P3, A3, PLO3,5)

5	Credit Value:	1
6	Pre-requisite/ co-requisite (if any):	NIL
7	Course Learning Outcomes (CLO)	CLO1 Demonstrate ability of taking clinical history and conducting physical
		CLO2 Demonstrate their preseantions skill (C3, P3, A3, PLO3)
		CLO3 Present resarch survey out come after analyzing the data and working
		CLO4 Display their ability and skill in debate competition, variable Show, g

CLO Dialog Box

CLOs are statements of what learner should be able to do upon completion of courses.Example: At the end of course the student will be able to: 1.Explain the basic principle of immunisation (C2, PLO1).

The number of CLO of a course is determined by the Courses to PLO mapping. If a course is designed to meet 2 PLOs (n), the number of CLO of that course can be determined by: CLO = (n) or maximum n+1. For example, if a course is mapped to 2 PLOs, then the number of CLOs can be 2-3.

In general, a course is suggested to have 3-5 CLOs.

However, courses with high intensity of learning volume such as research project, capstone projects, dissertation and industrial training with duration more than 6 months that runs into the final semester are permitted to have more than 5 CLOs, which is subject to further verification from the expert.

OK

8 Mapping of the Course Learning Outcomes to the Programme Learning Outcomes, Teaching Methods and As

Course Learning Outcomes	Programme Learning Outcomes (PLO)												Teaching Methods	Assessment Methods
	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6	PLO 7	PLO 8	PLO 9	PLO 10	PLO 11			
CLO1			√		√								All teaching methodology utilized in pre clinical phase	Not accountable, prizes winning
CLO2			√											
CLO3						√	√							
CLO4									√	√				

SSM entered the waiting room

Admit View

CVS RESPIRATORY ENDOCRINE REPRODUCTIVE Multimodule revision 3 GIT URINARY NS MSK Multimodule revision 4 MEF

Ready Circular References

Type here to search

ENG 10:44 AM 29/1/2022

CLO1: Discuss the aetiology and pathophysiology of common medical and surgical emergencies. (C2, A2, PLO 1)

CLO2: Demonstrate the primary and secondary survey in the management of shock and trauma cases for both adults and children and arrange for triage according to international and local guidelines of practice. (C3, A3, P5, PLO 1,2,3)

CLO3: Demonstrate the resuscitation of critically ill patients under supervision with appreciation of the importance of good communication, teamwork, and leadership skills. (C3, A3, P5, PLO 2,3,5,9)

CLO4: Describe assessment and management of seriously ill patients in emergency situations, and write adequate clinical notes and management records of individual patients. (C5, A1, P1 PLO 2,3,)

CLO5: Apply the principles of medical ethics, and respect to patient's rights in clinical practice and risks during the assessment and management of patients. (C3, A2, PLO11)

