

# Introduction to Outcome-Based Education (OBE)

UMA  
30<sup>TH</sup> NOV 2020

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# Content

- ← Introduction to Effective Teaching & Learning
- ← Outcome Based Education (OBE)
- ← Discussions on Implementations
- ← Problems / Issues
- ← Sample Planning for OBE Implementation
  - Planning
  - Implementation
  - Evaluation
  - Continual Quality Improvement (CQI)

# Effective Approach to Teaching & Learning

## ▶ Traditional Teaching & Learning Approach

- ▶ Teaching is a one-way communication
- ▶ Curriculum / Syllabus / Knowledge / Material delivery totally dependent on Teacher / Lecturer
- ▶ Pace at which the materials are delivered depend largely on a fixed schedule
- ▶ Assessments largely monotonous
- ▶ Assessments usually used to differentiate the students' knowledge

# Effective Approach to Teaching & Learning

- ▶ Teaching is a two-way communication
- ▶ Curriculum / Syllabus / Knowledge / Material delivery dependent on the Students' Understanding / Capability
- ▶ Pace at which the materials are delivered depend on the Students
- ▶ Assessments are designed based on the Nature of the Outcome
- ▶ Assessments are designed to Enable the Students to Demonstrate the Learning Outcomes
- ▶ Assessments are designed to Evaluate Outcomes Attainment

# TEACHER-CENTERED vs STUDENT-CENTERED LEARNING

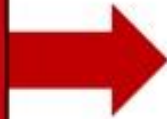
| ELEMENTS              | TEACHER-CENTERED              | STUDENT-CENTERED                 |
|-----------------------|-------------------------------|----------------------------------|
| KNOWLEDGE             | Transmitted from Instruction  | Constructed by Students          |
| STUDENT PARTICIPATION | Passive                       | Active                           |
| ROLE OF LECTURER      | Leader/Authority              | Facilitator/Partner in Learning  |
| ROLE OF ASSESSMENT    | Few Tests, Mainly for Grading | Many Tests, for Ongoing Feedback |
| EMPHASIS              | Learning Correct Answers      | Developing Deeper Understanding  |
| ASSESSMENT METHOD     | One-Dimensional Testing       | Multidimensional Testing         |
| ACADEMIC CULTURE      | Competitive, Individualistic  | Collaborative, Supportive        |

# Outcome-Based Education

## Education Transformation



TEACHING to answer exam questions and assignments



Teaching to enable TO LEARN to gain knowledge and skills

What Is Outcome Based Education?

**IT'S NOT WHAT WE HAVE TO TEACH,  
IT'S WHAT STUDENTS LEARN  
AND  
ABLE TO DEMONSTRATE**

# Outcome-Based Education

- OBE is an educational strategy and process.
- Directed/focussed at achieving certain specified **outcomes** in terms of individual student learning.
- **Outcomes** - key things students should **understand** and **be able to do** or the **qualities** they should develop.
- Both structures and curricula are designed to achieve those capabilities or qualities.
- Educational structures and **curriculum are regarded as means not ends**. If they do not do the job they are rethought (Continual Quality Improvement (CQI)).
- Very much depends on **EVIDENCE. DOCUMENTATIONS ARE IMPORTANT!**



