

## APPENDIX A

### Outcome Based Education (OBE)

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

- ➔ OBE means clearly focusing and organizing an educational system around what is essential for all students to be able to do successfully at the end of their learning experiences.
- ➔ Starting with a clear picture of what is important for students to be able to do and achieve (Knowledge, Skill and Ability) then organizing the curriculum, instruction, and assessment to make sure this learning ultimately happens.

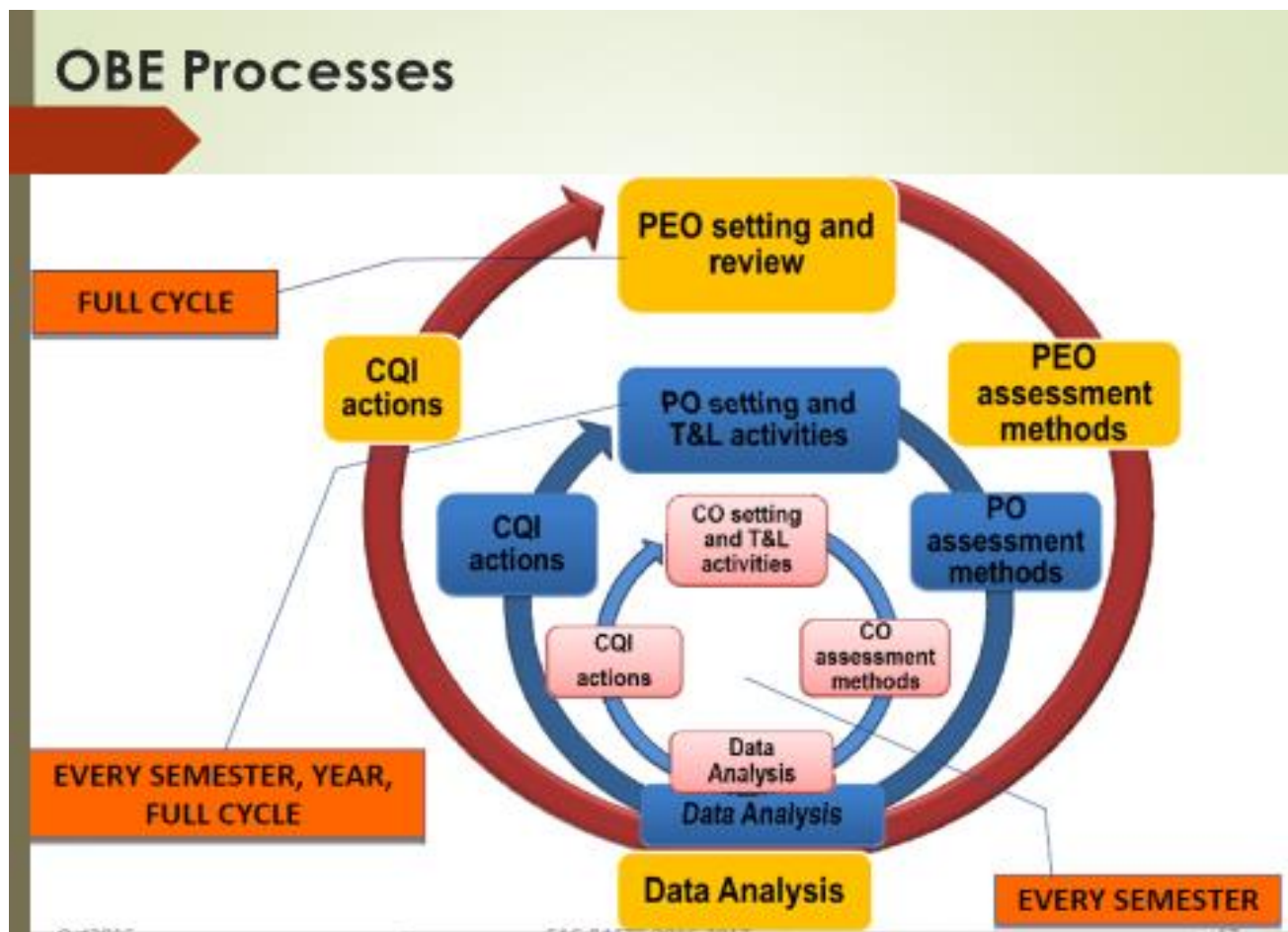


Figure 1: OBE Processes

## APPENDIX B

### Mapping of Outcomes

- CLO/COs address the Knowledge, Skill and Abilities (KSA) to be attained by students upon completion of a course.
- PLO/POs describe what students are expected to know and be able to perform or attain by the time of graduation
- PEOs address the graduates' attainment 5 years after graduation.