HOW TO CONSTRUCT CLO

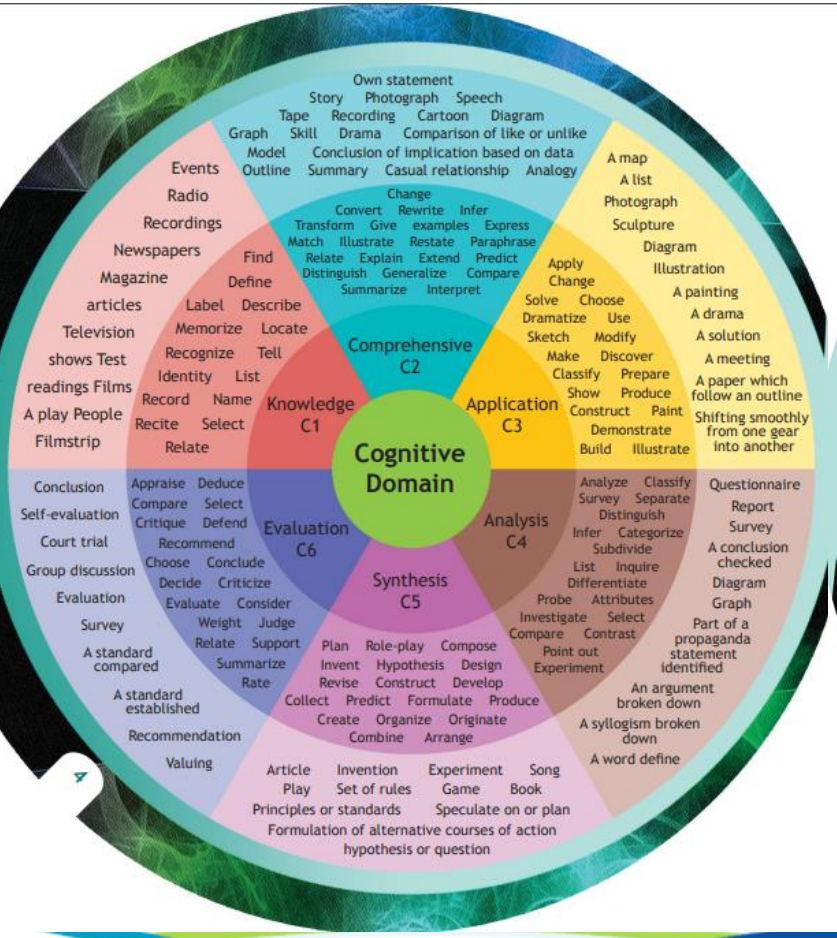
HOW TO CONSTRUCT CLO

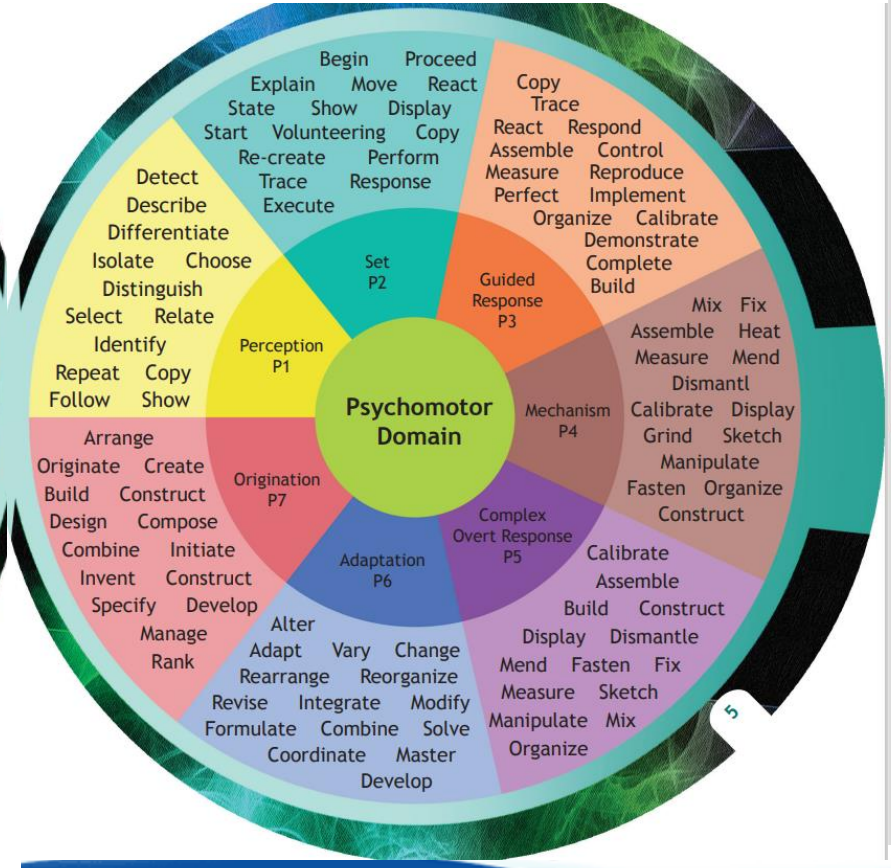
SMART O

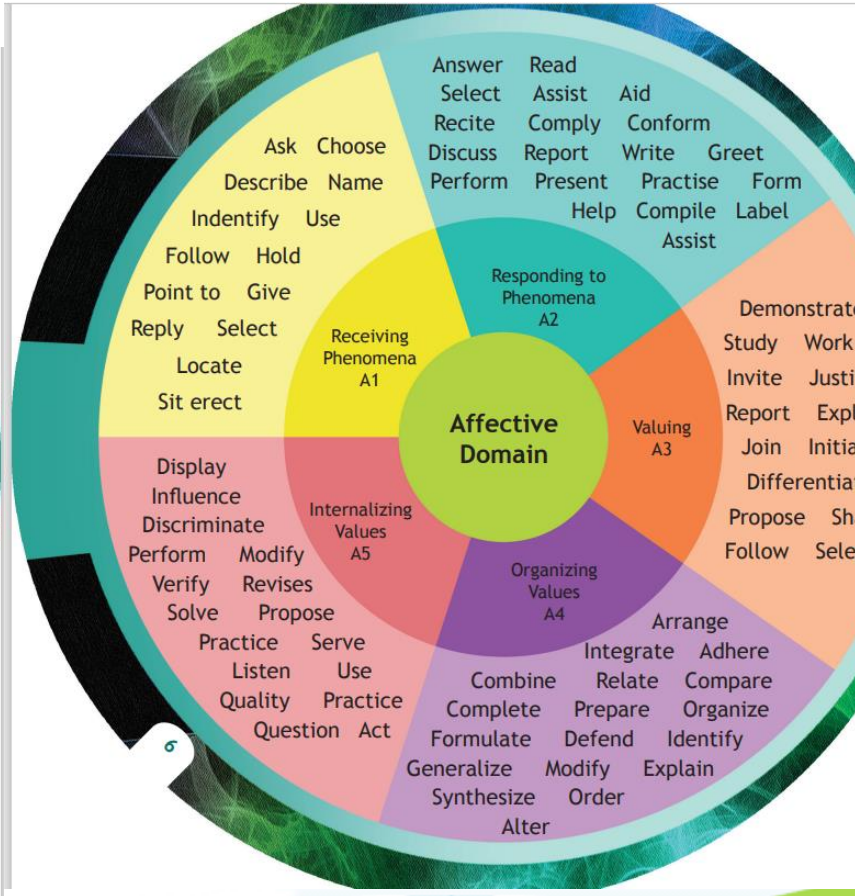
- Specific,
- Measurable,
- Achievable,
- Relevant,
- Time Bound,
- Observable

1. uses action verbs that specify definite, observable behaviors.
2. uses simple language.
3. describes student rather than teacher behaviors.
4. describes an outcome rather than a learning process.
5. focuses on end-of-instruction behavior rather than subject matter coverage.
6. indicates a single outcome per objective.
7. can be assessed by one or more indicators (methods).
   is clearly linked to a goal.
8. is realistic and attainable.
9. is not simple when complexity is needed.
10. is clear to people outside the discipline.
11. is validated by departmental colleagues.

How to select the best learning domain…







Tips 1; do not make it too difficult…

- Although you have too many choices,
  - Use the action verb/ learning domain commonly use in your field
  - Use the action verb / learning domain that easy to understand by your colleague and your student
  - Do not use a bombastic action verb / learning domain that make others difficult to understand esp to choose TLM and assessment

Tips 2; do not make it too easy…

- Although you only have choose from the list,