# Outcome-Based Education



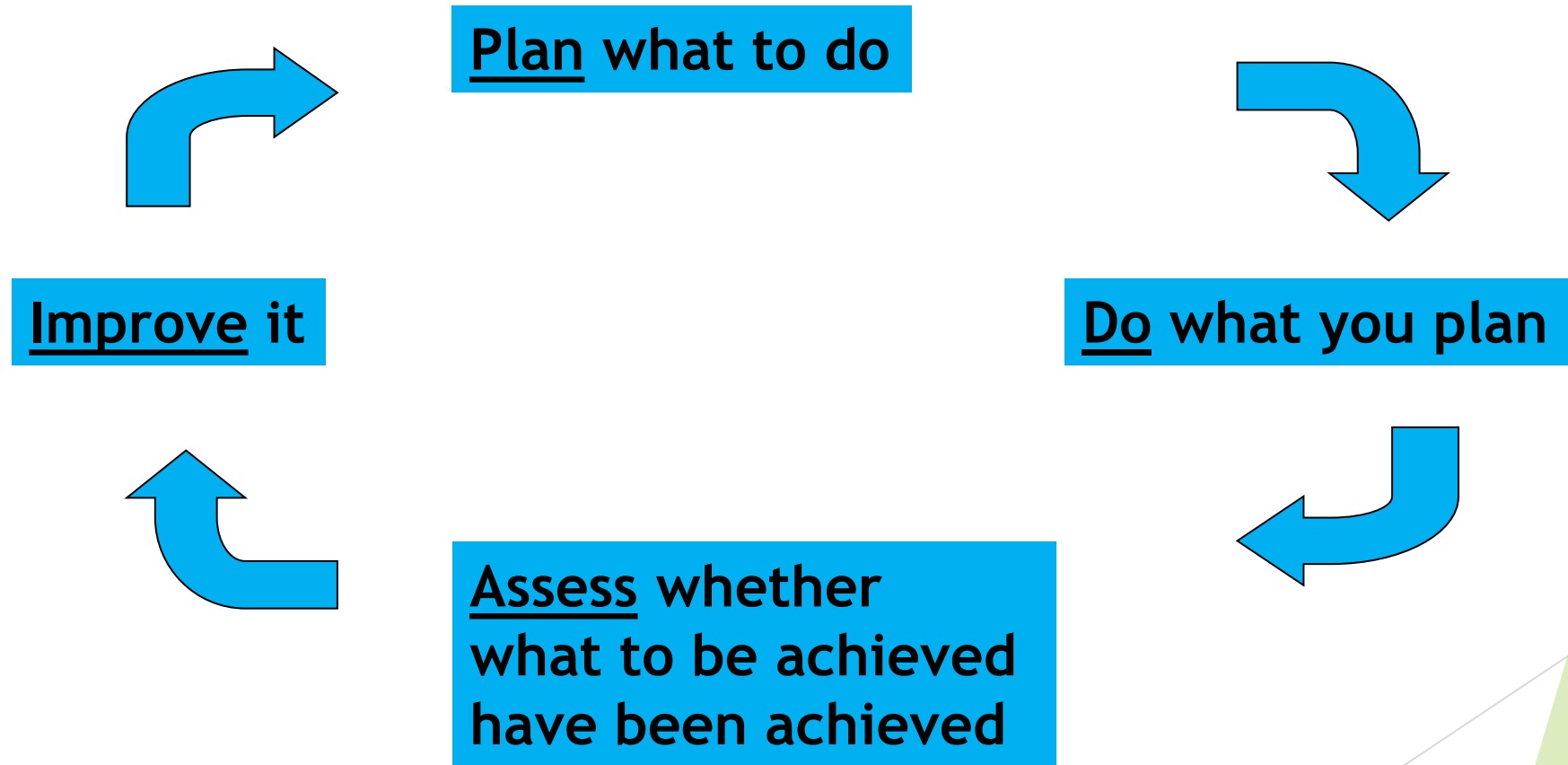
  
**Planning**

**Execution**  


**Evaluation**

  
**CQI**

# Outcome-Based Education

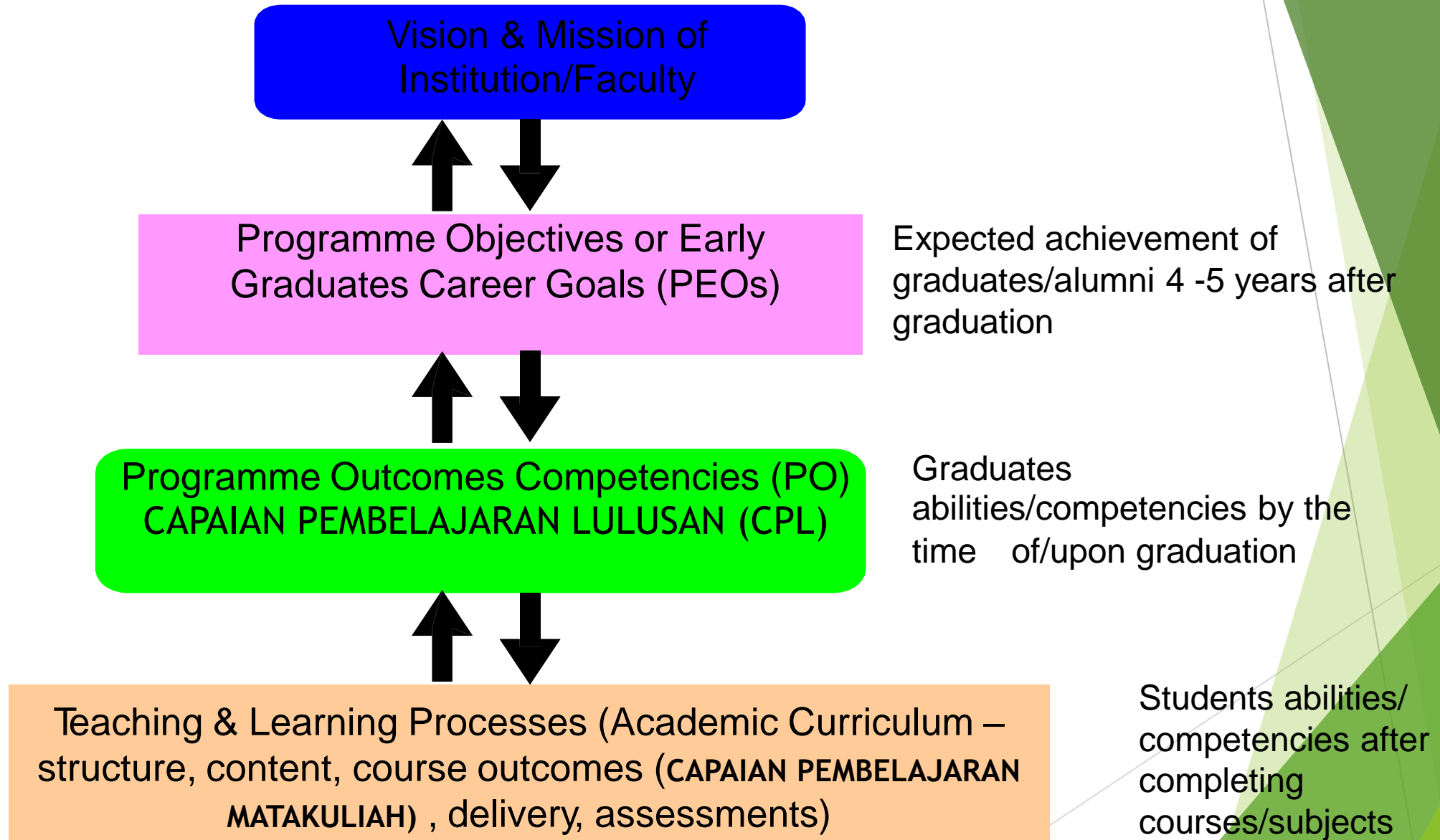


# Outcome-Based Education

## OBE addresses the following key questions:

- State **WHAT** do we want the students to have or be able to do? - planning
- **HOW** can we best enable students achieve it? - delivery
- **EVALUATE** whether the students have achieved / able to demonstrate it? - assessment
- **HOW / WHAT** should be done to improve (if needed) to enable us to close the loop (Continual Quality Improvement (CQI))