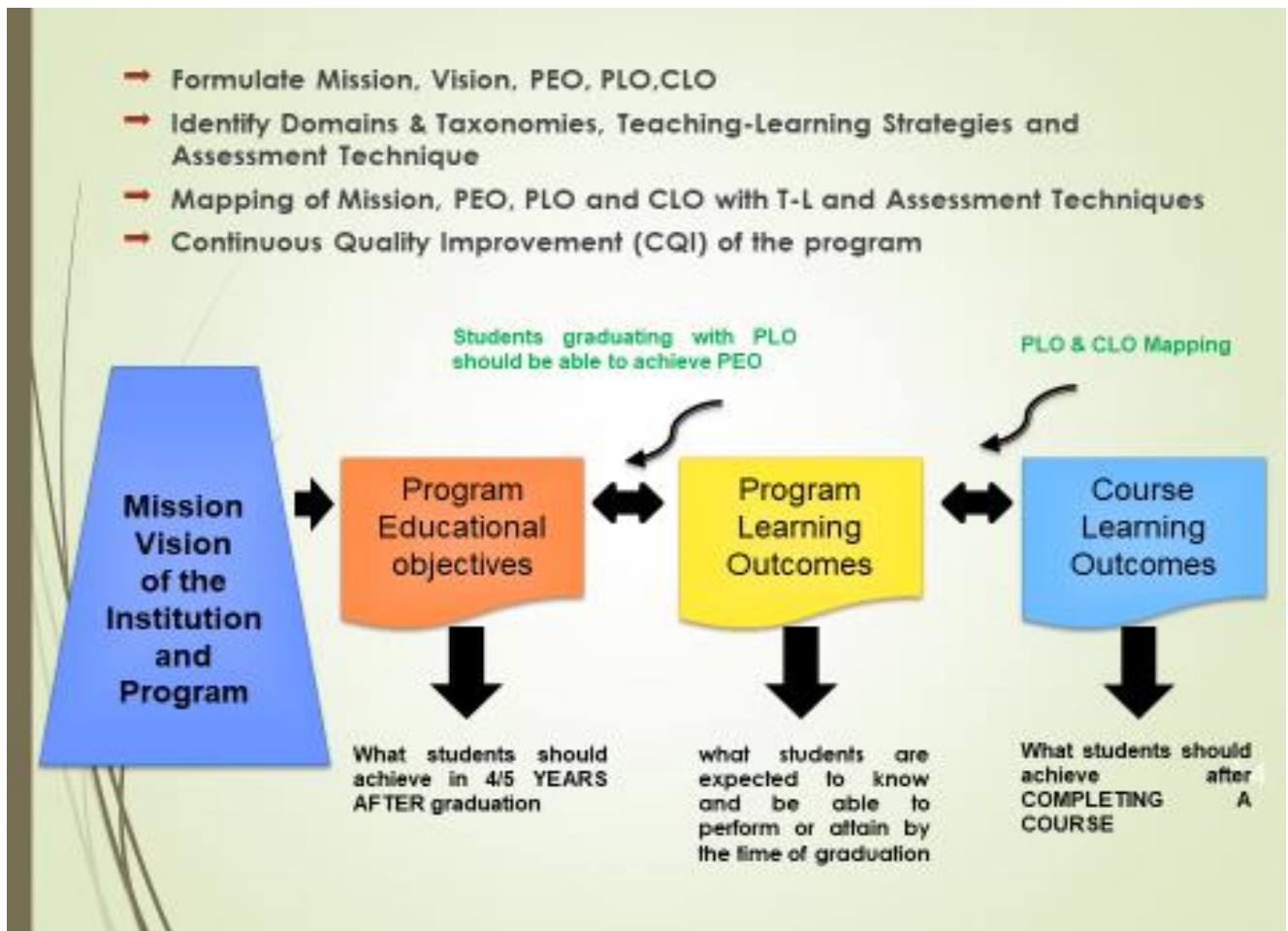


Figure 2: Flowchart on Mapping of Outcomes

## Outcome-Based Education (Closing the Loops)

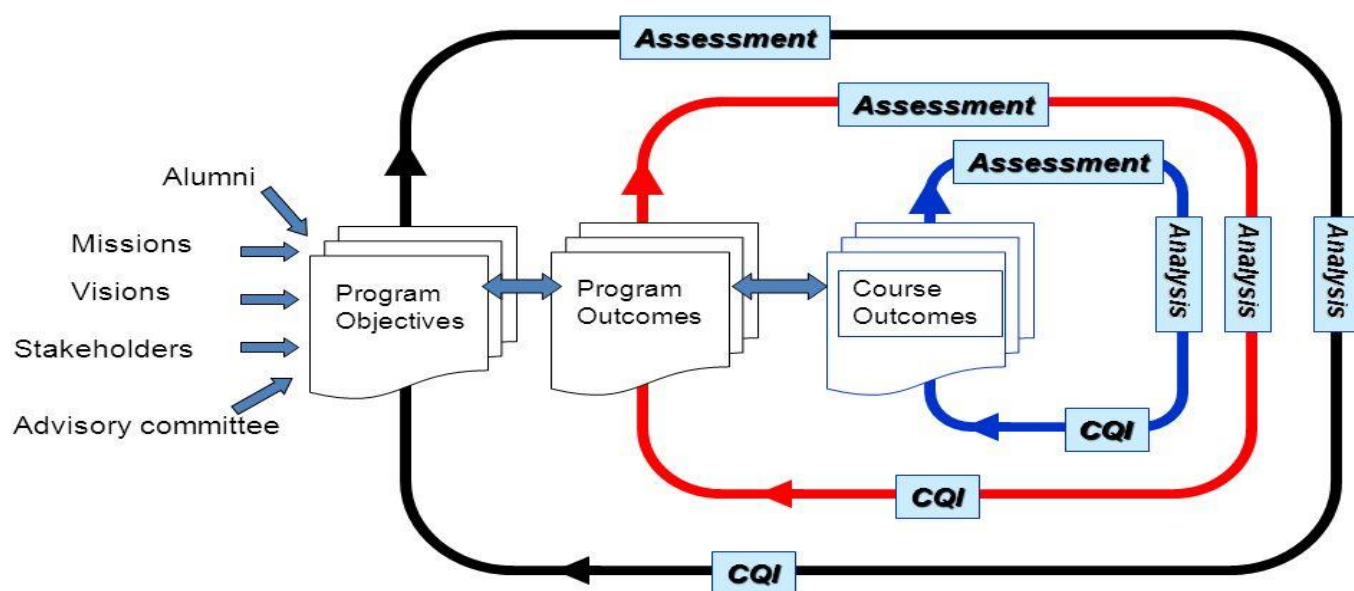


Figure 3: Flowchart on Mapping of Outcomes

Program Educational Objectives (PEO)	Program Objectives (PO)	Course Outcome (CO)
PEOs are specific statements/ goals consistent with the mission and vision of the university, are responsive to the expressed interest of program's stakeholders, and describe the expected achievements of graduates in their career and professional life a few (3-5) years after graduation. Program Education objective (PEO) are long term goals (e.g., 5 years or more after graduation) describing expected achievements of graduates in their career.	POs describe what students are expected to know and be able to perform or attain by the time of graduation. These relate to the skills, knowledge and behavior that students acquire through the completion.	Course outcomes (CO) address the abilities to be attained by students upon the completion of a subject. These are the statements that describe observable student action that serves as evidence of knowledge, skills and / or attitudes in a course.

