ASSESSING LEARNING OUTCOMES IN EDUCATION 4.0

Through the Lens of OBE

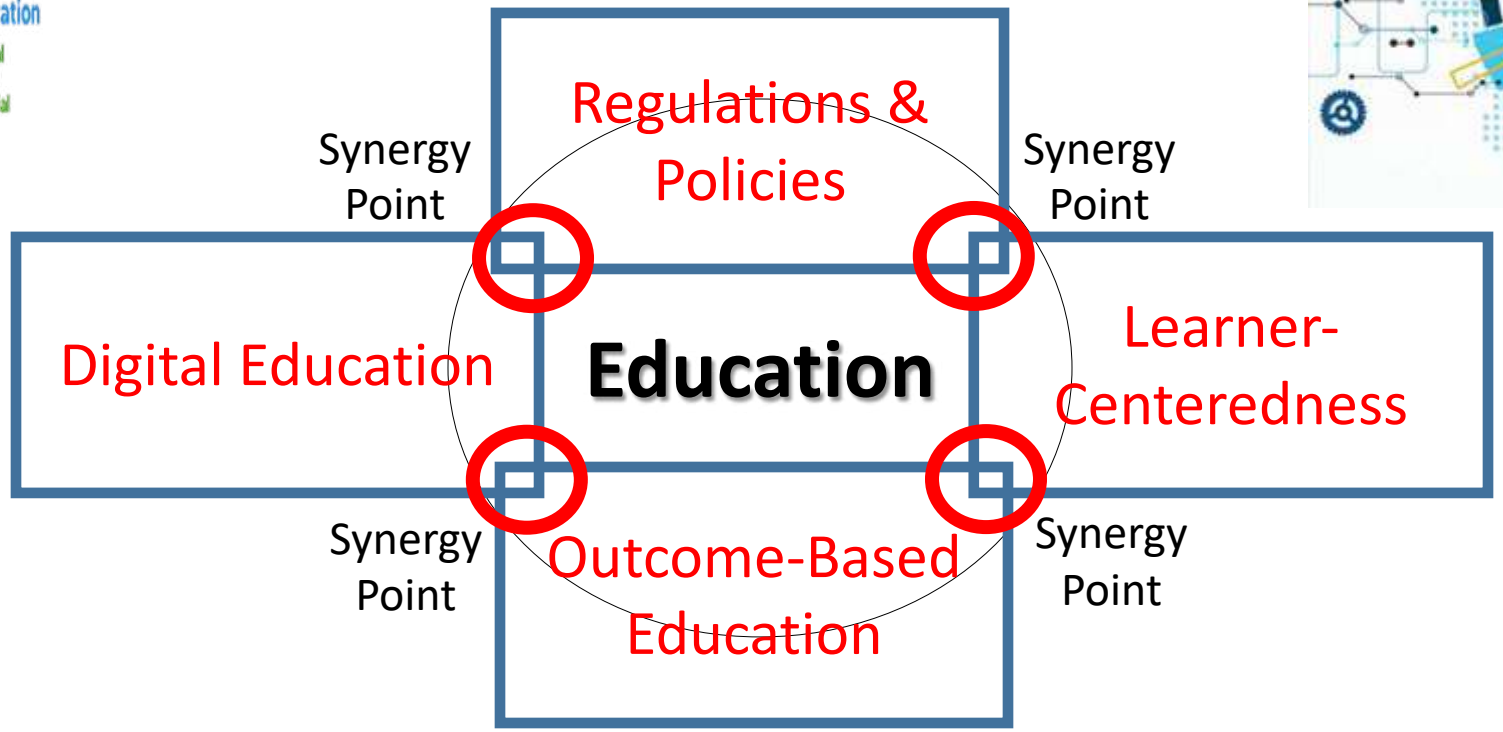
Jonathan V. Macayan, PhD

School of Social Sciences and Education

Mapúa university

SCHOOL OF SOCIAL SCIENCES AND EDUCATION

MAPÚA UNIVERSITY



CHALLENGES & PROSPECTS OF EDUCATION 4.0

Assessing Learning Outcomes in the 21st Century

Issues and Concerns

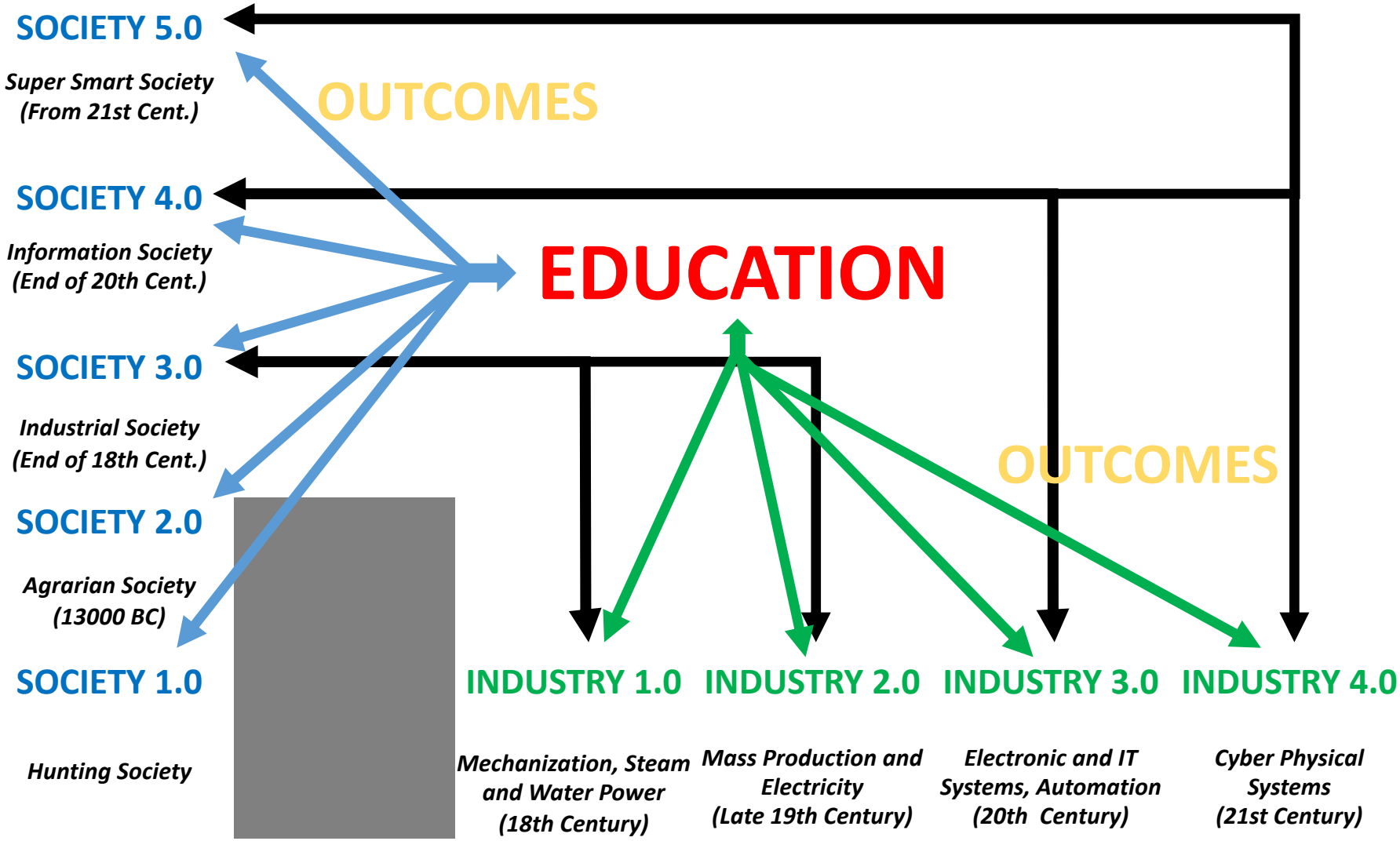
- What are the Learning Outcomes in the context of 21st Century Learning?