# Outcomes Attainment Expectation



**Institutional  
Mission Statement**

**Stakeholders Interest**

**Programme Objectives**

**Programme Outcomes  
(Knowledge, skills, attitudes of graduates)**

**Outcome-Related Course Learning Objectives  
(Ability to: explain, calculate, derive, design)**

**Assessment of Attainment Level**

**Continual Improvement**



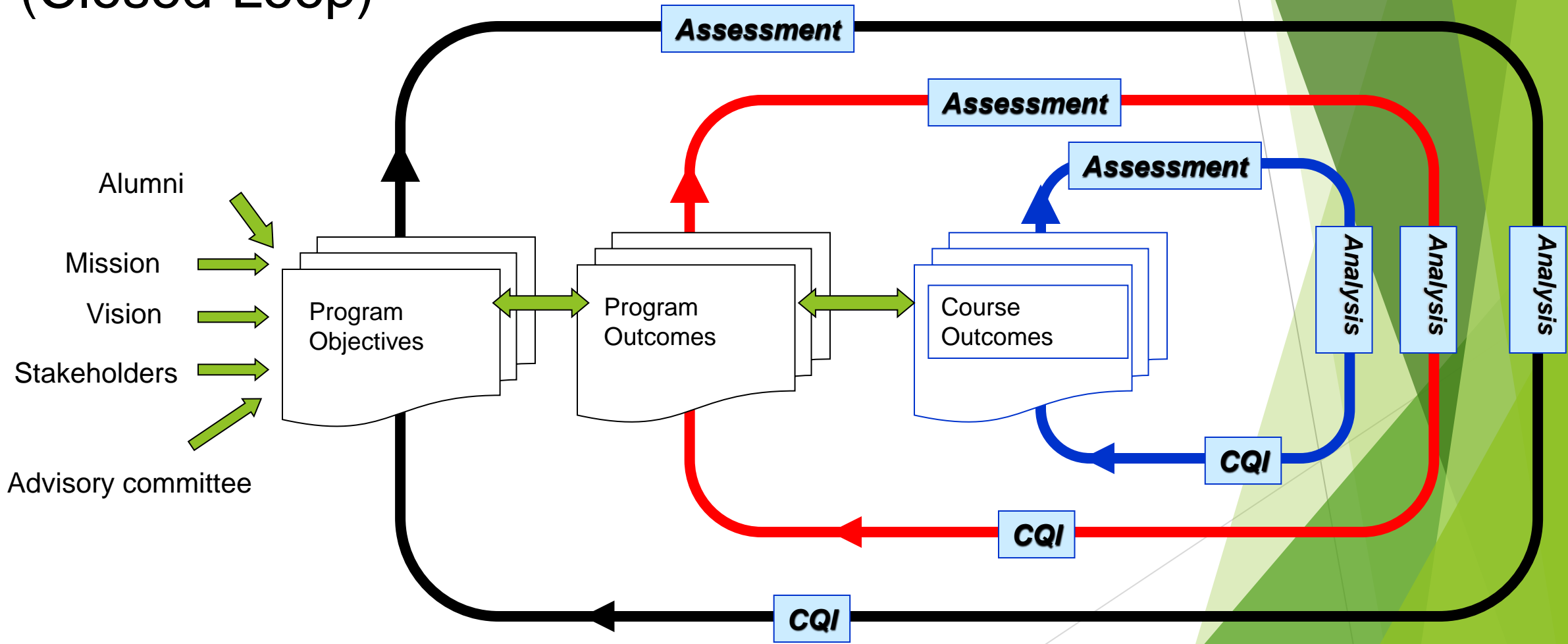
# Roles of lecturers

- ▶ Review PEOs, POs, course structures and syllabi.
- ▶ Teach the relevant engineering, mathematics, and other relevant subjects.
- ▶ Conduct relevant tutorials and laboratory practical sessions.
- ▶ Give appropriate guide on assignments and projects.
- ▶ Conduct empirical measurements of POs.
- ▶ Prepare the required documentation.
- ▶ Assure Stakeholders and public on the standard of graduates.
- ▶ Maintain Quality through Continual Quality Improvement (CQI).

