

Outcomes Based Education



Satuan Penjaminan Mutu ITB

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Workshop Pengembangan Kurikulum Dengan Paradigma
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Organ Akademik Perguruan Tinggi

Fakultas adalah himpunan sumber daya pendukung, yang menyelenggarakan dan mengelola pendidikan akademik, vokasi, dan/atau profesi dalam satu atau beberapa pohon/kelompok ilmu pengetahuan dan teknologi

Jurusan adalah himpunan sumber daya pendukung, yang menyelenggarakan dan mengelola pendidikan akademik, vokasi, dan/atau profesi dalam 1 (satu) atau beberapa cabang ilmu pengetahuan dan teknologi.

Jurusan 1

Jurusan 2

Fakultas 2

Fakultas 3

Program Studi adalah kesatuan kegiatan pendidikan dan pembelajaran yang memiliki kurikulum dan metode pembelajaran tertentu dalam satu jenis pendidikan akademik, pendidikan profesi, dan/atau pendidikan vokasi.

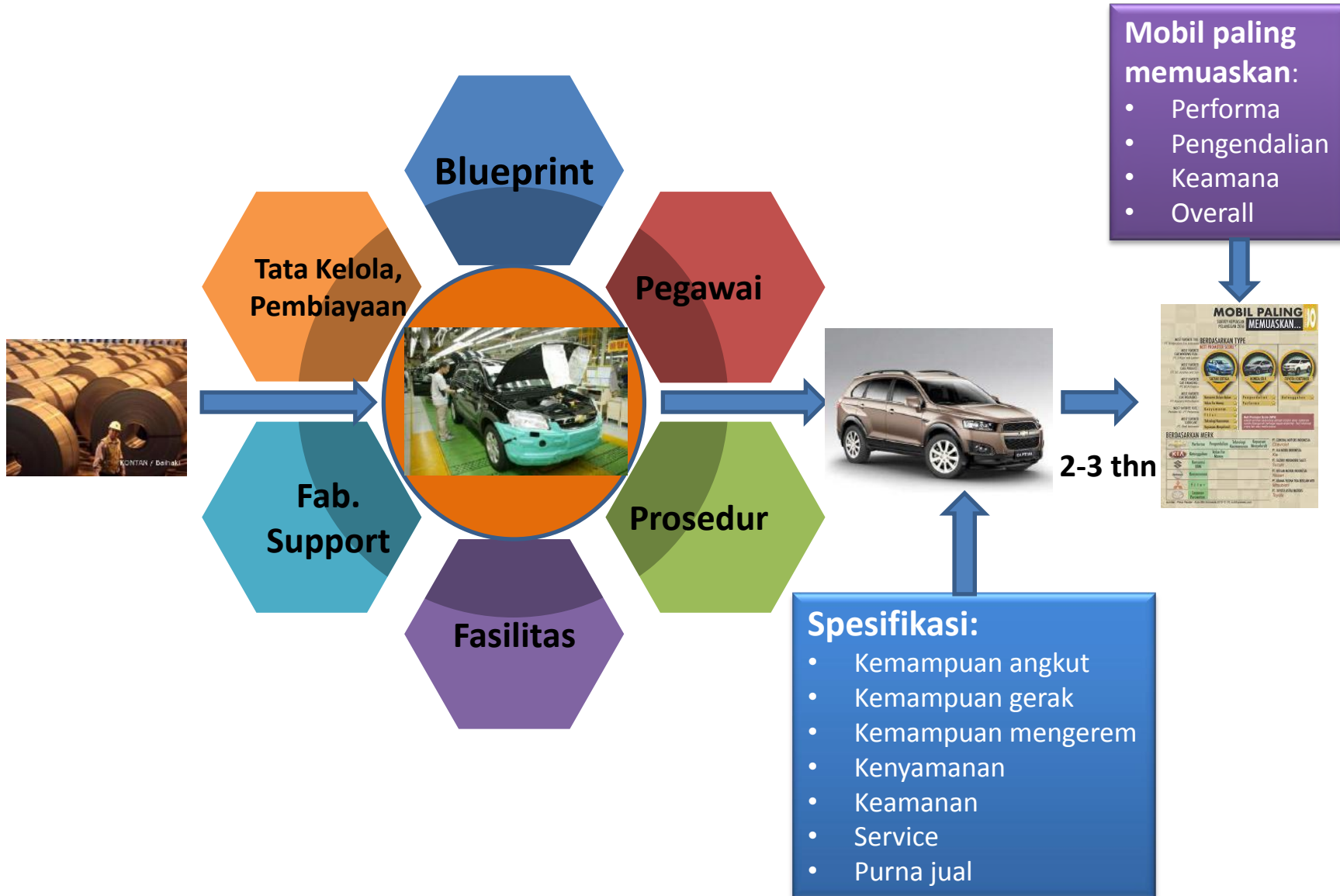
Prodi S1
Prodi S2

Prodi S2
Prodi S3

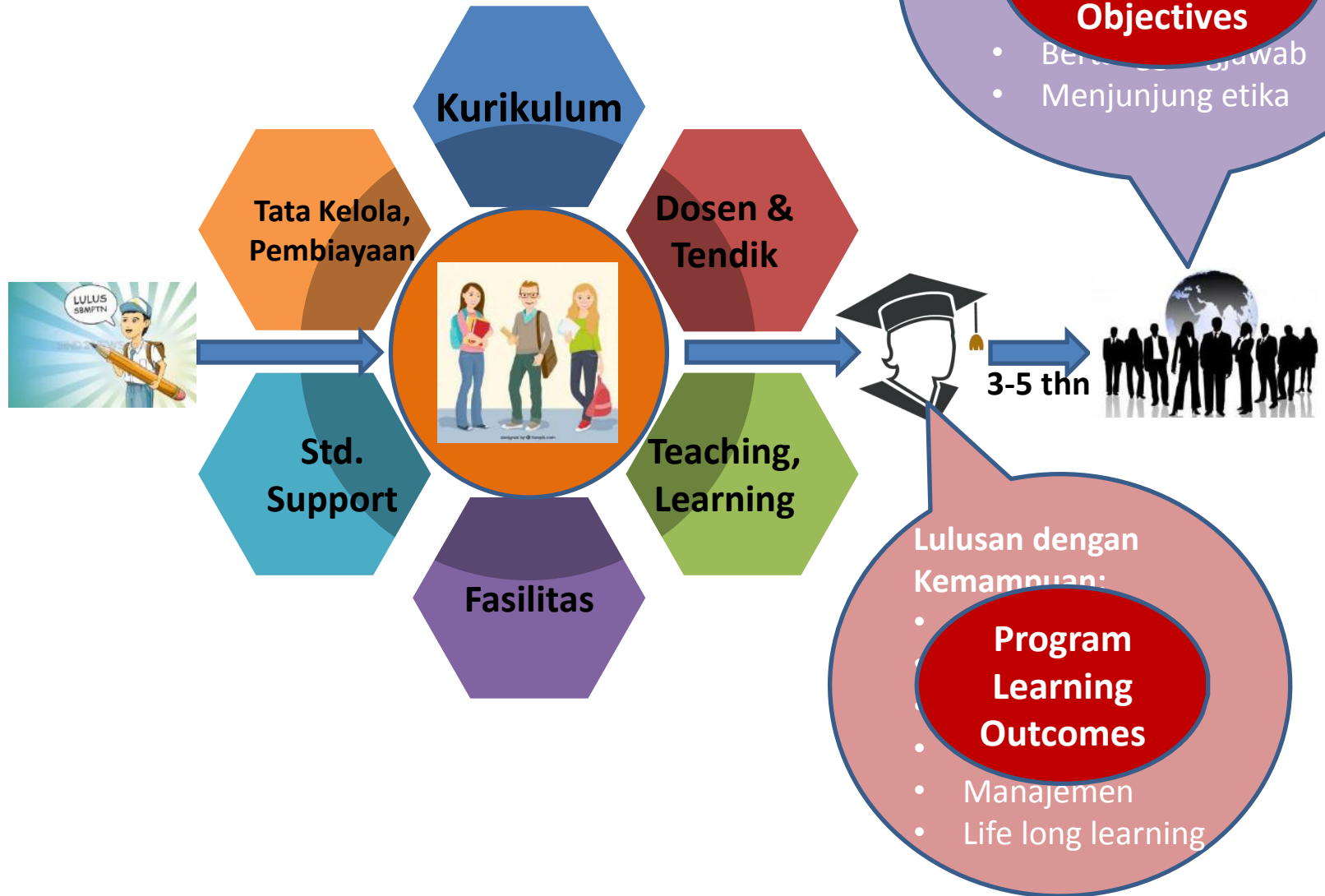
Prodi S1



Perakitan Mobil



Program Studi



Definisi (1)

Program Educational Objectives	Program Learning Outcomes	Graduate Profile	Qualification
<p>Statements that describe the expected accomplishments of graduates during the first few years after graduation</p>	<p>Statements of what a learner knows, understands and is able to do on completion of a learning process, defined in terms of knowledge, skills and competences.</p>	<p>Descriptions of attributes (knowledge, skills and attitudes) of graduates that will develop through their study to equip them for their future education or employment.</p>	<p>Formal outcome of an assessment and validation process (through package of standards or units) judged to be worthy of formal recognition in a certificate.</p>

Definisi (2)

Knowledge

Outcome of the assimilation of information through learning (theoretical and/or factual knowledge)

Skill

Ability to apply knowledge to complete tasks and solve problems (cognitive skills such as logical, intuitive and creative thinking and practical skills such as manual dexterity and the use of methods, materials, tools and instruments).

