

# OVERVIEW OF OUTCOME-BASED EDUCATION



A WORKSHOP FOR PROGRAMME EVALUATORS OF OUTCOME-BASED  
ENGINEERING ACCREDITATION

BY

ENGINEERING ACCREDITATION COMMITTEE  
COUNCIL FOR THE REGULATION OF ENGINEERING IN NIGERIA (COREN)

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# Outcomes of the Workshop

At the end of this workshop, participants are expected to:

1. know what OBE is and its importance.
2. explain the
  - essential components of the OBE.
  - purposes of OBE
  - basic assumptions of OBE
  - principles of OBE
3. differentiate traditional education approach from OBE.
4. know what exactly are outcomes.
5. identify different Learning outcomes in OBE.

# Outline of the Workshop

1. The Present challenge to Nigeria Engineering Education Approach
2. Traditional Education – Its limitations
3. Outcome based Approach- Meaning, Assumptions, Purposes Principles and Thrust.
4. Major differences between Traditional and OBE Approaches
5. Expectations of OBE Approach
6. What exactly are outcomes?

# The Great Challenge

How tertiary education could provide both **professional knowledge/skills** and **all-round attributes** to the *graduates* so as to enable **them** face the **diversified** yet **global demands** of the 21st century society.

To compete in a global economy of the 21st century society, a country requires a workforce (Engineer) that:

1. can solve problems
2. is committed to ongoing learning
3. is creative
4. has above-average communication skills
5. is in line with new technological developments
6. is flexible
7. can participate in management processes and decision-making and
8. can work interactively.

# Traditional Education Approach

- is often described as;

1. teacher-centered
2. Lecture-based
3. Curriculum-centered, and
4. formal (i.e. transmitting information from the teacher to the student)
5. knowledge and skills learnt are not always coupled to a specific outcomes, so the learning takes place in a vacuum.

# Deficiencies of Traditional Education Approach

1. More attention is put on what is taught rather than what students learned.
2. Students are given grades and rankings compared to each other – students become **exam oriented** or **CGPA driven**.
3. Graduates are not completely prepared for the workforce.
4. Lack of emphasis on soft skills needed in jobs e.g. communication skills, interpersonal skills, analytical skills, working attitude etc..

Success at education institution level is of limited benefit, unless ***learners*** are equipped to ***transfer academic success*** to life in a ***complex, challenging, high-technology future.***

# The Missing Link

Having learners do *important things* with *what they know* is a major step *beyond* knowing itself.

# Paradigm Shift in the Education & Training Philosophy

**WHAT** and **WHETHER** students learn successfully is more important than **WHEN** and **HOW** they learn something.

How the Approach operate towards "***accomplishing results***" is more important than simply "***providing services***" that does not meet the societal needs.

# What does "Outcome-Based Education" really mean?

- 1. All learning activities** (teaching, assessment, etc.) are geared towards, ***not what the teacher is going to teach, but what the outcome of that teaching should be, what the learner supposed to do and at what standard.***
- 2. it involves the *restructuring of curriculum, assessment and reporting practices* in education to reflect the achievement of high order learning and mastery rather than *accumulation of course credits.***

# The Purposes of OBE

OBE's purposes reflect its underlying **"Success for all students and staff"** philosophy. They are:

1. Ensuring that all students are equipped with the knowledge, competence, and qualities needed to be successful after they exit the educational Approach.
2. Structuring and operating schools so that those outcomes can be achieved and maximized for all students.

# Basic Assumptions of OBE Approach

- 1. All students can learn and succeed, but not all in the same time or in the same way.**

This implies the differences in students' learning rates and learning styles should not be considered as barriers to successful learning, but as factors that must be considered in designing a sound instructional process.

- 2. Successful learning promotes even more successful learning.**

This is based on the fact that successful learning is a product of students having a strong cognitive and psychological foundation of prior learning success. The schools can help make the cognitive and psychological foundation stronger in order to make it easier for students to continue learning successfully.