# Roles of students

- ▶ Know the required **Programme Outcomes and Programme Objectives** - make it available from first lecture.
- ▶ Be more **proactive** in the learning process to acquire the Learning Outcomes of subjects.
- ▶ Give **constructive feedbacks** -- Online Teaching Evaluation, Academic Advisory System, dialogue sessions with Dean, buddy system, etc.

# Outcome-Based Education Implementation Model (Closed-Loop)



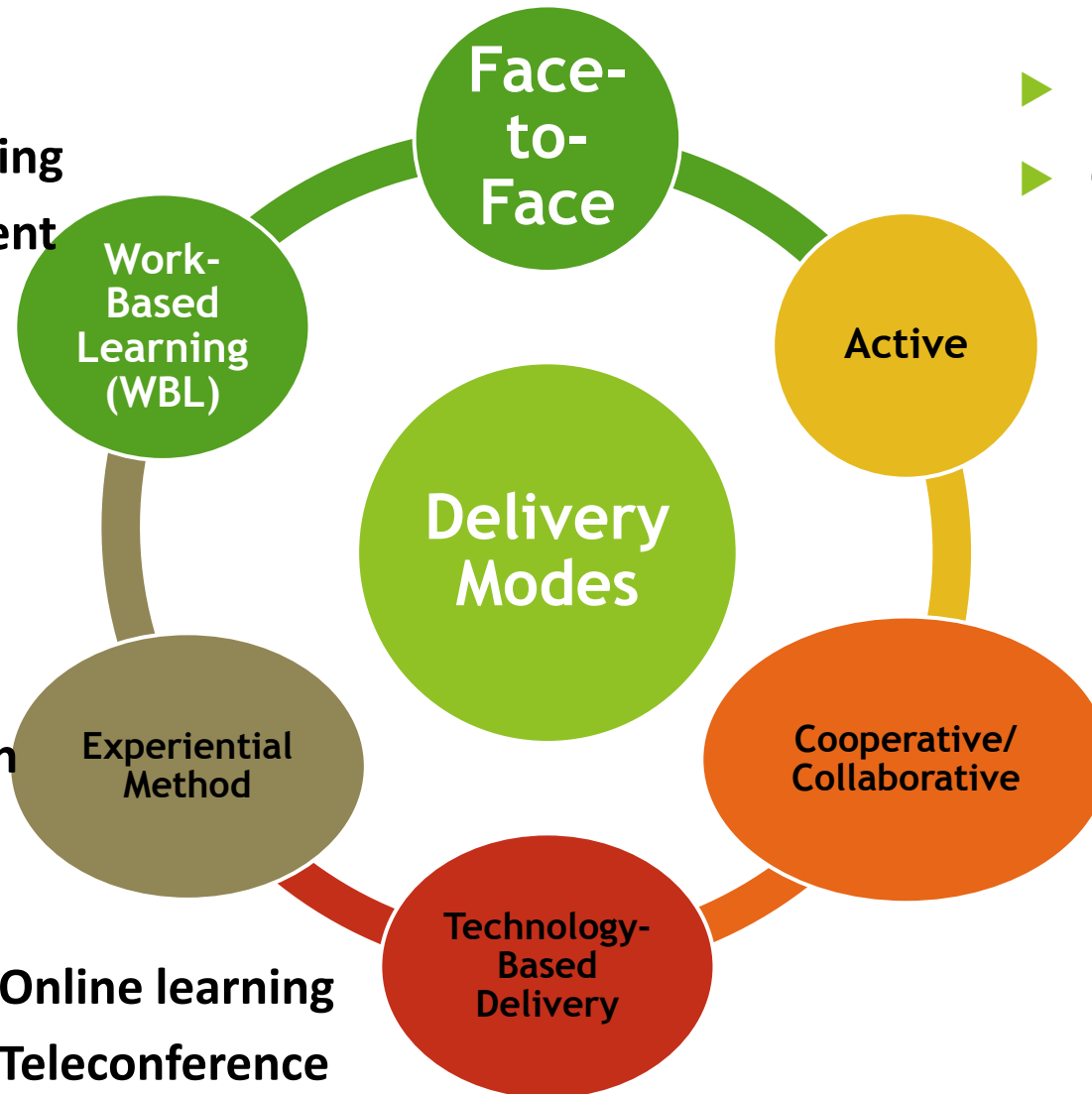


# OBE - Delivery modes

- Practical
- Industrial Training
- Work Attachment
- Field Trip
- Visit

- Lab
- Demonstration
- Workshop

- Online learning
- Teleconference
- Simulation



- Problem-Based
- Case Study
- Project-Based

# OBE- Four Common Teaching approach & Associated Learning Activities

| Situation | Teaching Activities                    | Learning Activities   |
|-----------|--|---|
| LECTURE   | Talk, explain, clarify                 | Listen, take notes, accept, query, discuss with peers, one-minute paper                         |
| TUTORIAL  | Set/answer questions, provide feedback | Pre-read, prepare questions, learn from peers, critique, analyse                                |
| PROJECT   | Set brief, provide ongoing feedback    | Apply, create, self-monitor, communicate, teamwork  |
| PBL       | Set problems provide feedback          | Set learning goals, design, apply, access desired content and skills, integrate, solve problems |