Competence

Proven ability to use knowledge, skills and personal, social and / or methodological abilities, in work or study situations and in professional and / or personal development

Definisi (3)

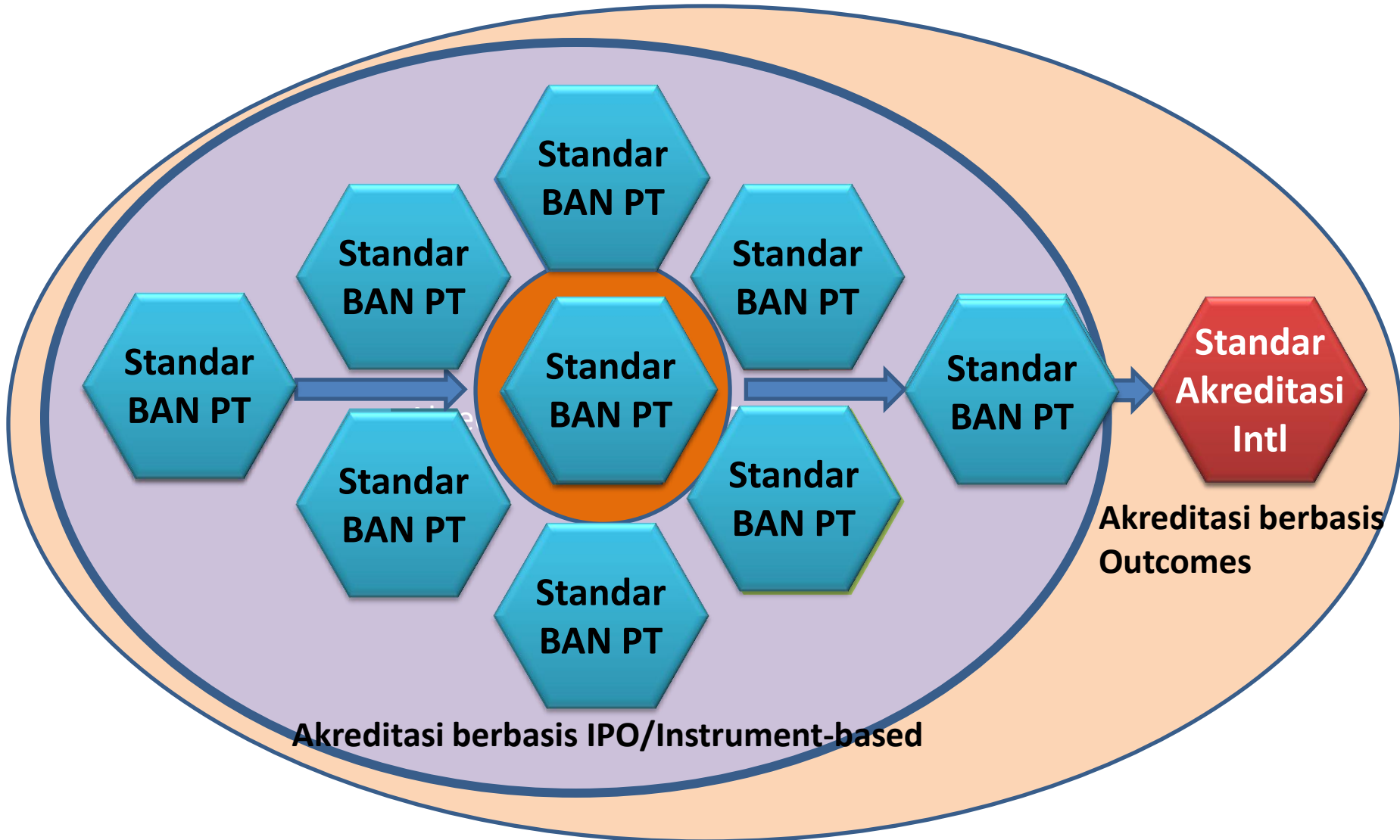
Qualification Framework

An instrument for the development and classification of qualifications according to a set of criteria for levels of learning achieved. This set of criteria may be implicit in the qualifications descriptors themselves or made explicit in the form of a set of level descriptors

National Qualification Framework (KKNI)

Kerangka penjenjangan kualifikasi kompetensi yang dapat menyandingkan, menyetarakan, dan mengintegrasikan antara bidang pendidikan dan bidang pelatihan kerja serta pengalaman kerja dalam rangka pemberian pengakuan kompetensi kerja sesuai dengan struktur pekerjaan di berbagai sektor.

Program Studi dan Akreditasi



ABET-ASIIN-AACSB-AUN QA-BAN PT

ABET	ASIIN	AACSB	AUN-QA	BAN-PT
Accreditation	Accreditation	Accreditation	Assessment	Accreditation
International	International	International	Regional	National
OBE	OBE	OBE	OBE	IPO- Outcomes
SSR - visit	SAR - visit	SER - visit	SAR - visit	SAR - visit
Professional	Professional	Professional	Semi-Gov	Government
Program	Program	Program	Program & Institutional	Program & Institutional
Eng, Comp, Tech	Engineering Informatics, Sciences	Business, Accounting	All Programs	All Programs

What is OBE?

01

OBE is an educational system that focuses on what students can do successfully at the end of their learning experiences.