  - Do not use similar action verb / learning domain

Tips 3; do not include everything for each CLO…

- Although you have too many important contents,
  - Make it concise and comprehensive, not too lengthy

Tips 4; my personal suggestion…

- Make sure it covers all 3 type of learning domains except some specific courses
- Standardize CLOs for several cluster,
  - Basic medical sciences
  - Clinical
  - Medical and surgical based
- Pay attention on specific/unique CLO for some courses to map with your specific PLO and MQF cluster/domain
  - Medicine and society
  - Research courses or contain research element
  - PPA courses or contain PPA specific element
  - Family medicine courses

Tips 5; my personal suggestion…

Jadual 1.9 : Panduan Penentuan Aras Domain Mengikut Tahap Kelayakan

Program Pengajian	Tahap Kelayakan MQF	Purata Aras Domain Taksonomi[5]
Asasi	-	C2-C3
Sarjana muda	6	C4
Sarjana/Diploma Pascasiswazah	7	C4-C5
Kedoktoran	8	C5-C6

Above C4 must be minimal

Thank you

Anatomy of Learning Outcomes

Demonstrate knowledge and skills to initiate immediate management of emergency cases in the pre hospital care setting

Behaviour	Concept	Context

CLOs

- Cognitive: Apply the concept of haematopoiesis and haemostatic response in haematological diseases (C3)

- Explain the principle and applied aspects of medical microbiology.