- 3. Schools control the conditions that directly affect successful school learning.**

Schools are capable of changing how they operate in order to allow and encourage all students to be successful learners. It can function differently, if educators and others who work with them choose to implement needed changes (Spady, 1995)

# Essential Principles of OBE

## 1. Clarity of focus:

- **Everything** teachers **do** must be **clearly focused** on what they want learners to ultimately be able to do successfully.

## ***Applications:***

1. Help learners develop competencies
2. Enable predetermined significant outcomes
3. Clarify short & long term learning intentions at every stage of the teaching process.
4. Focus all student assessments on clearly defined effective outcomes

# Essential Principles of OBE...

## 2. Designing back

- ***All instructional decisions*** are made by tracing back from the “desired end result” and identifying the “building blocks” of learning that students must achieve in order to eventually reach the long-term outcomes.

### ***Applications:***

1. Develop Approachatic education curricula.
2. Trace back from desired end results.
3. Identity learning “building blocks”.
4. Link planning, teaching & assessment decisions to significant learner outcomes.

# Essential Principles of OBE...

## 3. Teachers should have high expectations for all students

- Establish high, challenging standards of performance in order to encourage students to engage deeply with the issues about which they are learning.

### ***Applications:***

1. Believe in the idea that successful learning promotes more successful learning (Spady, 1994).
2. Engage deeply with issues about which they are learning.
3. Intellectual quality is not something reserved for a few learners. Thus expect effective learning outcomes from **all** learners.

## Essential Principles of OBE...

### 4. Teachers must strive to provide expanded opportunities to all learners

- Not all learners can learn the same thing in the same way and in the same time (Spady, 1994).
- This imply the differences in students' learning rates and learning styles should not be consider as barriers to successful learning, but as factors that must be consider in designing sound instructional process.

#### ***Applications:***

1. Most students can achieve high standards, if they are given appropriate opportunities.
2. Provide multiple learning opportunities matching learner's needs with teaching techniques.

# Thrust of OBE

- **What** do you want the students to have or able to do?
  - **Knowledge, Skill, Attitude**
- **How** can you best help students achieve it?
  - **Student Centred Delivery**
- **How** will you know what they have achieved it?
  - **Assessment**
- **How** do you close the loop
  - **Evaluation through Continuous Quality Improvements**

# Differences between Tradition Based Education and OBE (Killen, 2000)

	<b>From</b> (Traditional Education Approach)	<b>To</b> (OBE Approach)
1.	A teacher-centered.	A student-centered.
2.	Teacher “owns” knowledge and conveys as much as possible.	Students (trainee) to learn as much as possible.
3.	Teacher brings the content and the answers into the training room with him/her.	Teacher act as a coach who asks questions and provides guidelines for the acquisition of knowledge.

# Differences between Contents-Based Education and OBE

<b>Process Step</b>	<b>From:</b> <i>Content Based Approach</i>	<b>To:</b> <i>OBE Approach</i>
Needs analysis	<ul style="list-style-type: none"><li>• A very few parties are consulted before trainers develop courses themselves.</li><li>• Trainers decide on how needs are determined and expressed</li></ul>	<ul style="list-style-type: none"><li>• All stakeholders are consulted prior to curriculum development.</li><li>• The end-product of needs analysis is reflected as unit standards.</li></ul>

<b>Process Step</b>	<b>From:</b> <i><b>Content Based Approach</b></i>	<b>To:</b> <i><b>OBE Approach</b></i>
Course design	<ul style="list-style-type: none"> <li>• Instructional designers develop courses around the contents.</li> <li>• The outcomes of a course are written as objectives</li> </ul>	<ul style="list-style-type: none"> <li>• Learning programmes are designed according to the needs of the stakeholders.</li> <li>• Outcomes clearly indicate what the learner must be able to do in line with national standards.</li> </ul>
Learning material	<ul style="list-style-type: none"> <li>• The learning material is called study manuals or textbooks which is contents-driven.</li> <li>• The instructor determines the content. The content is mainly theoretical</li> </ul>	<ul style="list-style-type: none"> <li>• Learning material is called learning guides and is outcomes-driven.</li> <li>• The contents are determined by the inputs of various role-players.</li> <li>• The contents are practical, addressing particular skills.</li> </ul>