02

OBE involves the restructuring of curriculum, teaching and learning, assessment and reporting practices in education

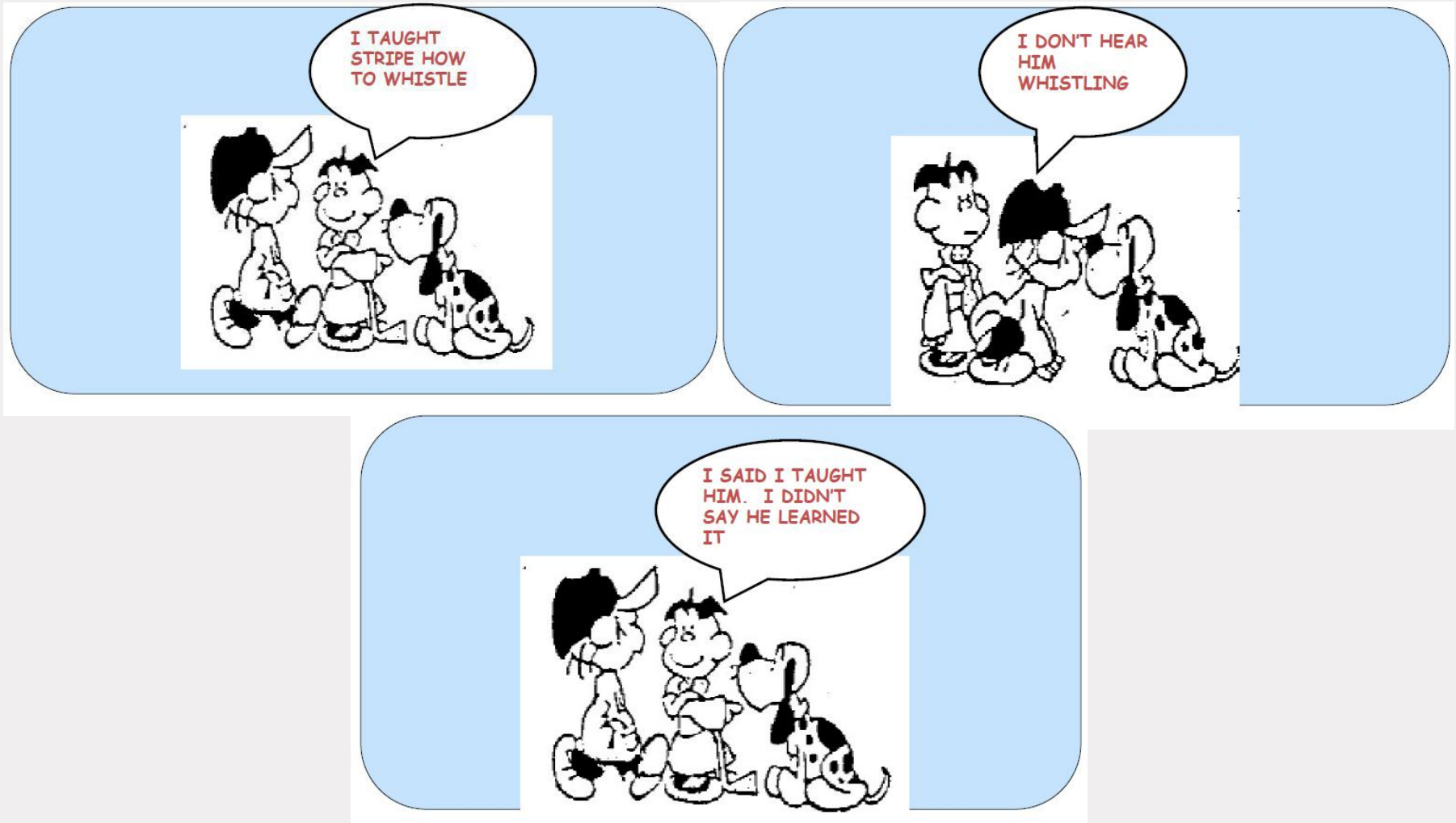
03

Both structures and curricula are designed to achieve those capabilities or qualities.

04

It requires that the students demonstrate that they have learnt the required skills and content.

OBE: It's Not What We Teach, It's What You Learn



OBE - Focus

01

What do we want the students to have or be able to do?

02

How can we best help students achieve it?

03

How will we know whether they students have achieved it?

04

How do we close the loop for further improvement (Continuous Quality Improvement (CQI))?

OBE Basic Principles



Clarity of focus

focus on helping students to develop and acquire the knowledge, skills and competences that will enable them to achieve the learning outcomes.



Backward design

the curriculum is designed based on a clear definition of the program learning outcomes that students are to achieve by the end of the program.



Learning engagement

Students are encouraged to engage deeply in what they are learning.