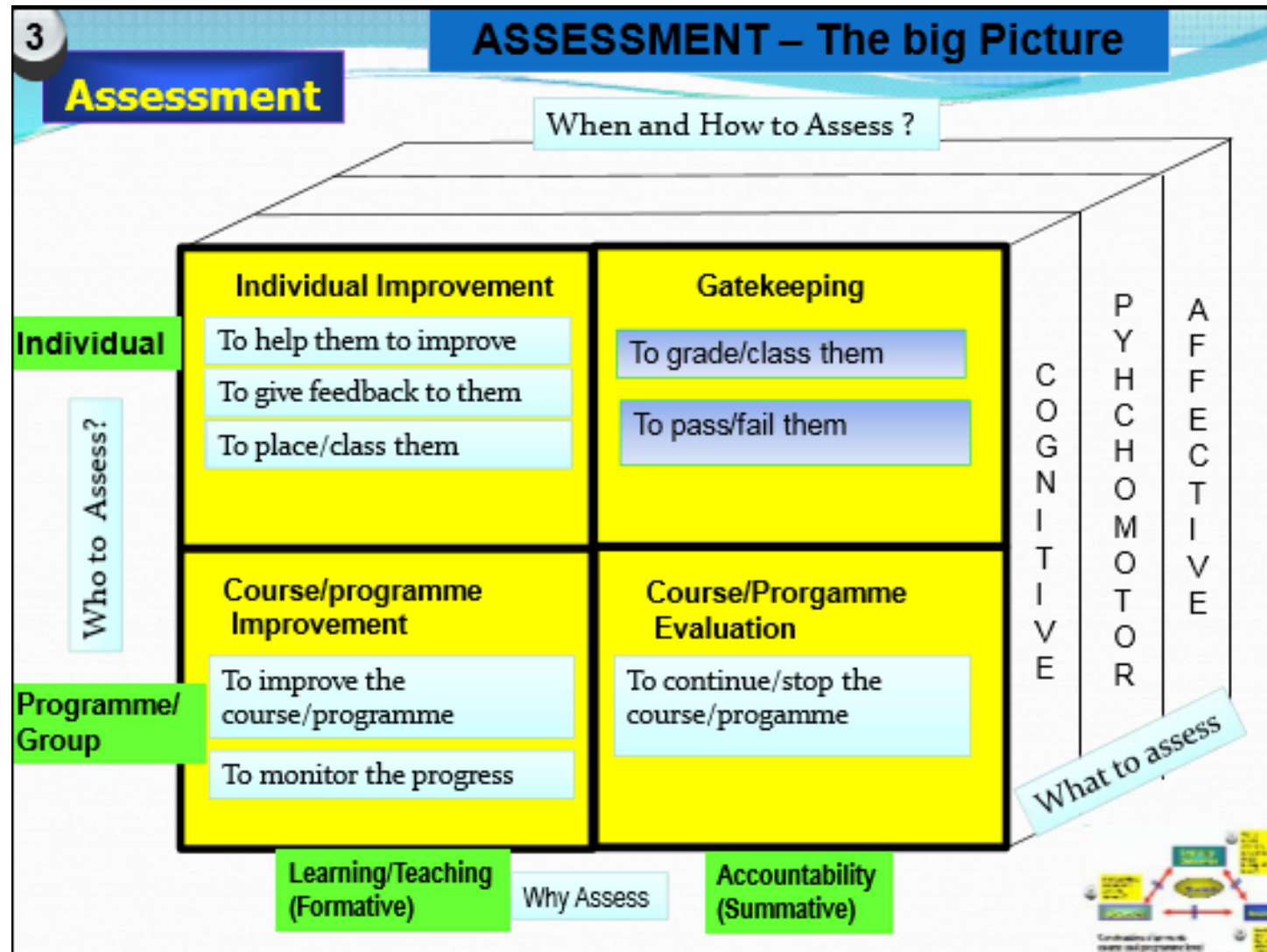
# Effective Course Delivery

- **Responsibility of Lecturers:**
  - carefully planned - NOT ADHOC
  - teaching strategy in accordance with lesson
  - incorporated new delivery strategies to address specific problem of the students.
- **Responsibility of Students:**
  - must be responsible for their own learning.
  - define clearly student Learning Time (SLT)

# How will you know what they have achieved it? - delivery

- ▶ Formative Assessment
- ▶ Summative Assessment
- ▶ Course Assessment
- ▶ Programme Assessment
- ▶ Assessment Tools
- ▶ Direct and Indirect Assessments

# How will you know what they have achieved it? - Assessment



# Example of direct assessments

- ▶ Samples of individual student work
- ▶ Pre-test and post-test evaluations
- ▶ Standardized tests
- ▶ Performance on licensure exams
- ▶ Blind scored essay tests
- ▶ Internal or external juried review of student work
- ▶ Case study/problems
- ▶ Capstone papers, projects or presentations

# Example of direct assessments

- ▶ Capstone papers, projects or presentations
- ▶ Project or course imbedded assessment
- ▶ Documented observation and analysis of student behavior/performance
- ▶ Externally reviewed internship or practicum
- ▶ Collections of work (portfolios) of individual students