Process Step	From: <b><i>Content Based Approach</i></b>	To: <b><i>OBE Approach</i></b>
Presentation	<ul style="list-style-type: none"> <li>• The <b><i>instructor</i></b> presents a pre-determined lesson.</li> <li>• The <b><i>instructor</i></b> is in control of the learning event.</li> </ul>	<ul style="list-style-type: none"> <li>• A <b><i>facilitator</i></b> presents a lesson based on the unit standard in a flexible manner.</li> <li>• The <b><i>facilitator</i></b> guides learners to achieve outcomes.</li> </ul>
Assessment	<ul style="list-style-type: none"> <li>• Learners do assignments, write tests and examinations in order to indicate their level of competence.</li> <li>• Limited assessment criteria evaluations are non-existent or vague</li> </ul>	<ul style="list-style-type: none"> <li>• Simulations, portfolios, self-assessment, workplace assessment are additional assessment techniques often used.</li> <li>• Assessment and evaluations criteria are clearly defined and indicated as part of the unit standard.</li> </ul>

# Importance of OBE

The following are the importance of OBE:

1. Discourages traditional education approaches based on direct instruction of facts and standard methods.
  - a) Tradition Education provides students with a learning environment with little attention to whether or not students ever learnt the material.
  - b) If students are only given grades and ranking compared to each other – students become exam oriented or CGPA driven.
  - c) Graduates are not completely prepared for the workforce.
  - d) Lack of emphasis on soft skills needed in jobs e.g. Communication skills, interpersonal skills, analytical skills, working attitude etc.

# Importance of OBE...

2. OBE helps to have a more direct and rational curriculum in terms of its responsiveness to the societal and national needs.
3. OBE focuses on what students can do or the attributes they should develop after they are taught.
4. OBE requires that the students demonstrate proficiency in knowledge, skills and professional attitude.
5. It enhances graduates employability in an ever growing and competitive world.

# Importance of OBE...

6. Enhances universities community and stakeholders relations.
7. OBE enhances university's visibility and ranking.
8. OBE will become a pre-requisite for Accreditation of Engineering Programmes by COREN.
9. Degree will be well recognized in all Washington Accord Countries.
10. COREN becomes a PROVISIONAL SIGNATORY of the Washington Accord.