- History taking: To demonstrate the history taking skill to establish the correct diagnosis (P3,A3,C3).
  - TLM: bed side teaching/case presentation
  - Assesment: Observed long case, manned OSCE
- Physical examination: To demonstrate a correct examination technique to aid the clinical diagnosis in a patient (P3)
- Cognitive clinical- To formulate a clinical diagnosis based on history taking, physical examination and investigations in a patient (C5)

CLOs

- Procedural: Manage normal labour and delivery including interpretation of cardiotocography (P3, C3, A3)
- Communication skills: To demonstrate the ability to use basic technology in presentation (A3)

BLOOM'S DIGITAL TAXONOMY VERBS

Bloom's Digital Taxonomy is about using technology and digital tools to facilitate learning. This kind of student engagement is defined with power verbs that can be used for everything from lesson planning and rubric making, to doing curriculum mapping and more.

You can use these verbs which cover the span of the taxonomy from LOTS (lower-order thinking skills) to HOTS (higher-order thinking skills). It begins with *Remembering* and ends with *Creating*. Listed beneath are the power verbs that apply to each stage.

LOTS → HOTS

REMEMBERING

Remembering is when memory is used to produce definitions, facts, or lists or to retrieve information.

Bookmarking
Bullet pointing
Copying
Defining
Describing
Duplicating
Favouring
Finding
Googling
Highlighting
Identifying
Labelling
Liking
Listening
Listing
Locating
Matching
Memorizing
Naming
Networking
Numbering
Quoting
Recalling
Reading
Reciting
Recognizing
Recording
Retelling
Repeating
Retrieving
Searching
Selecting
Tabulating
Telling
Visualizing

UNDERSTANDING

Understanding is all about constructing meaning from many different types of functions, be they written or graphic.

Advanced search
Annotating
Associating
Boolean search
Categorizing
Classifying
Commenting
Comparing
Contrasting
Converting
Demonstrating
Describing
Differentiating
Discussing
Discovering
Distinguishing
Estimating
Exemplifying
Explaining
Expressing
Extending
Gathering
Generalizing
Grouping
Identifying
Indicating
Inferring
Interpreting
Journalling
Paraphrasing
Predicting
Relating
Subscribing
Summarizing
Tagging
Tweeting

APPLYING

Applying refers to situations where the learned material is used in products such as diagrams, models, interviews, simulations, and presentations.

Acting out
Administering
Applying
Articulating
Calculating
Carrying out
Changing
Charting
Choosing
Collecting
Completing
Computing
Constructing
Demonstrating
Determining
Displaying
Examining
Executing
Explaining
Implementing
Interviewing
Judging
Editing
Experimenting
Hacking
Loading
Operating
Painting
Playing
Preparing
Presenting
Running
Sharing
Sketching
Uploading
Using

ANALYZING

Analyzing is about breaking materials into parts, and then determining how the parts interrelate to each other or to an overall structure or purpose.

Advertising
Appraising
Attributing
Breaking down
Calculating
Categorizing
Classifying
Comparing
Concluding
Contrasting
Correlating
Deconstructing
Deducing
Differentiating
Discriminating
Dividing
Distinguishing
Estimating
Explaining
Illustrating
Inferring
Integrating
Linking
Mashing
Mind mapping
Ordering
Organizing
Outlining
Planning
Pointing out
Prioritizing
Questioning
Separating
Structuring
Surveying

EVALUATING

Evaluating is about making judgements based on criteria and standards through checking and critiquing.

Arguing
Assessing
Checking
Criticizing
Commenting
Concluding
Considering
Convincing
Critiquing
Debating
Defending
Detecting
Editorializing
Experimenting
Grading
Hypothesizing
Judging
Justifying
Measuring
Moderating
Monitoring
Networking
Persuading
Posting
Predicting
Rating
Recommending
Reflecting
Reframing
Reviewing
Revising
Scoring
Supporting
Testing
Validating