- Are there available tools/measurements/instruments that can be used to measure these outcomes?

REALLY

WHAT ARE LEARNING OUTCOMES?

WHO DECIDES WHICH ARE DESIRABLE OUTCOMES?


SOCIETY 5.0
Super Smart Society
(From 21st Cent.)
OUTCOMES
SOCIETY 4.0
Information Society
(End of 20th Cent.)
EDUCATION
SOCIETY 3.0
Industrial Society
(End of 18th Cent.)
OUTCOMES
SOCIETY 2.0
Agrarian Society
(13000 BC)
SOCIETY 1.0
Hunting Society
INDUSTRY 1.0
Mechanization, Steam and Water Power (18th Century)
INDUSTRY 2.0
Mass Production and Electricity (Late 19th Century)
INDUSTRY 3.0
Electronic and IT Systems, Automation (20th Century)
INDUSTRY 4.0
Cyber Physical Systems (21st Century)

What is QUALITY EDUCATION?

INFORMATION/
KNOWLEDGE

STUDENTS/
LEARNERS

QUALITY EDUCATION

21st CENTURY

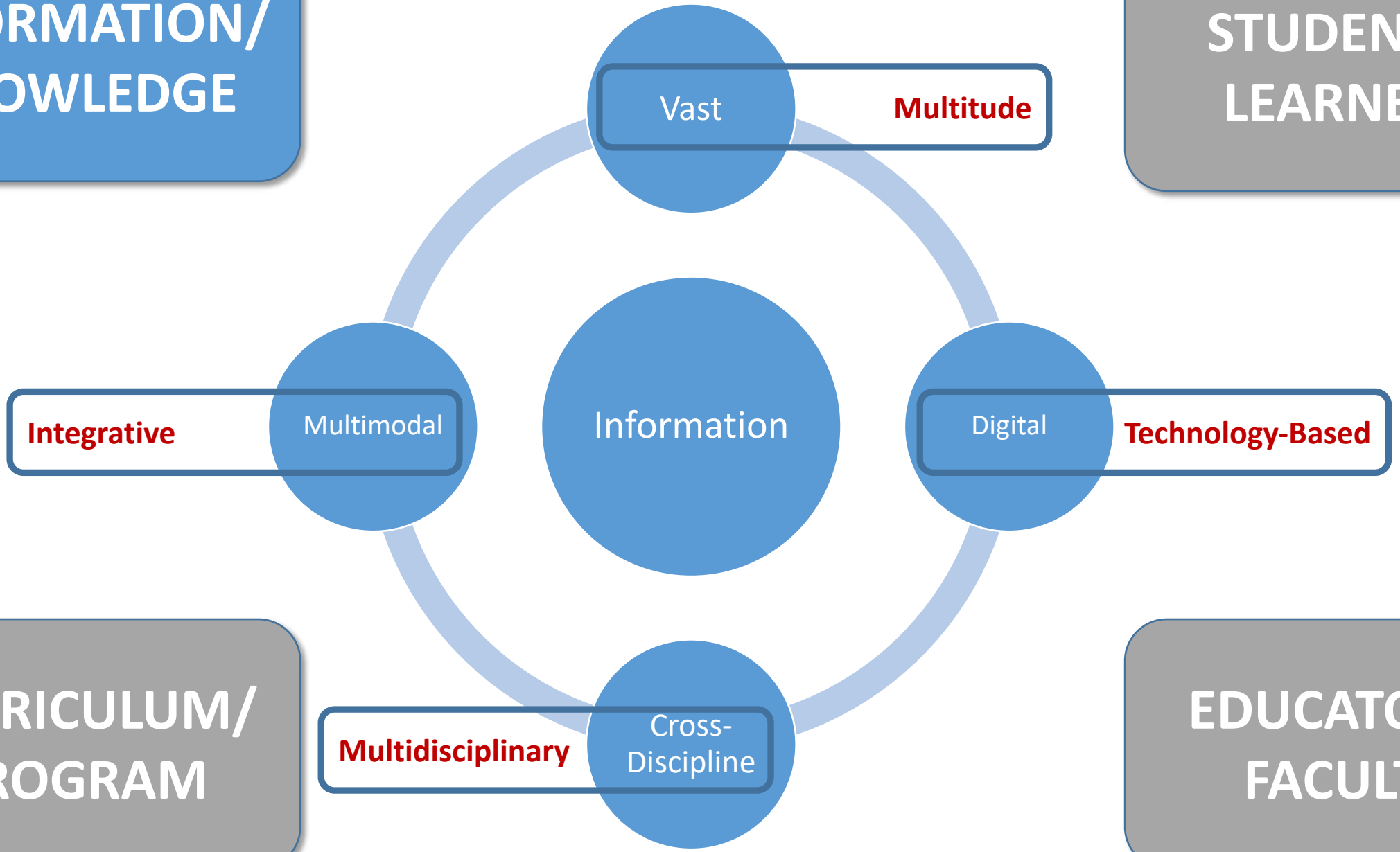
4th I.R.