- ▶ Activity logs
- ▶ Performances
- ▶ Interviews (including videotaped)

# Examples of indirect assessments

- ▶ Questionnaires and Surveys
  - ▶ Students
  - ▶ Graduating Seniors
  - ▶ Alumni
  - ▶ Employers
- ▶ Syllabus and curriculum analysis
- ▶ Transcript analysis



# OBE - Problems in the house



# OBE - Problems in the house

- ▶ Do you disclose the CO at the beginning of lecture?
- ▶ No monitoring - CW marked at the end of semester
- ▶ No good planning in the delivery
- ▶ Assessment did not help the student achieving CO
- ▶ No feedback
- ▶ Mismatch assessments
- ▶ Ineffective lectures/one way communication

# OBE - Problems in the house

- ▶ Immature assessment
- ▶ suitability of the level of taxonomy of the assessment
- ▶ lesser assessments results “covers up” more significant assessments
- ▶ Only grading correct answer rather than rewarding understanding
- ▶ Moderation to ensure attainment - suppressing the correct CQI

# 7 ways to engage students in lectures

- ▶ Activate student prior knowledge
- ▶ Use questions
- ▶ Encourage active learning
- ▶ Use incomplete handouts
- ▶ Use demonstrations or examples
- ▶ Ensure your teaching is culturally inclusive
- ▶ Enable learning before the lecture

**THANK YOU**

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