Expanded opportunities

Students are provided with expanded opportunities to achieve high performances

OBE Process – Constructive Alignment



Constructive

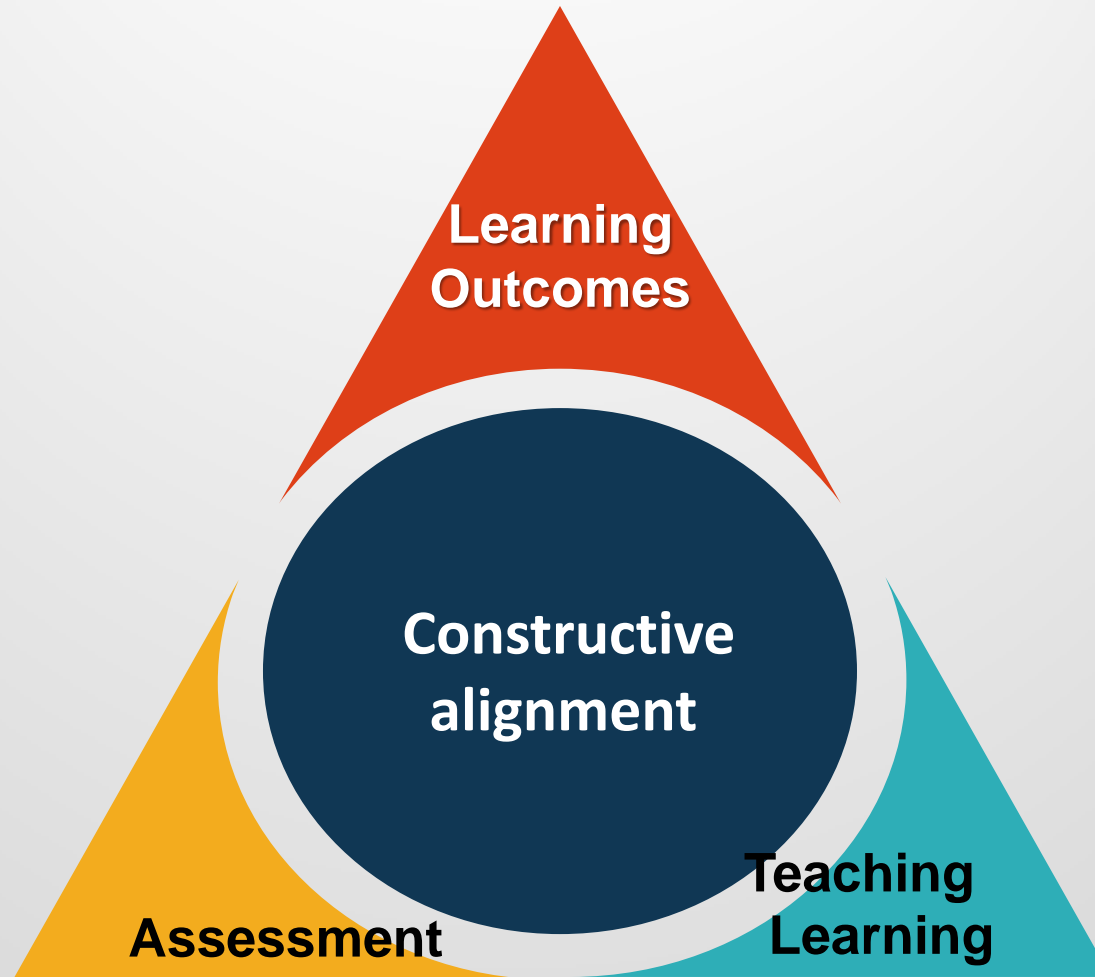
the learner does to construct meaning through relevant learning activities



Alignment

the teaching/learning methods/activities and the assessment tasks are aligned to the learning outcomes

Constructive alignment



OBE - Benefit

01

More directed & coherent curriculum.

02

Graduates will be more “relevant” to industry and other stakeholders (more well rounded graduates).

03

Continuous Quality Improvement (CQI) is in place

Comparison between Input-based and Outcomes-based Paradigm (1)

Dimension	The Instruction (Inputs-Based) Paradigm	The Learning (Outcomes-Based) Paradigm
Mission and Purposes	<ul style="list-style-type: none"> • Provide/deliver instruction 	<ul style="list-style-type: none"> • Produce learning
	<ul style="list-style-type: none"> • Transfer knowledge from faculty 	<ul style="list-style-type: none"> • Elicit student discovery towards construction of knowledge
	<ul style="list-style-type: none"> • Offer courses and programs 	<ul style="list-style-type: none"> • Create powerful learning environments
	<ul style="list-style-type: none"> • Improve the quality of instruction 	<ul style="list-style-type: none"> • Improve the quality of learning
	<ul style="list-style-type: none"> • Achieve access for diverse students 	<ul style="list-style-type: none"> • Achieve success for diverse students
Criteria for Success: Learning varies with ...	<ul style="list-style-type: none"> • Inputs/Resources 	<ul style="list-style-type: none"> • Learning and student success outcomes
	<ul style="list-style-type: none"> • Quality of entering students 	<ul style="list-style-type: none"> • Quality of exiting students
	<ul style="list-style-type: none"> • Curriculum development, expansion 	<ul style="list-style-type: none"> • Learning technologies development
	<ul style="list-style-type: none"> • Quantity and quality of resources 	<ul style="list-style-type: none"> • Quantity and quality of outcomes
	<ul style="list-style-type: none"> • Enrolment and revenue growth 	<ul style="list-style-type: none"> • Aggregate learning growth, Efficiency
	<ul style="list-style-type: none"> • Quality of faculty, instruction 	<ul style="list-style-type: none"> • Quality of learning

⁶³ Barr, R. and Tagg, J. (1995). "Teaching to Learning: a New Paradigm for Undergraduate Education," *Change*, November/December, pp. 13 – 25.