CURRICULUM/
PROGRAM

EDUCATORS/
FACULTY

INFORMATION/ KNOWLEDGE

STUDENTS/ LEARNERS

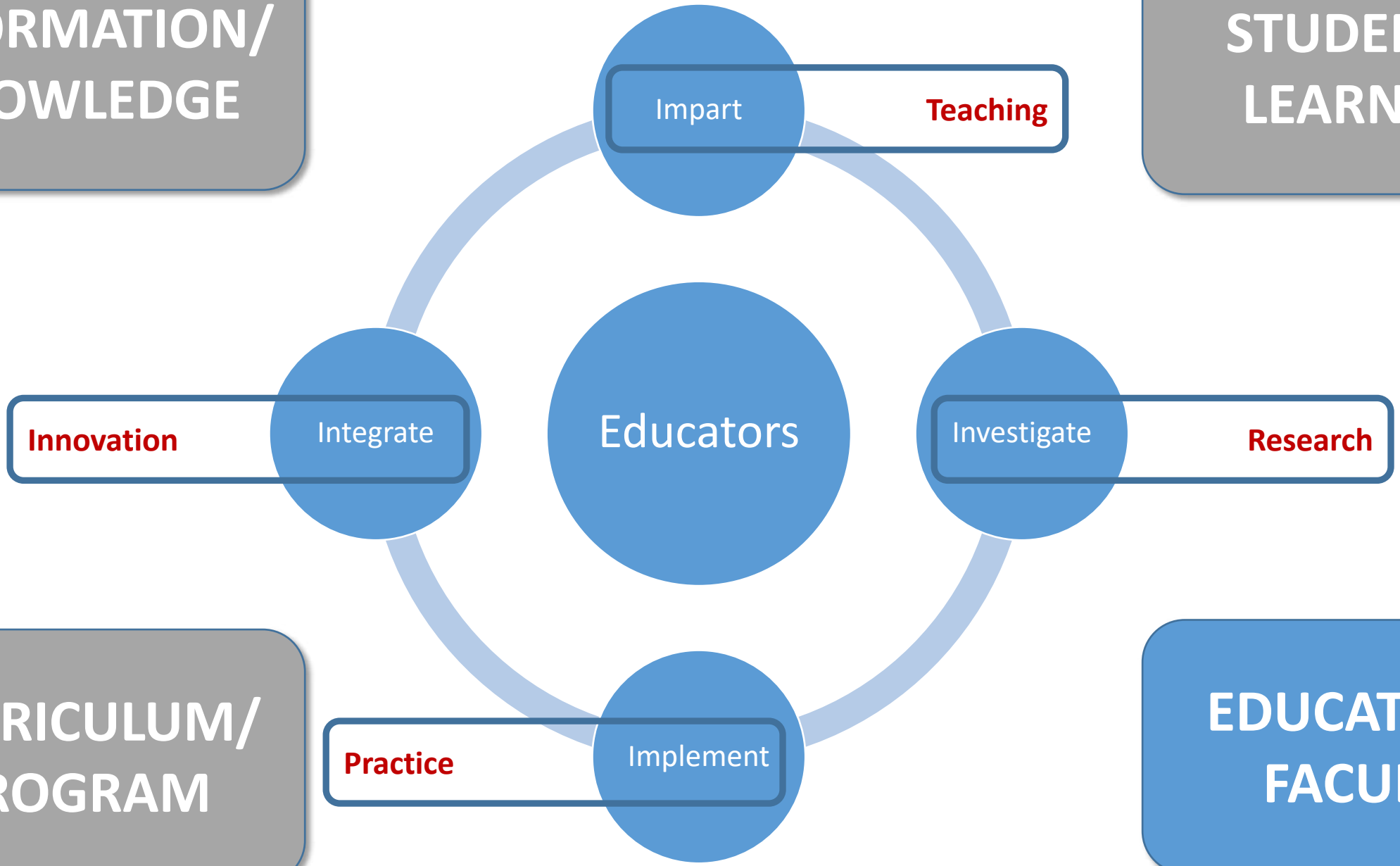


CURRICULUM/ PROGRAM

EDUCATORS/ FACULTY

INFORMATION/ KNOWLEDGE

STUDENTS/ LEARNERS