Table 1: PEO, PO and CO

## **A Model Hierarchy of Out comes**

**Vision and mission of the institution Program**



**Program Educational Objectives (PEO)**



**Program Outcomes (PO)**



**Course Out comes (CO) of subjects.**

**Figure 4: Flowchart on Hierarchy of Out comes**

## **APPENDIX C**

### **BLOOM’S TAXONOMY**

**Bloom’s Taxonomy** is a classification system used to define and distinguish different levels of human cognition—i.e., thinking, learning, and understanding. Educators have typically used Bloom’s Taxonomy to inform or guide the development of **Assessments** (tests and other evaluations of student learning), **Curriculum** (units, lessons, projects, and other learning activities), and instructional methods such as questioning strategies.

#### **Characteristics of Bloom’s Taxonomy**

- This system defines different capabilities in a hierarchical fashion that may be developed in students as a result of learning experiences.
- These capabilities are not restricted to any specific subject areas.
- They are described in terms of what the students will be able to do, to prove that they have achieved the various levels of objectives.
- The scheme identifies and classifies the products of learning experiences.

### Use of Bloom's Taxonomy in OBE Curriculum

- Setting COURSE OUTCOMES(CO) &PROGRAM OUTCOMES (PO).
- Selecting TEACHING METHODS/STRATEGIES.
- Selecting TEACHING AIDS-MATERIALS.
- Preparation of ASSESSMENT TOOLS.
- Development & review of CURRICULUM.
- Development & review of SYLLABUS.