# Expectations under OBE

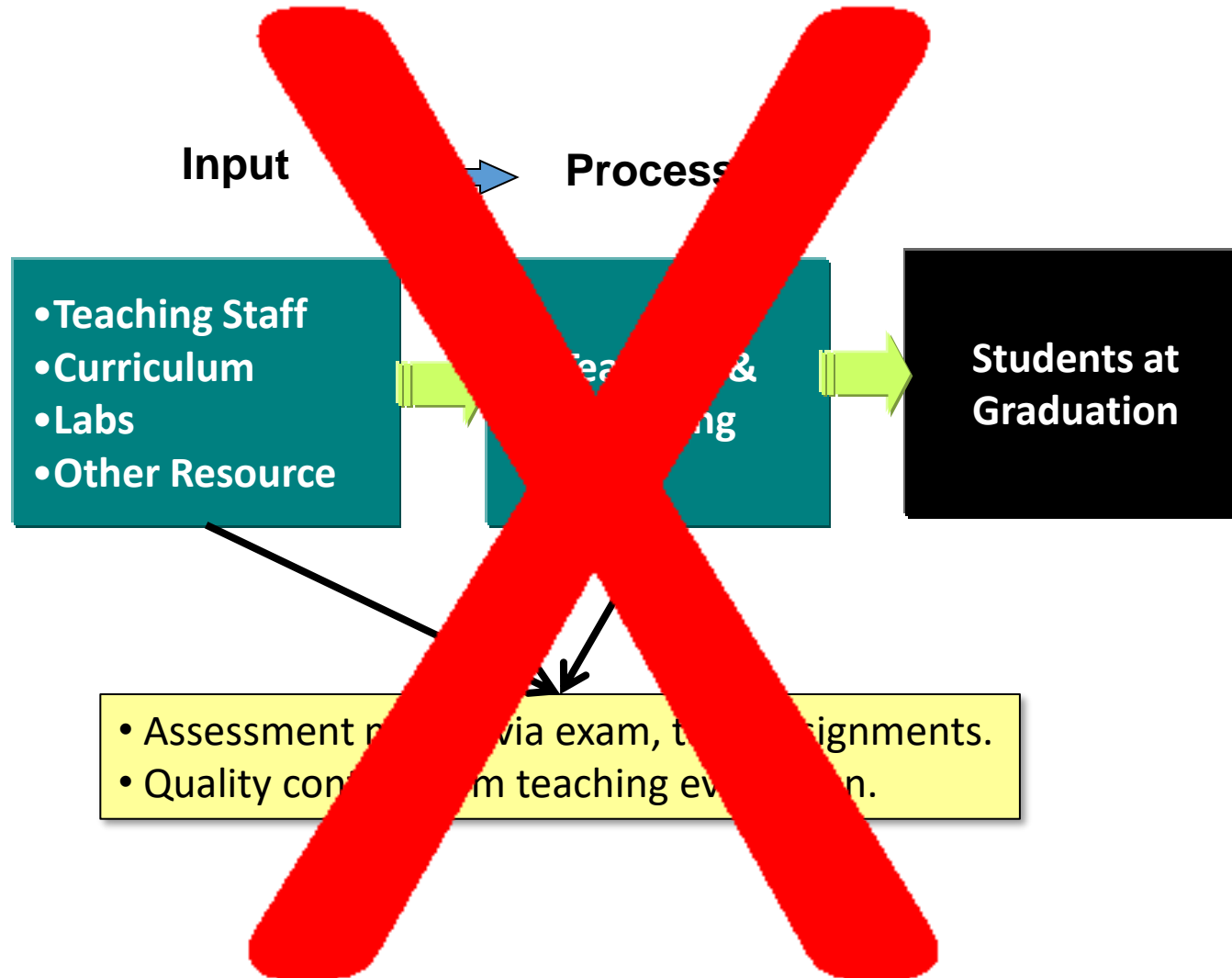
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# Expectations on Students under OBE

1. Students are expected to be able to do more challenging tasks other than memorize and reproduce what was taught.
2. Students should be able to show their abilities to think, ask question, research, and make decisions based on their findings.
3. Be more creative, able to analyze and synthesize information.
4. Able to plan, organize tasks and work in a team as a community or in entrepreneurial service teams to propose solutions to problems and market their solutions.