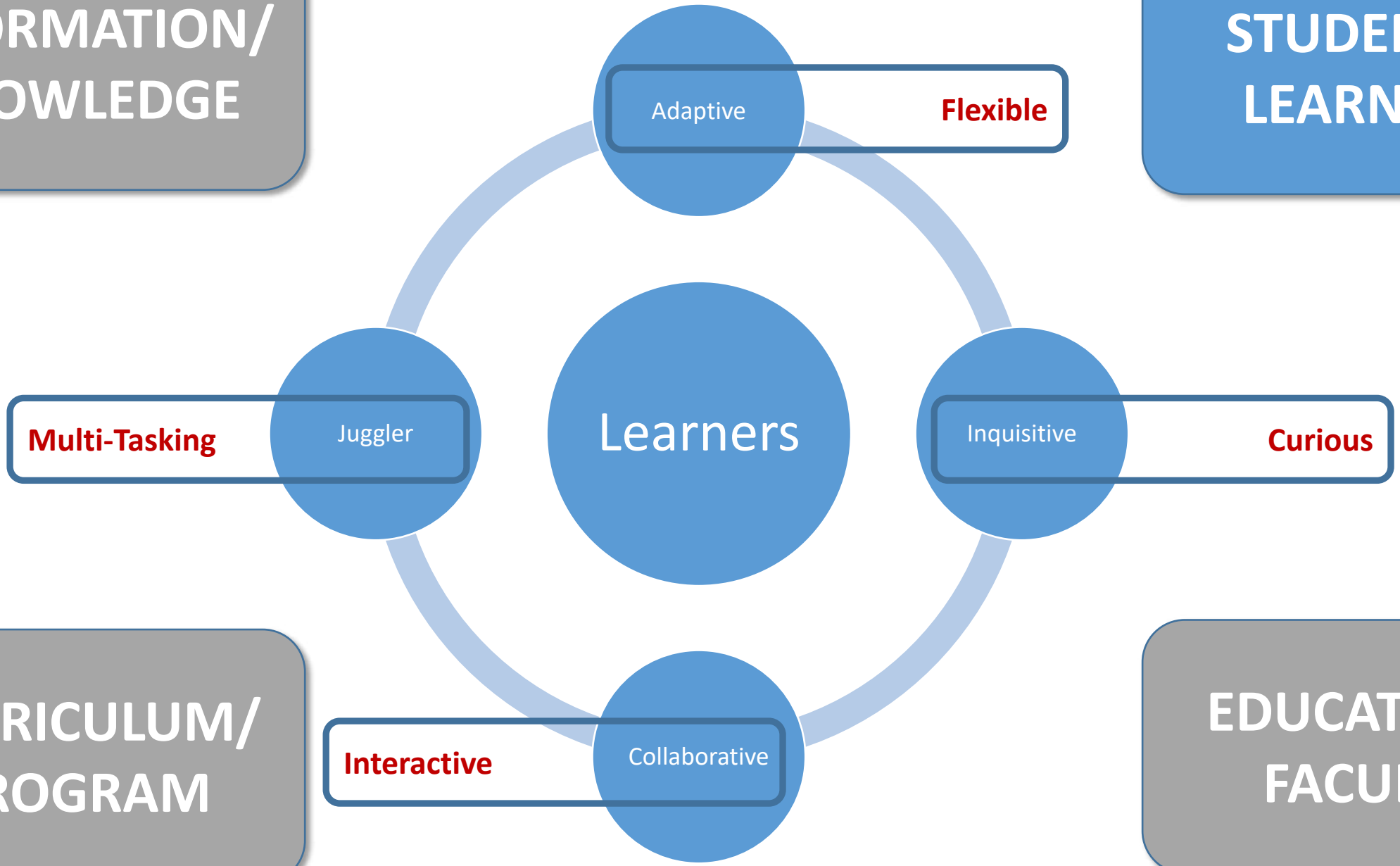


CURRICULUM/ PROGRAM

EDUCATORS/ FACULTY

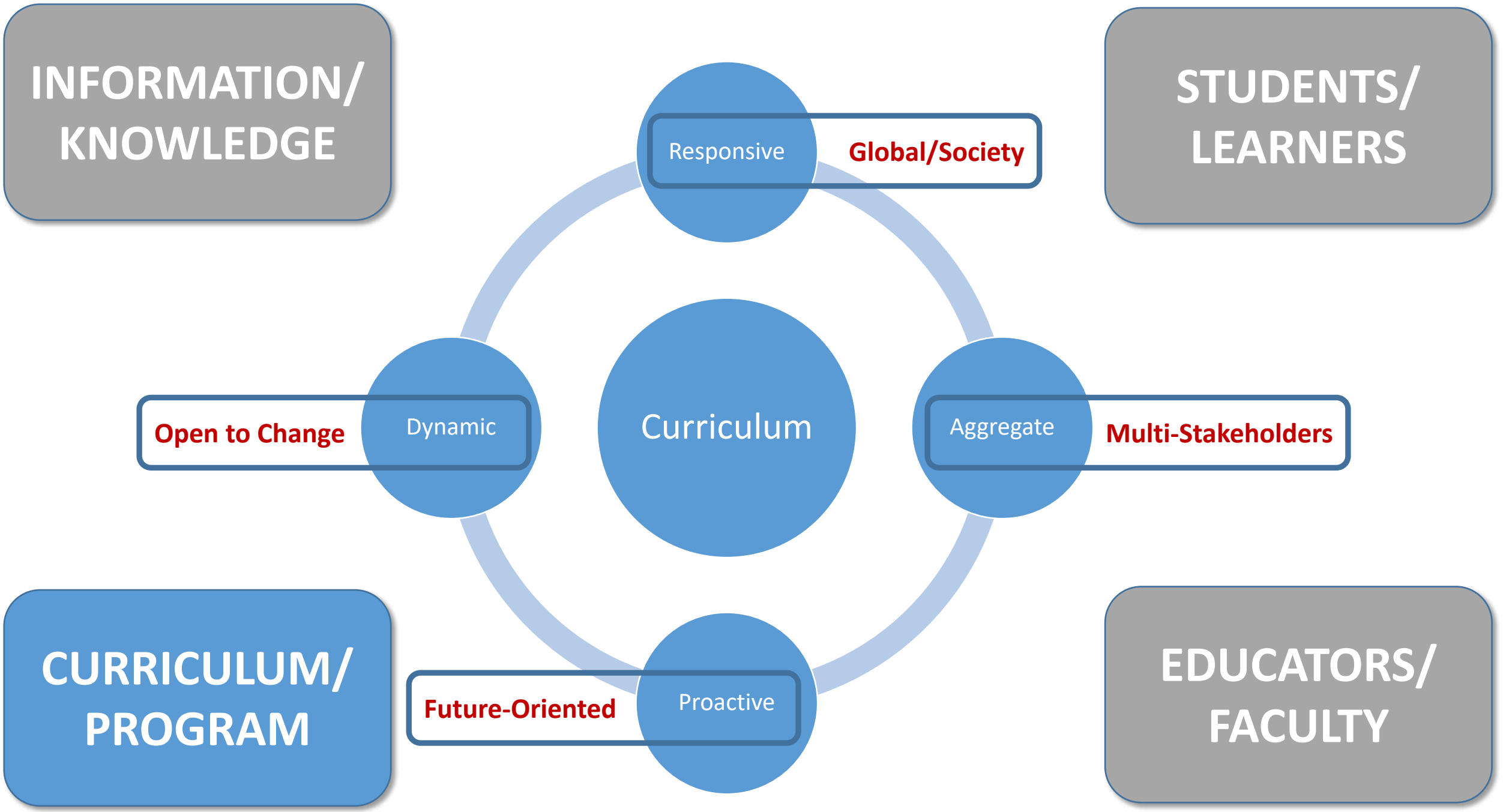
INFORMATION/ KNOWLEDGE

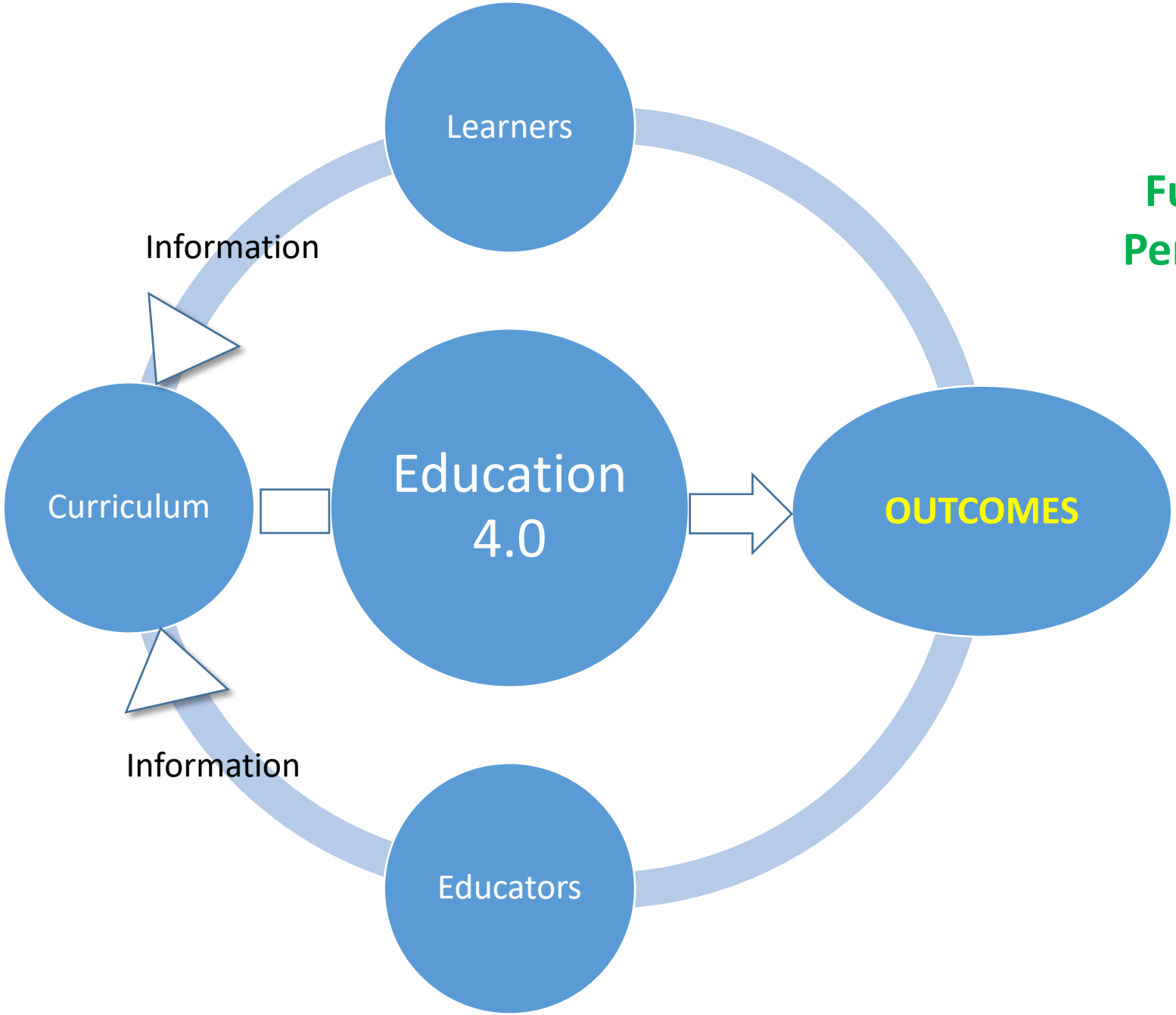
STUDENTS/ LEARNERS



CURRICULUM/ PROGRAM

EDUCATORS/ FACULTY


INFORMATION/ KNOWLEDGE
STUDENTS/ LEARNERS
Responsive
Global/Society
Open to Change
Dynamic
Curriculum
Aggregate
Multi-Stakeholders
Future-Oriented
Proactive
CURRICULUM/ PROGRAM
EDUCATORS/ FACULTY