Comparison between Input-based and Outcomes-based Paradigm (2)

Teaching/Learning Structures	<ul style="list-style-type: none"> • Atomistic, parts prior to whole 	<ul style="list-style-type: none"> • Holistic, whole prior to parts
	<ul style="list-style-type: none"> • Time held constant, learning varies 	<ul style="list-style-type: none"> • Learning held constant, time varies
	<ul style="list-style-type: none"> • 50-minute lecture, 3-unit course 	<ul style="list-style-type: none"> • Learning environments
	<ul style="list-style-type: none"> • Classes start, end at same time 	<ul style="list-style-type: none"> • Environment ready when student is
	<ul style="list-style-type: none"> • One teacher, one classroom 	<ul style="list-style-type: none"> • Whatever learning experience works
	<ul style="list-style-type: none"> • Independent discipline/ departments 	<ul style="list-style-type: none"> • Cross disciplines/department
	<ul style="list-style-type: none"> • Covering material/content 	<ul style="list-style-type: none"> • Specified learning results
	<ul style="list-style-type: none"> • End of course assessment 	<ul style="list-style-type: none"> • Pre-during and post-assessment
	<ul style="list-style-type: none"> • Grading within classes by instructors 	<ul style="list-style-type: none"> • External evaluation of learning
	<ul style="list-style-type: none"> • Private assessment 	<ul style="list-style-type: none"> • Public assessment
	<ul style="list-style-type: none"> • Degree equals accumulated credit hours 	<ul style="list-style-type: none"> • Degree equals demonstrated knowledge and skills

Comparison between Input-based and Outcomes-based Paradigm (3)

Dimension	The Instruction (Inputs-Based) Paradigm	The Learning (Outcomes-Based) Paradigm
Learning Theory	<ul style="list-style-type: none"> Knowledge "exists out there" 	<ul style="list-style-type: none"> Knowledge exists in each person's mind and is shaped by experience
	<ul style="list-style-type: none"> Knowledge comes in chunks and bits; delivered by instructors and gotten by students 	<ul style="list-style-type: none"> Knowledge is constructed, created
	<ul style="list-style-type: none"> Learning is cumulative and linear 	<ul style="list-style-type: none"> Learning is a nesting and interacting of frameworks
	<ul style="list-style-type: none"> Fits the storehouse of knowledge metaphor 	<ul style="list-style-type: none"> Fits learning how to ride a bicycle metaphor
	<ul style="list-style-type: none"> Learning is teacher-centered and controlled 	<ul style="list-style-type: none"> Learning is learner-centered and learner-controlled
	<ul style="list-style-type: none"> "Live" teacher, "live" student required 	<ul style="list-style-type: none"> "Active" learner required but not "live" students required
	<ul style="list-style-type: none"> The classroom and learning are competitive and individualistic 	<ul style="list-style-type: none"> Learning environments and learning are cooperative, collaborative and supportive
	<ul style="list-style-type: none"> Talent and ability are rare 	<ul style="list-style-type: none"> Talent and ability are abundant
Productivity/ Funding	<ul style="list-style-type: none"> Definition of productivity: cost per hour of instruction per student 	<ul style="list-style-type: none"> Definition of productivity: cost of unit of learning per student
	<ul style="list-style-type: none"> Funding for hours of instruction 	<ul style="list-style-type: none"> Funding for learning outcomes

Comparison between Input-based and Outcomes-based Paradigm (4)

Nature of Roles	<ul style="list-style-type: none"> Faculty are primarily lecturers 	<ul style="list-style-type: none"> Faculty are primarily designers of learning methods and environments
	<ul style="list-style-type: none"> Faculty and students act independently and in isolation 	<ul style="list-style-type: none"> Faculty and students work in teams with each other and with other staff
	<ul style="list-style-type: none"> Teachers classify and sort students 	<ul style="list-style-type: none"> Teachers develop every student's competencies and talents
	<ul style="list-style-type: none"> Staff serve, support faculty and the process of instruction 	<ul style="list-style-type: none"> All staff are educators who produce student learning and success
	<ul style="list-style-type: none"> Any expert can teach 	<ul style="list-style-type: none"> Empowering learning is challenging and complex
	<ul style="list-style-type: none"> Line governance/independent actors 	<ul style="list-style-type: none"> Shared governance, teamwork independent actors

Defining Learning Outcomes (LO)

01

Learning outcomes must be simply and clearly described

02

Learning outcomes must reflect the level of capability as well as the range.

03

Learning outcomes must be capable of being validly assessed.