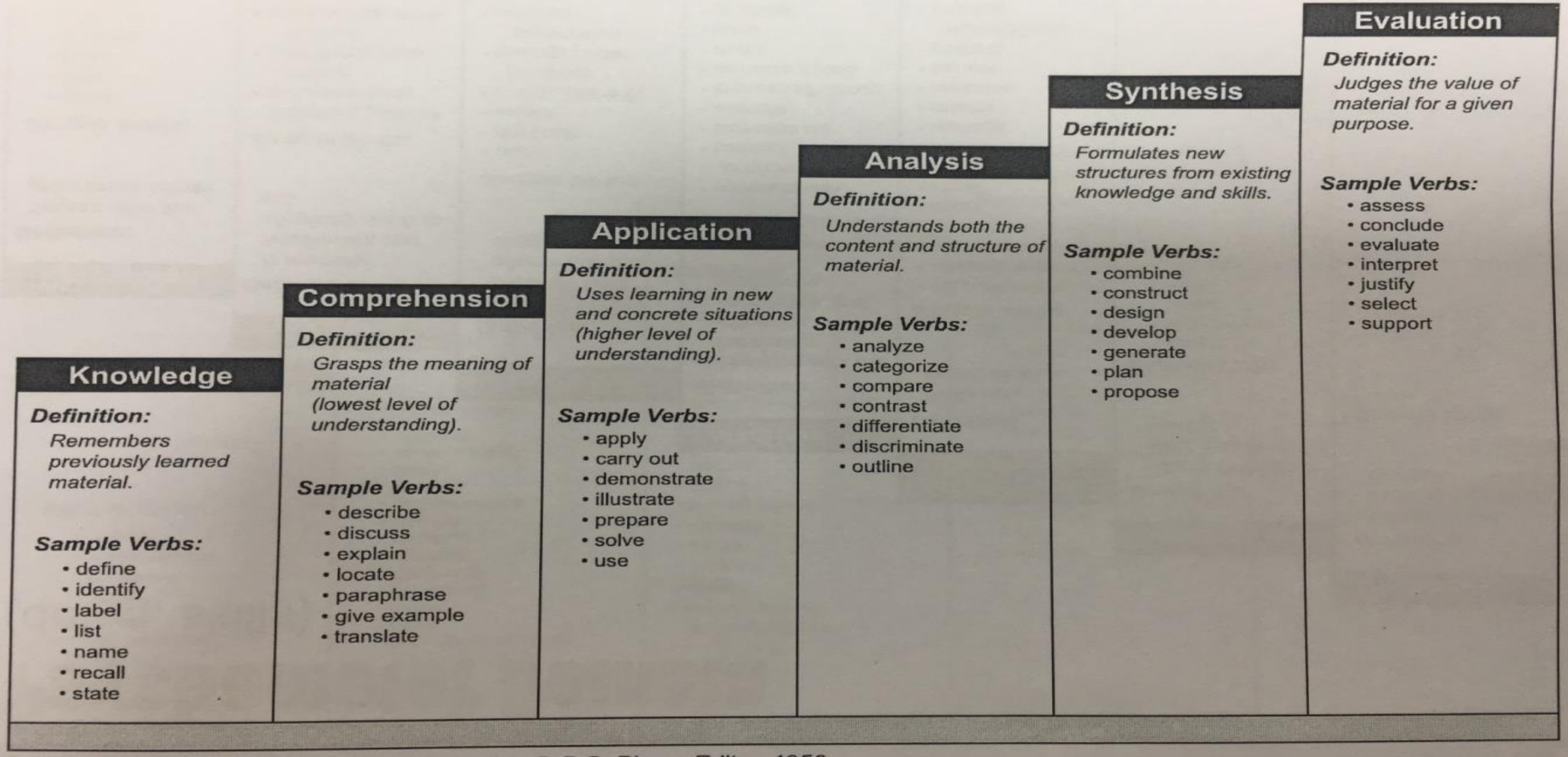
CREATING

Creating is about combining elements to form a whole, and also reorganizing elements into new structures or patterns by planning and producing.