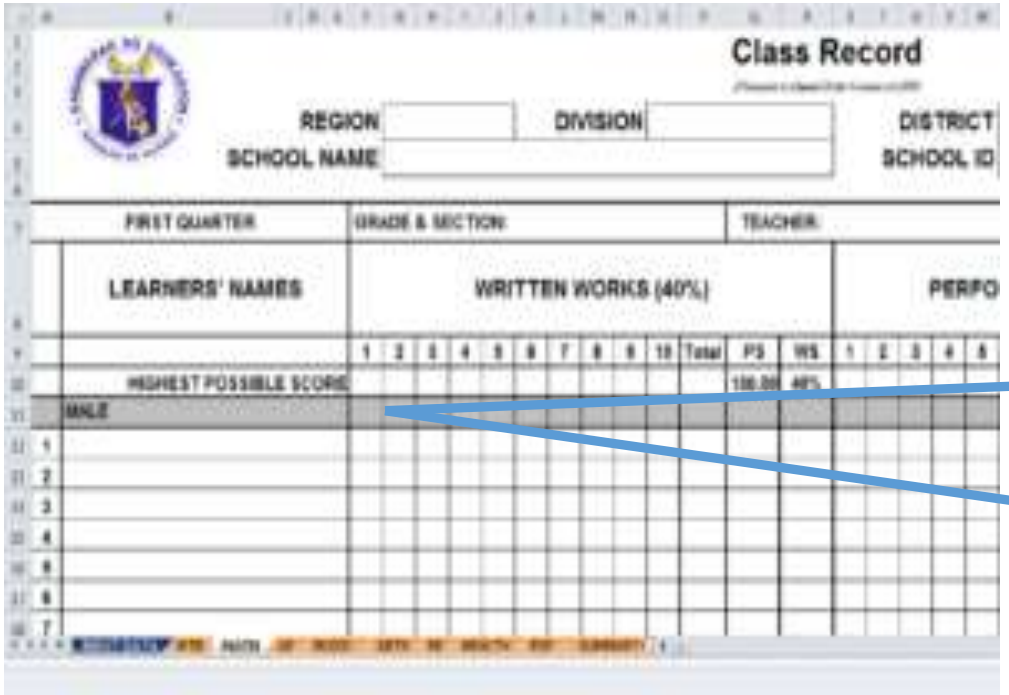
Future Life Performance Roles

PERSONAL

PROFESSIONAL

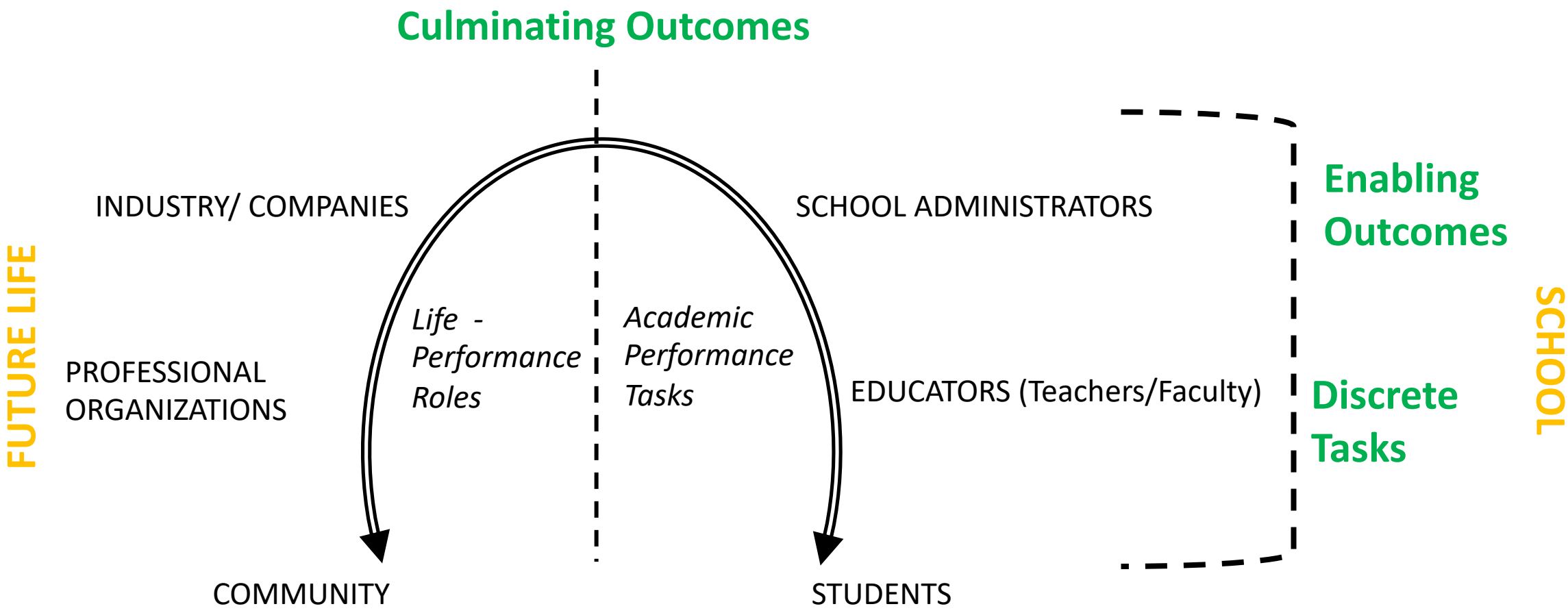
SOCIAL

OUTCOMES ARE SO BIG, COMPLEX DESCRIPTION OF WHAT A STUDENT CAN DO OR PERFORM, yet…



85

The *ARC* Model of Generating/Developing/Stating Outcomes



HOW TO ASSESS LEARNING OUTCOMES IN THE 21st CENTURY LEARNING CONTEXT?

- UNDERSTAND FIRST WHAT ARE OUTCOMES
- DEFINE THE OUTCOMES (STATE THE OUTCOMES)
- DESIGN MEASUREMENT TOOLS FOR THESE OUTCOME

ASSESSING OUTCOMES IN THE 21st CENTURY requires a PARADIGM SHIFT.

Paradigm Shift No. 1. Being Outcomes-Minded

Paradigm Shift No. 2. From Teacher-Centered to Learner-Centered

BITS of OBE Philosophy and Principles

An EFFECTIVE BASIS of LEARNING OUTCOMES

ASSESSMENT

Reforms in Philippine Hig
Education Curricula
2nd
ASSERT NATIONAL CONVENTION
OUTCOME-BASED EDUCATION
HE CHALLENGES AND PROSPECTS OF THE NEW PHILIPPINE HIGHER
NCULUM THROUGH DIGITAL AND OUTCOME-BASED EDUCATION

https://in4obe.org
Menu
Welcome to IN4OBE
OBE Experts
Login
IN4OBE
International Network for Outcome Based Education
WORLD OBE EXPERTS

https://in4obe.org/collaborative-colleagues/
Collaborative Colleagues
Menu
Welcome to IN4OBE
OBE Experts
Login
Renate Caine
Ronald Carriveau
James E. Groccia
Noraini Idris
Jonathan V. Macayan
Fong Mak
Jonathan V. Macayan
Dr. Jonathan V. Macayan is a practitioner (Registered Psychologist), a researcher, and an education leader. He has spent many of his professional years in the academe as a faculty of social sciences and psychology. He has also been also actively engaged in private consultative projects in various areas involving: academic (OBE and Learner-Centeredness, Education Research programs, Academic Administration), business and organization (IR Skills, Leadership Competencies, Change Management, Organizational Management) and, clinical (Behavioral Intervention Programs, Psychological Diagnostics and Assessment, Psychometric Test Development). His