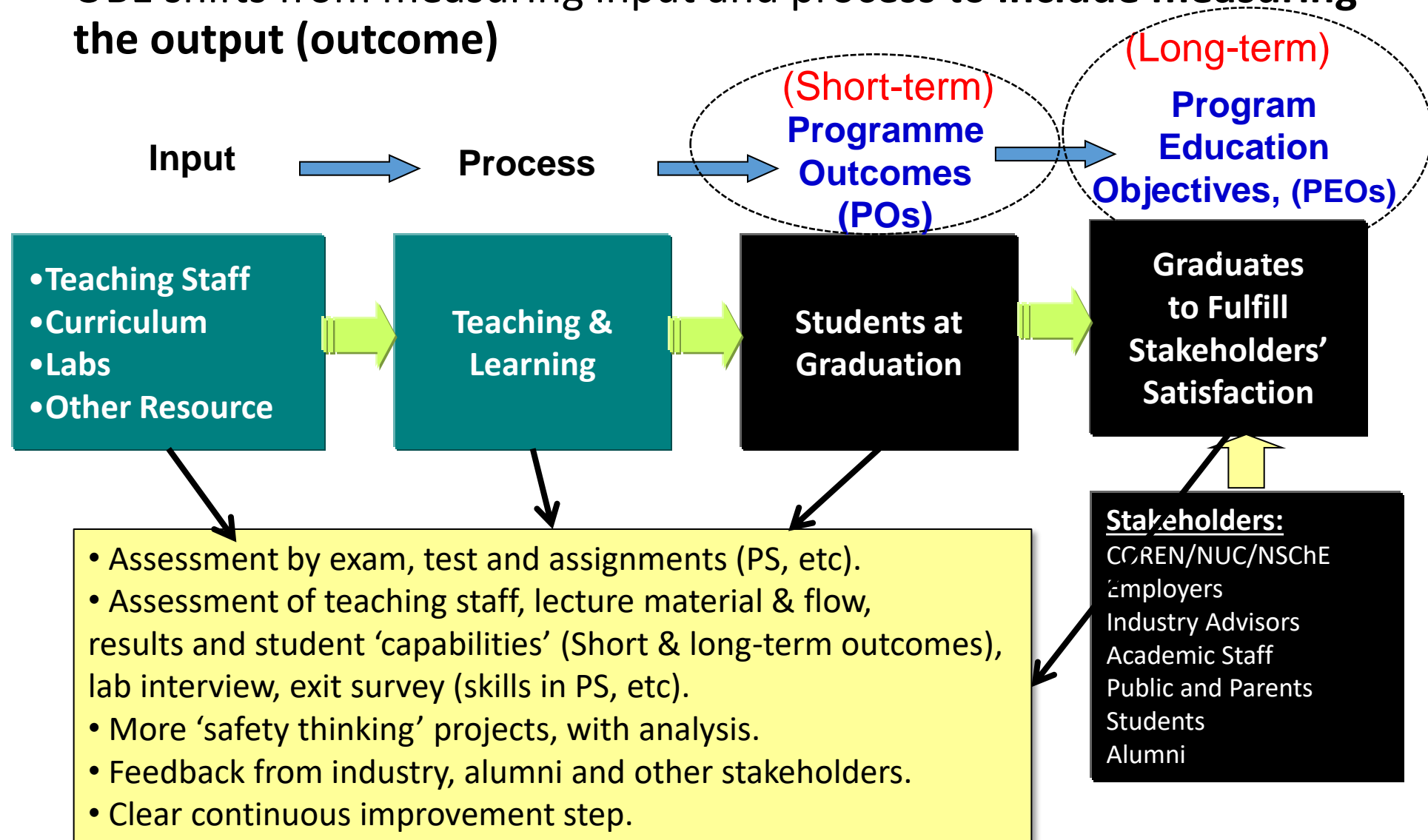
# Summary...

- Traditional education process focuses on the inputs.