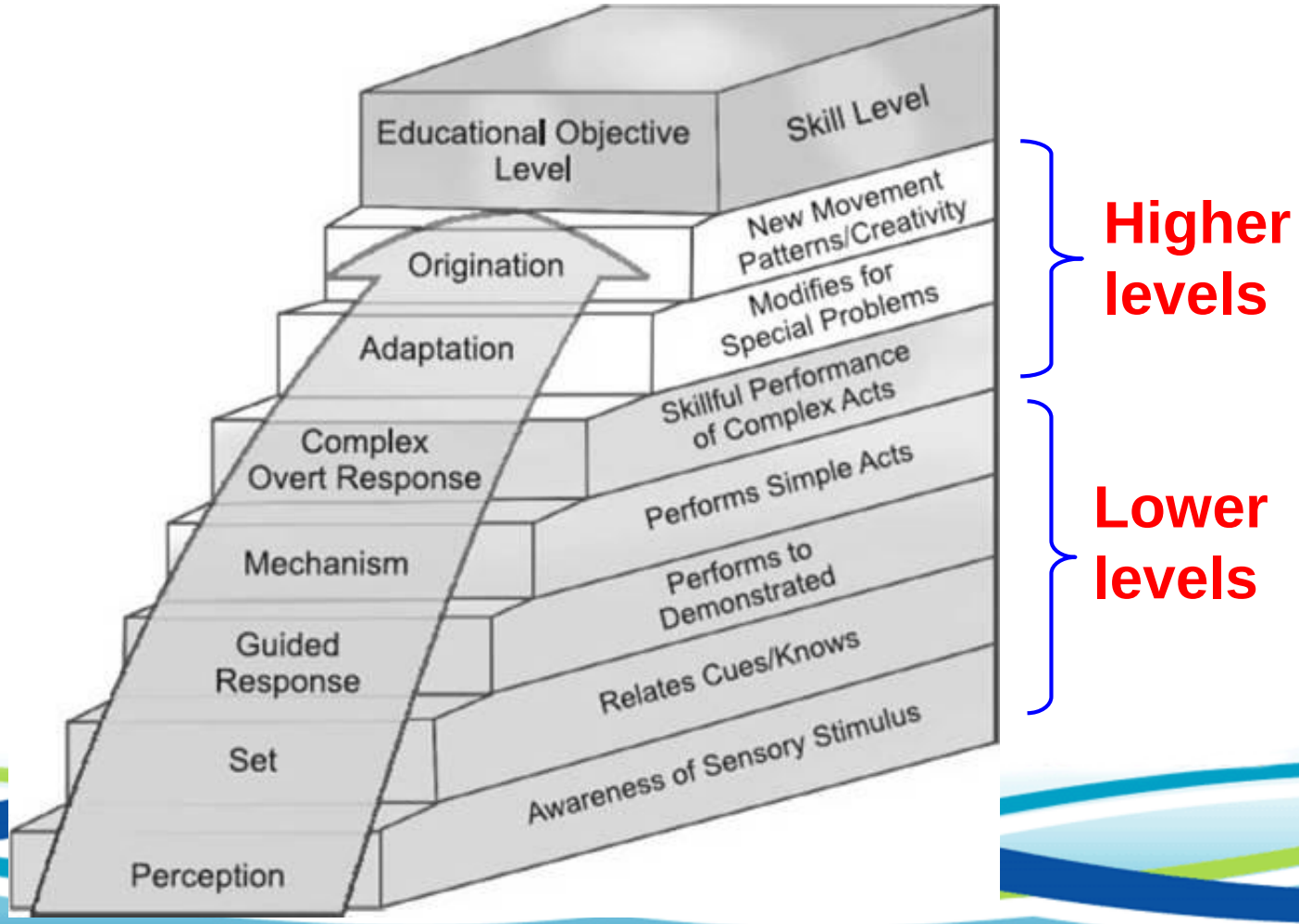
Adapting
Animating
Blogging
Building
Collaborating
Composing
Constructing
Designing
Developing
Devising
Directing
Facilitating
Filming
Formulating
Integrating
Inventing
Leading
Making
Managing
Mixing/remixing
Modifying
Negotiating
Originating
Orating
Planning
Podcasting
Producing
Programming
Publishing
Roleplaying
Simulating
Solving
Structuring
Video blogging
Wiki building
Writing

Cognitive Domain

(thinking, knowledge)



Psychomotor Domain (Simpson's Model, 1972)



Psychomotor Domain

(doing, skills)

Perception

Definition:

Senses cues that guide motor activity.

Sample Verbs:

- detect
- hear
- listen
- observe
- perceive
- recognize
- see
- sense
- smell
- taste
- view
- watch

Set

Definition:

Is mentally, emotionally, and physically ready to act.

Sample Verbs:

- achieve a posture
- assume a body stance
- establish a body position
- place hands, arms, etc.
- position the body
- sit
- stand
- station

Guided Response

Definition:

Imitates and practices skills, often in discrete steps.

Sample Verbs:

- copy
- duplicate
- imitate
- manipulate with guidance
- operate under supervision
- practice
- repeat
- try

Mechanism

Definition:

Performs acts with increasing efficiency, confidence, and proficiency.