Educational Measurement and Evaluation Review (2017), Vol. 8 Issue 1
© 2017 Philippine Educational Measurement and Evaluation Association

Implementing Outcome-Based Education (OBE) Framework: Implications for Assessment of Students' Performance

Jonathan V. Macayan
Mapúa University

Abstract

This paper initially traces the roots of Outcome-Based Education (OBE) and introduces key concepts at the level of school-wide implementation based on Spady (1994). It then proceeds with defining what outcomes are and discusses how the definition of outcomes demands paradigm shift in assessment and evaluation practices. Finally, the paper tackles important implications of carrying out the framework for the practice and methods of assessment and evaluation of students' performance in schools. These implications are meshed with discussion of the four operating principles of OBE.

Keywords: outcome-based assessment, outcome-based evaluation, outcome-based education

Introduction

In response to the need for standardization of education systems and processes, many higher education institutions in the Philippines shifted attention and efforts toward implementing Outcome-Based Education (henceforth OBE) system on school level. The shift to OBE has been propelled predominantly because it is used as a framework by international and local academic accreditation bodies in school- and program-level surveillance, on which many schools invest their efforts into. The Commission on Higher Education (CHED) even emphasized the need for the implementation of OBE by issuing a memorandum order (CMO No. 46, s. 2012) entitled, "Policy-Standard to enhance quality assurance in Philippine Higher Education through an Outcomes-Based and Typology Based QA". Then, in 2014, it was followed

researchgate.net

ResearchGate

Home More

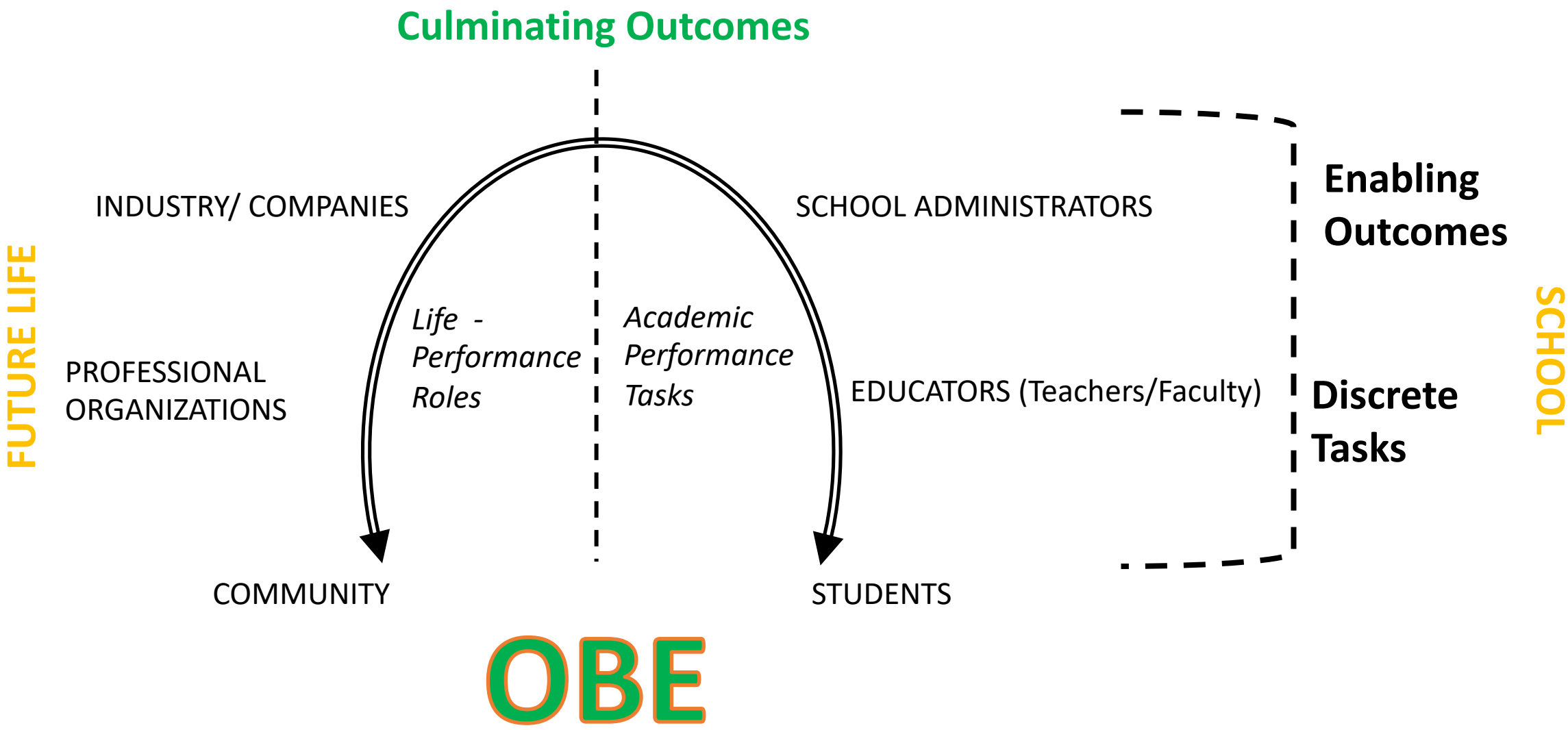
Well done, Jonathan!