Types of Learning Outcomes

01

Disciplinary knowledge and skills

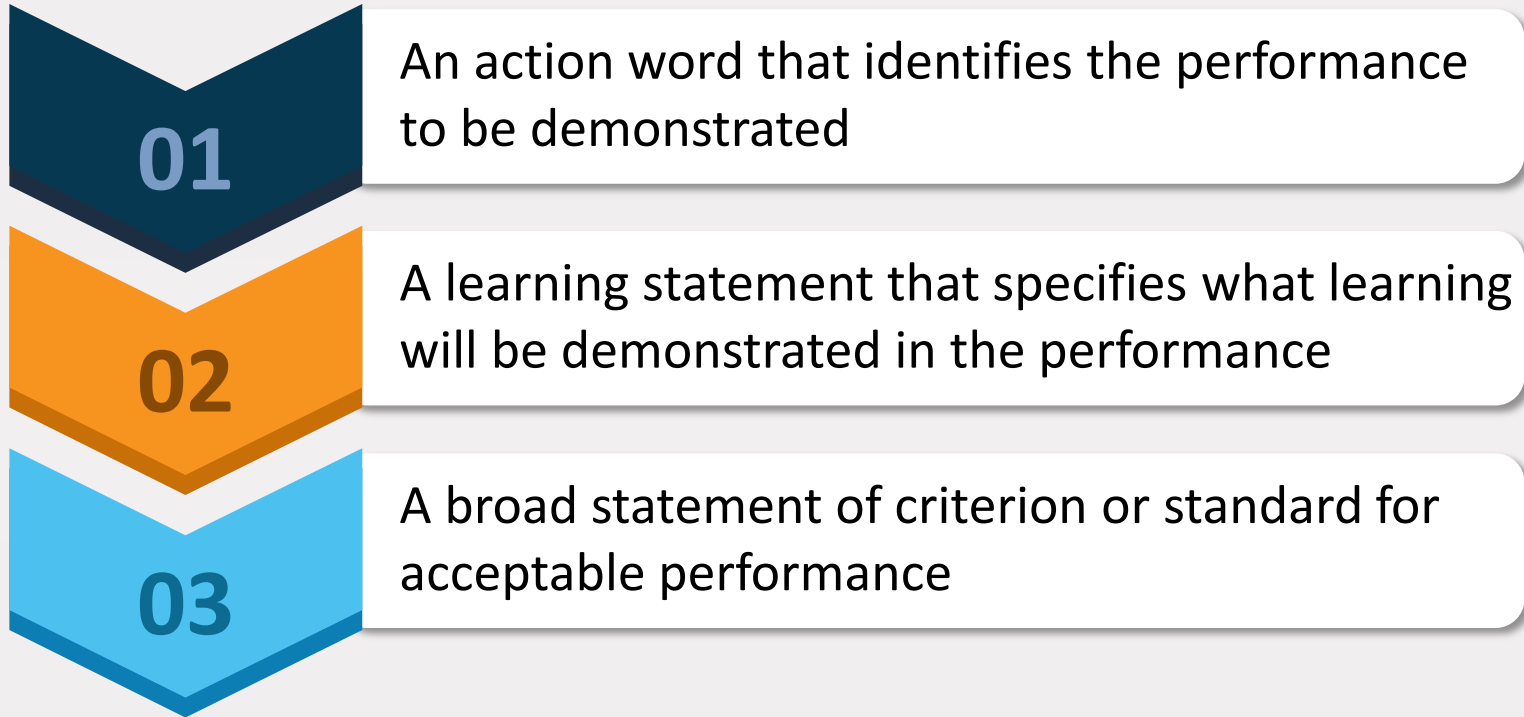
02

Generic skills

03

Attitudes and values

Structure of a Learning Outcome Statement



Characteristics of good learning outcome

01

Specify the level, criterion or standard for the knowledge, skill and ability that the student must demonstrate

02

Include conditions under which they should be able to demonstrate their knowledge, skill, abilities.

03

Contain active verbs

04

It can be measured by more than one assessment (ideally)

05

Be written such that you do not join elements in one outcome statement that can not be assessed by a single method

Action Verbs: Cognitive (Bloom Taxonomy)

REMEMBER	UNDERSTAND	APPLY	ANALYZE	EVALUATE	CREATE
Retrieve knowledge from long-term memory	Construct meaning from instructional messages, including oral, written, graphic communication	Carry out/use procedure in a given situation	Break material into constituent parts; determine how parts relate to one another and to an overall structure or purpose	Make judgments based on criteria and standards	Put elements together to form coherent or functional whole; reorganize elements into a new pattern or structure
<u>Sample Verbs:</u>	<u>Sample Verbs:</u>	<u>Sample Verbs:</u>	<u>Sample Verbs:</u>	<u>Sample Verbs:</u>	<u>Sample Verbs:</u>
<ul style="list-style-type: none"> Define Describe Label List Match Recall Recognize State 	<ul style="list-style-type: none"> Classify Compare Discuss Exemplify Explain Identify Illustrate Infer Interpret Predict Report Review Summarize Translate 	<ul style="list-style-type: none"> Apply Change Choose Demonstrate Execute Implement Prepare Solve Use 	<ul style="list-style-type: none"> Analyze Attribute Debate Differentiate Distinguish Examine Organize Research 	<ul style="list-style-type: none"> Appraise Check Critique Judge 	<ul style="list-style-type: none"> Compose Construct Create Design Develop Formulate Generate Invent Make Organize Plan Produce Propose