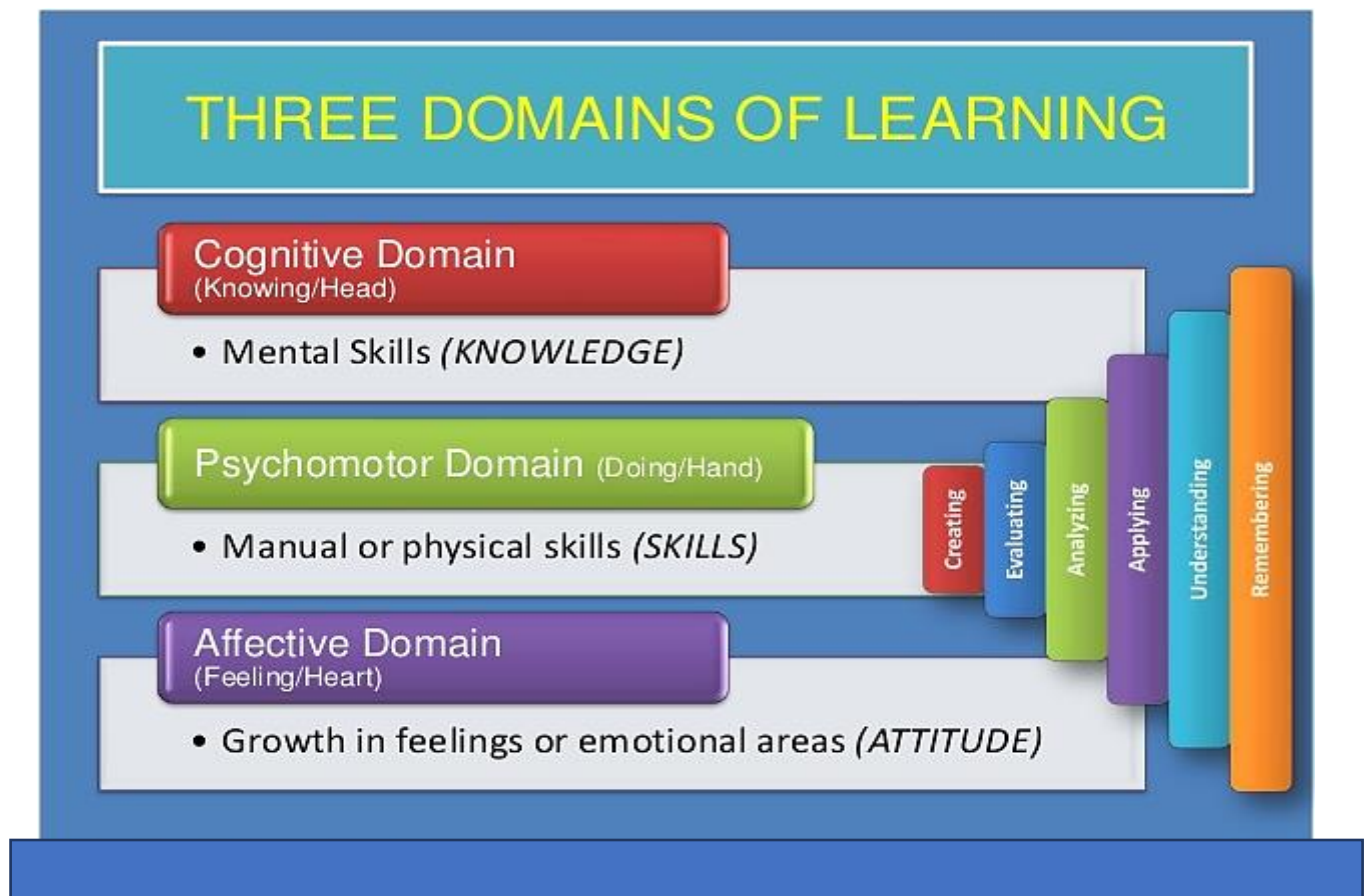


Figure 5: The Learning Domains of Bloom's Taxonomy

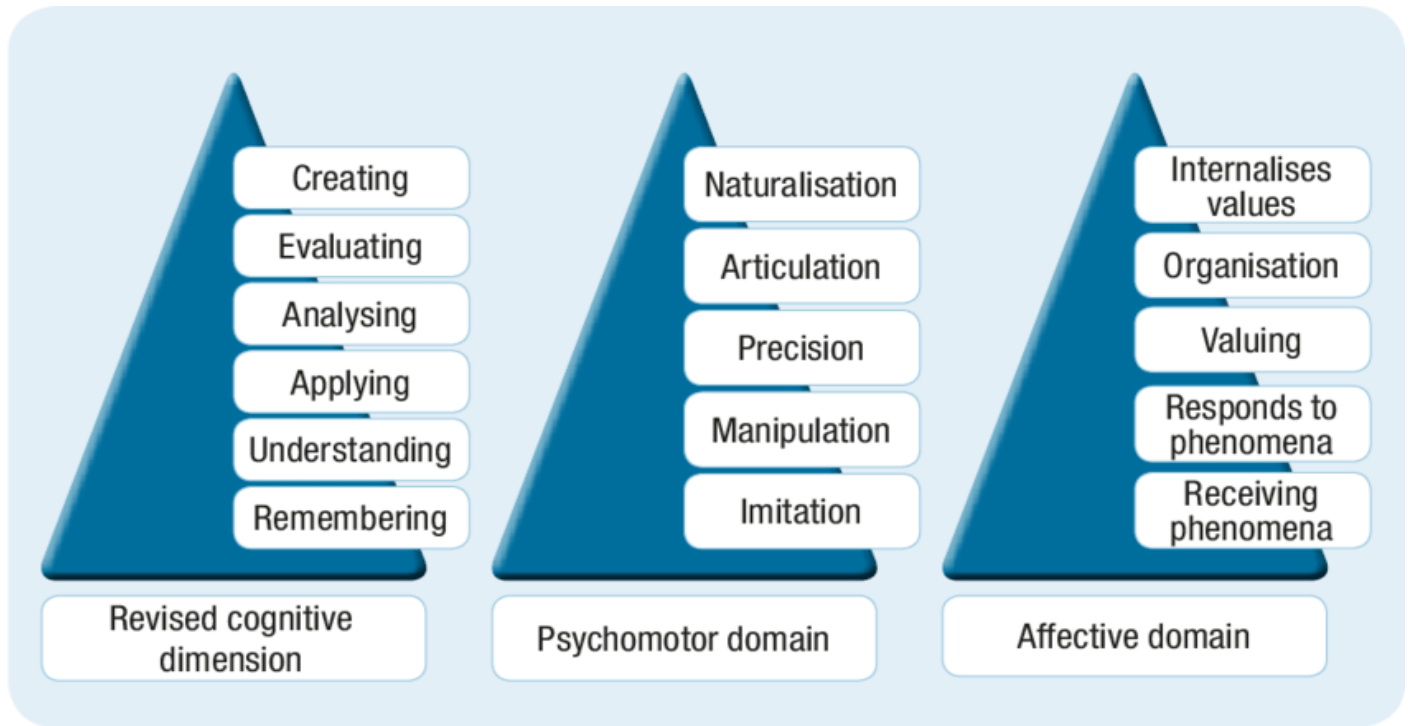


Figure 6: Three Domains of Bloom's Taxonomy