Sample Verbs:

- complete with confidence
- conduct
- demonstrate
- execute
- improve efficiency
- increase speed
- make
- pace
- produce
- show dexterity

Complete Overt Response

Definition:

Performs automatically.

Sample Verbs:

- act habitually
- advance with assurance
- control
- direct
- excel
- guide
- maintain efficiency
- manage
- master
- organize
- perfect
- perform automatically
- proceed

Adaption

Definition:

Adapts skill sets to meet a problem situation.

Sample Verbs:

- adapts
- reorganizes
- alters
- revises
- changes

Organization

Definition:

Creates new patterns for specific situations.

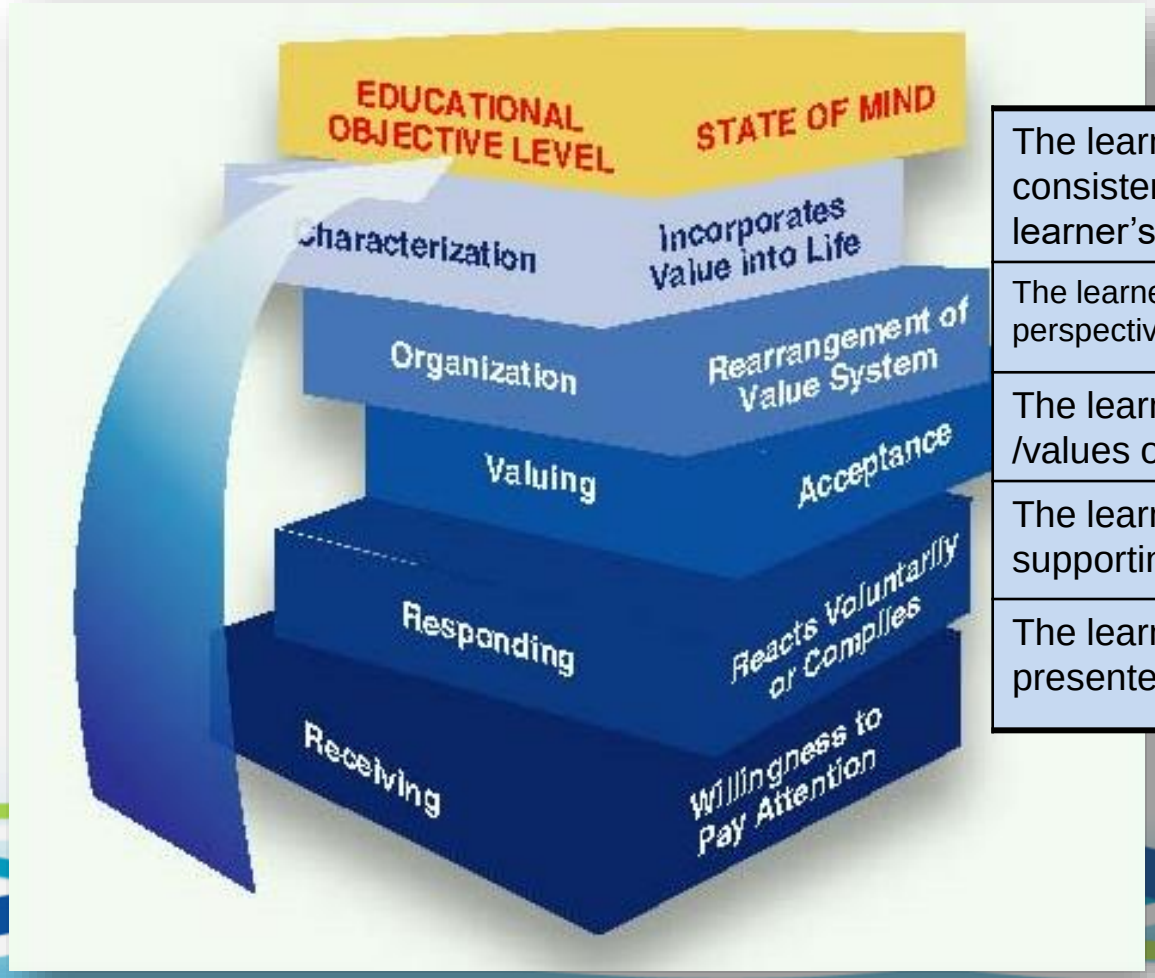
Sample Verbs:

- designs
- originates
- combines
- composes
- constructs

Based on "Taxonomy of Educational Objectives", B.S. Bloom Editor. 1956

AFFECTIVE DOMAIN

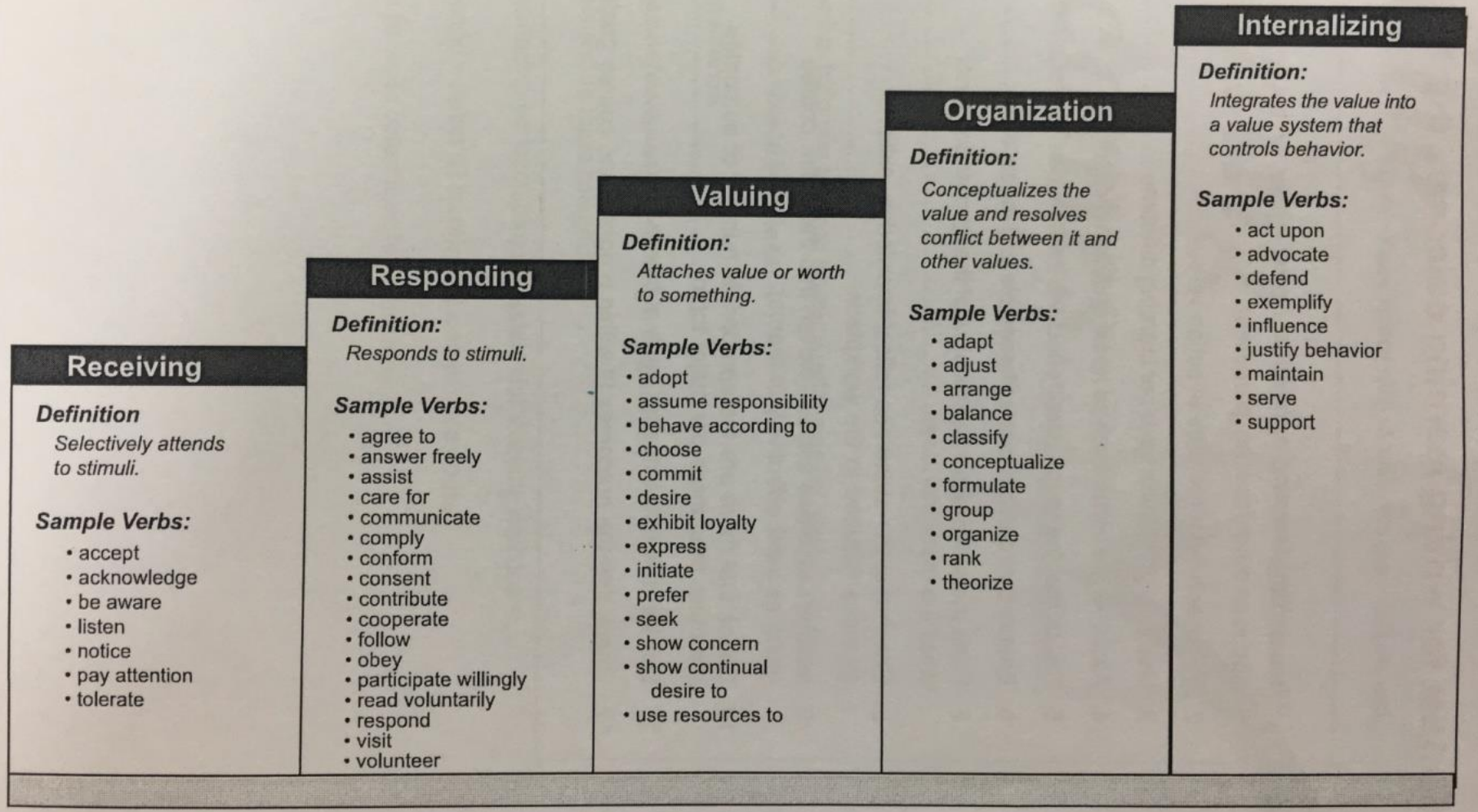
(Krathwohl's Model, 1964)



The learner provides evidence of consistency of belief system from the learner's perspective	Higher levels
The learner examines issues from various perspectives after analyzing each perspective	
The learner supports his or her belief /values on issues presented.	
The learner presents argument supporting one perspective	Lower levels
The learner actively listen to issues presented	

Affective Domain

(feeling, attitudes)



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