Action Verbs: Affective

RECEIVE	RESPOND	VALUE	ORGANIZE	INTERNALIZE (CHARACTERIZE)
Selectively responds to stimuli	Responds to stimuli	Attaches value or worth to something	Conceptualizes value and resolves conflict between this value and other values	Integrate the value into a value system that controls behavior
<u>Sample Verbs:</u>	<u>Sample Verbs:</u>	<u>Sample Verbs:</u>	<u>Sample Verbs:</u>	<u>Sample Verbs:</u>
<ul style="list-style-type: none"> • Acknowledge • Choose • Demonstrate awareness • Demonstrate tolerance • Locate • Select 	<ul style="list-style-type: none"> • Answer • Communicate • Comply • Contribute • Cooperate • Discuss • Participate willingly • Volunteer 	<ul style="list-style-type: none"> • Adopt • Assume responsibility • Behave according to • Choose • Commit • Express • Initiate • Justify • Propose • Show concern • Use resources to 	<ul style="list-style-type: none"> • Adapt • Adjust • Arrange • Balance • Classify • Conceptualize • Formulate • Organize • Prepare • Rank • Theorize 	<ul style="list-style-type: none"> • Act upon • Advocate • Defend • Exemplify • Influence • Perform • Practice • Serve • Support

Action Verbs: Psychomotor

PERCEIVE	SET	RESPOND AS GUIDED	ACT	RESPOND OVERTLY	ADAPT	ORGANIZE
Senses cues that guide motor activity	Is mentally, emotionally, physically ready to act	Imitates and practices skills	Performs acts with increasing efficiency, confidence, and proficiency	Performs acts automatically	Adapts skill sets to solve a problem	Creates new patterns for specific situations
<u>Sample Verbs:</u>	<u>Sample Verbs:</u>	<u>Sample Verbs:</u>	<u>Sample Verbs:</u>	<u>Sample Verbs:</u>	<u>Sample Verbs:</u>	<u>Sample Verbs:</u>
<ul style="list-style-type: none"> • Detect • Differentiate • Distinguish • Identify • Observe • Recognize • Relate • Describe the perception • Describe the sensation: <ul style="list-style-type: none"> ○ Hear ○ Listen ○ See ○ Smell ○ Taste 	<ul style="list-style-type: none"> • Assume a stance • Display • Perform motor skills • Position the body • Proceed • Show 	<ul style="list-style-type: none"> • Copy • Duplicate • Imitate • Operate under supervision • Practice • Repeat • Reproduce 	<ul style="list-style-type: none"> • Assemble • Calibrate • Complete with confidence • Conduct • Construct • Demonstrate • Dismantle • Fix • Execute • Improve efficiency • Make • Manipulate • Measure • Mend • Organize • Produce 	<ul style="list-style-type: none"> • Act habitually • Control • Direct • Guide • Manage • Perform <p><i>Note: Same verbs as "ACT", but with modifiers describing the performance, e.g., faster, better, more accurate, outstanding, etc.</i></p>	<ul style="list-style-type: none"> • Adapt • Alter • Change • Rearrange • Reorganize • Revises 	<ul style="list-style-type: none"> • Arrange • Build • Compose • Construct • Create • Design • Originate • Make

Example of PLO

Students/graduate of the program will be able to [action verb] + [demonstrated learning] + [criterion]

- Example 1: A Physics graduate will be able to **evaluate** **research designs, methods, and conclusions** **effectively**.
- Example 2: A Physics graduates will be able to **assess** **their own strengths, weaknesses, and omissions** in the **light of their self-assessments**.
- Example 3: A Physics graduates will be able to **communicate** both formally and informally through **speaking, writing, and listening, effectively**

Assessment Type

Remembering

- Fill-in the Blank
- Multiple choice
- Labeling Diagram
- Reciting

Understanding

- Oral/written exam questions
- Concept maps
- Summarizing
- Comparing and/or contrasting
- Classify or categorizing
- Paraphrasing
- Explaining and or elaborating

Applying

- Problem sets
- Performance
- Labs
- Prototype presentation
- Simulation

Assessment Type

Analyzing

- Lectures
- Discussion
- Case studies
- Writing
- Labs
- Group project

Evaluating

- Journals
- Diaries
- Critiques
- Problem sets
- Product review
- Case studies
- Research project report, presentation, self assessment, peer assessment

Creating

- Musical composition
- Performances
- Essays
- Business Plans
- Website designs
- Prototype presentation
- Set designs

Teaching and Learning

Remembering

- Lectures
- Discussion

Understanding

- Lectures
- Discussion

Applying

- Lectures
- Discussion
- Case Studies
- Writing
- Labs
- Group projects

Teaching and Learning

Analizing

- Lectures
- Discussions
- Case Studies
- Writing
- Labs
- Group projects

Evaluating

- Lectures
- Discussion
- Case studies
- Writing
- Labs
- Group projects

Creating

- Lectures
- Discussion
- Case studies
- Writing
- Labs
- Group projects

Terima kasih