# Summary on OBE – Input, Process and Outcomes

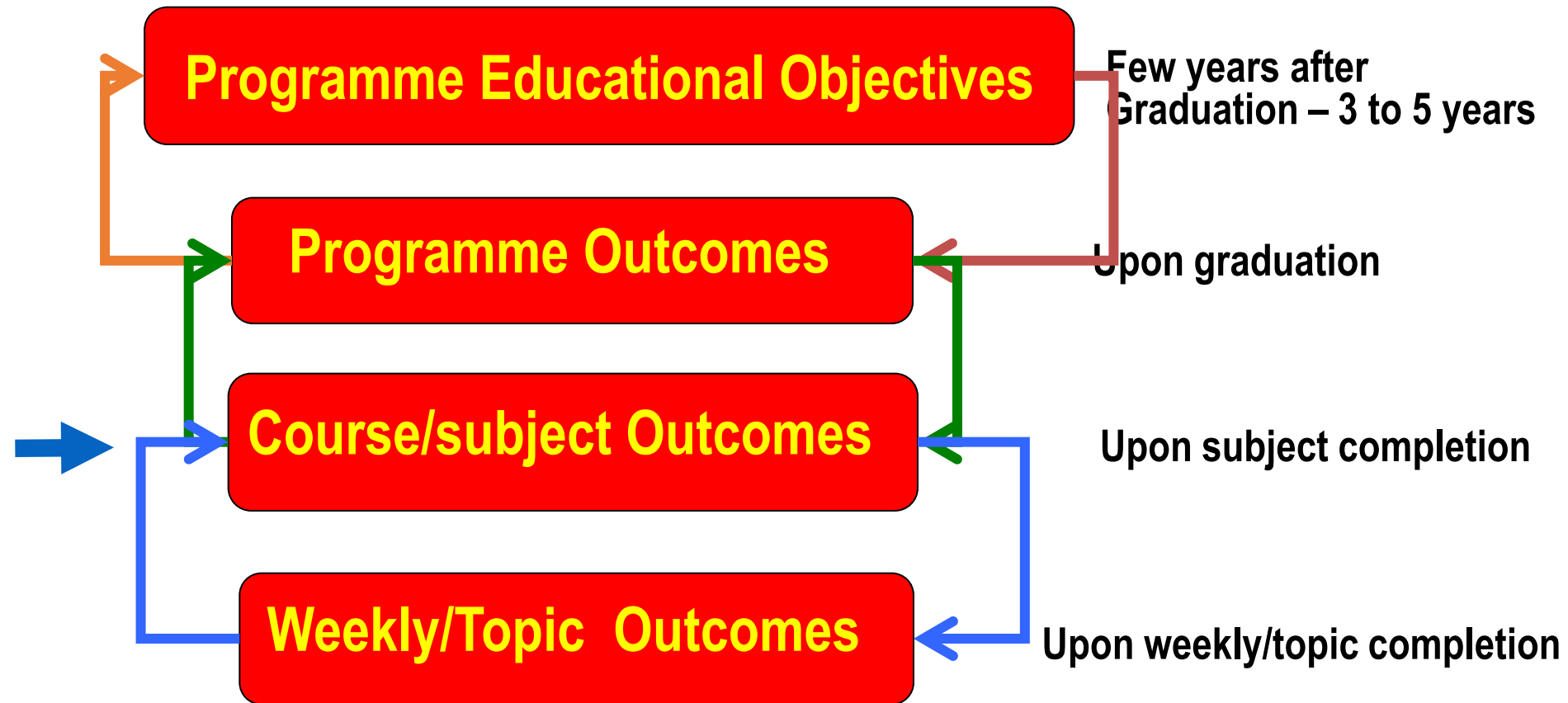
- OBE shifts from measuring input and process to **include measuring the output (outcome)**



# What exactly are outcomes?

- Outcomes are ***clear learning results that we want students to demonstrate at the end of significant learning experiences.***
- They ***are what learners can actually do with what they know and have learned.*** (Tangible application of what has been learned).
- Outcomes are ***actions and performances*** that embody and reflect learner competence in ***using content, information, ideas, and tools successfully.***
- They represent the ultimate result that is sought from the learning (Spady, 1994).

# Different Levels of Learning Outcomes in OBE



# Gentle Reminder

- This session does **NOT** intent participants to seek for a unified template
- It is an attempt to allow contemplation, creativity and innovation
- It encourages diversity in approach but unified in outcome

# Summary

1. Tertiary education could provide both **professional knowledge/skills** and **all-round attributes** to their *graduates* through the OBE approach.
2. OBE helps to empower a workforce that can compete in a global economy of the 21st century society.
3. OBE equipped learners to *transfer academic success* to life in a ***complex, challenging and high-technology future.***

# Common Questions on Outcome Based Education (OBE)

- What is OBE? Paradigm shift!
- Why OBE?
- When to start OBE?
- Who to develop and implement OBE?
- Where are the facilities for OBE?
- How to develop and implement OBE?

*Thank  
you*



**The End**

**Q & A**