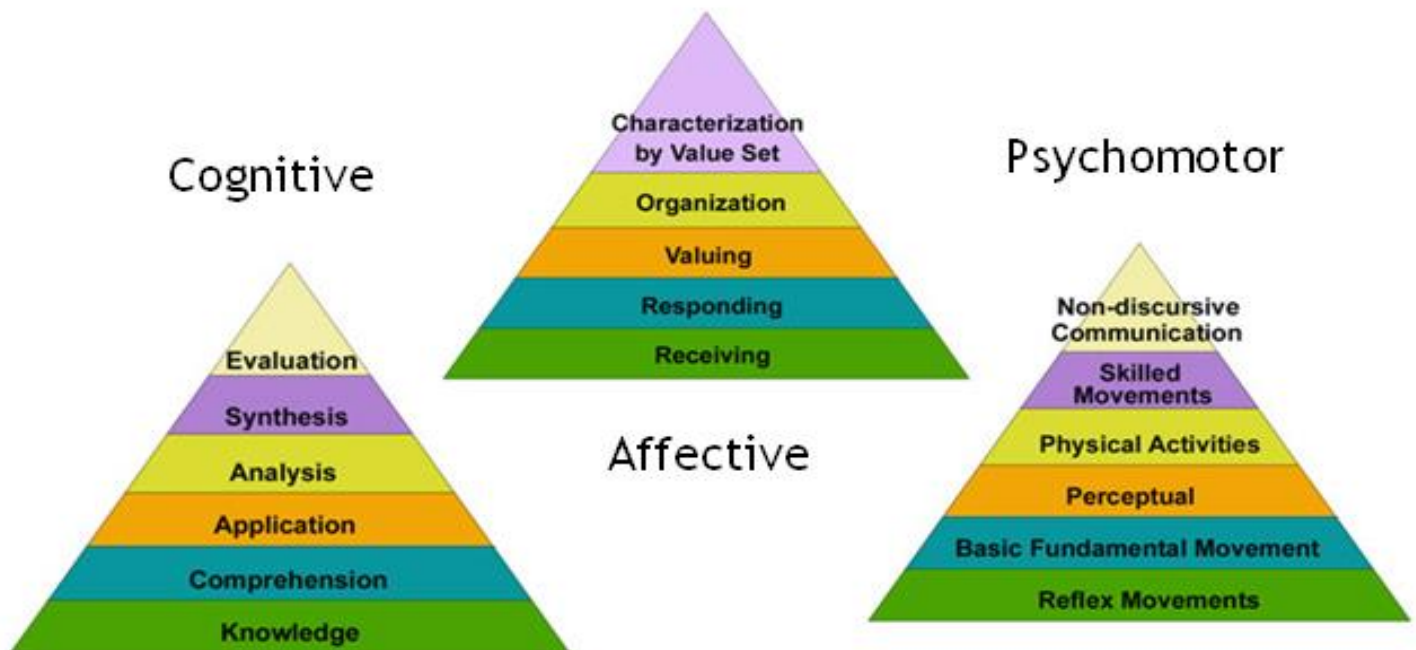


Figure 7: Levels of three Domains of Bloom's Taxonomy

(Figures and Illustrations are adopted from [www.google.com](http://www.google.com))