Your article reached 6,000 reads

Achieved on Jan 27, 2019

Article: Implementing Outcome-Based Education (OBE) Framework: Implications for Assessment of Students' Performance

The *ARC* Model of Generating/Developing/Stating Outcomes



Know and Understand OBE

What really is OBE?

- **Outcomes-Based Education** *means clearly focusing and organizing everything in an educational system around what is essential for all students to be able to do successfully at the end of their learning experience.*

Spady (1994, p. 12)

OBE is...

OUTCOMES

…what is essential for all students to be able to do successfully at the end of their learning experience"

- Academic Administration
  - Faculty Development
  - Quality Assurance System
- Curricular & Co-Curricular Implementation
  - Curriculum & Teaching & Learning Materials
  - Linkages, Research, Extension
- Facilities & Services
  - Laboratories, Equipment, Tools
  - Students Services (library, vocational guidance, etc.)

"Focusing & Organizing everything in the educational system…

Of the 3 Words in OBE, which do you think is the most important?

A. OUTCOME

B. BASED

C. EDUCATION

Which of the following is an OUTCOME?

A. GWA
B. Test Scores
C. Course Objectives
D. Certificate of Graduation

ANSWER: ***NONE OF THE ABOVE***

- *Outcomes* ***HAPPEN****…they are the learning results we desire from students that lead to culminating demonstrations*

- *Outcomes refer to what students can actually* ***DO*** *with what they know and understand*

?

OUTCOME BASED EDUCATION

=

O = E

E = O

Refers to what a students can actually DO with what they know/learn.

- *Action Words*
- *Should be Demonstrable*

Refers to school systems and processes.

- *Teaching and learning*
- *Assessment and evaluation*
- *Curricular, co-curricular, and extra-curricular activities*

Education is

Defined by +
Focused on +
Designed around +
Organized around +

the Outcomes

Real OBE means…

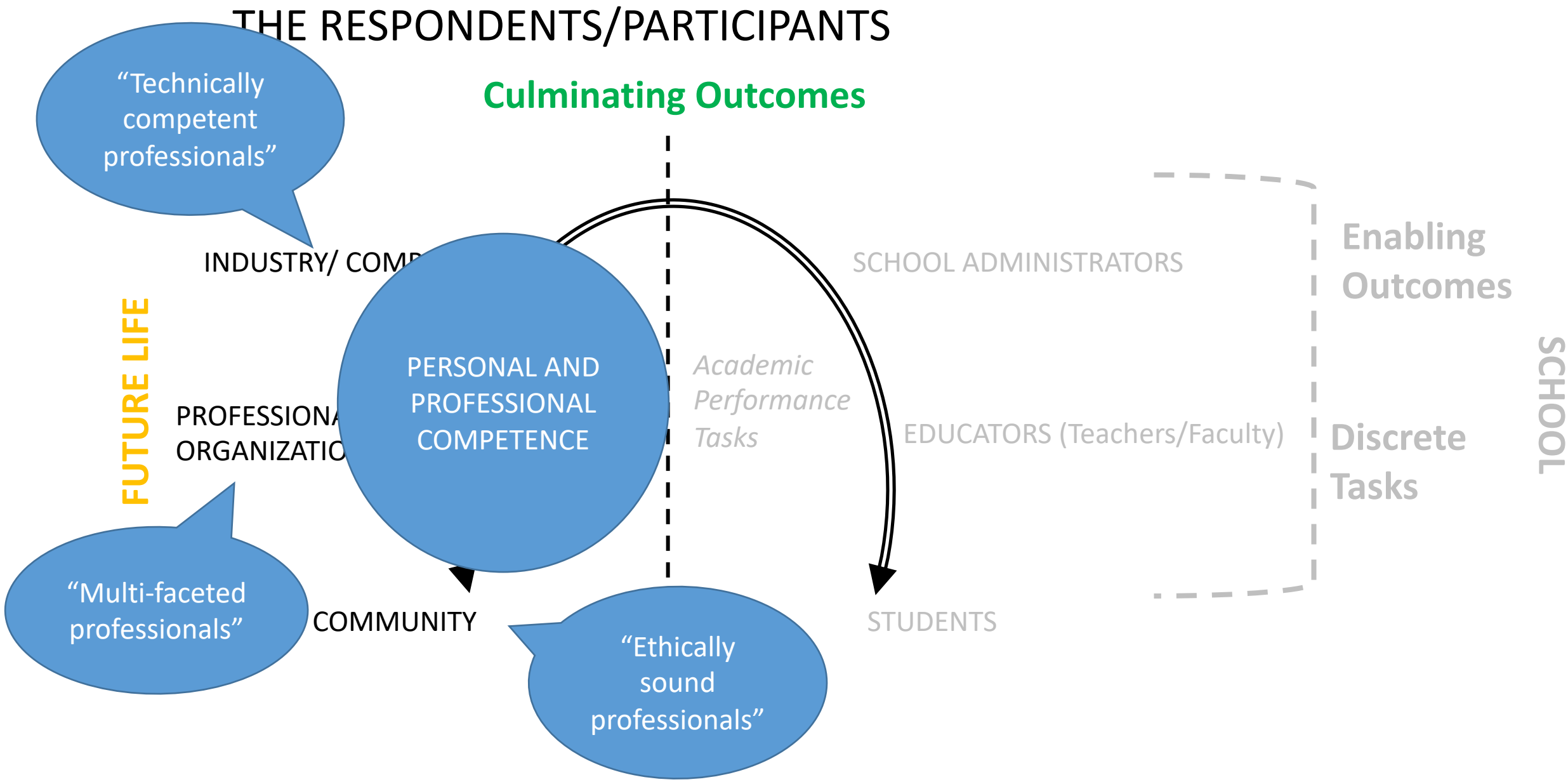
Education is Defined by + Focused on + Designed around + Organized around + **the Outcomes**

HOW DO WE BASE OUR EDUCATION SERVICES TO THE OUTCOMES?

*BY CONSTRUCTIVELY, PURPOSEFULLY, AND DELIBERATELY **ALIGNING** OUR TEACHING & LEARNING ACTIVITIES AND MOST IMPORTANTLY OUR ASSESSMENT TO THE **INTENDED OUTCOMES***

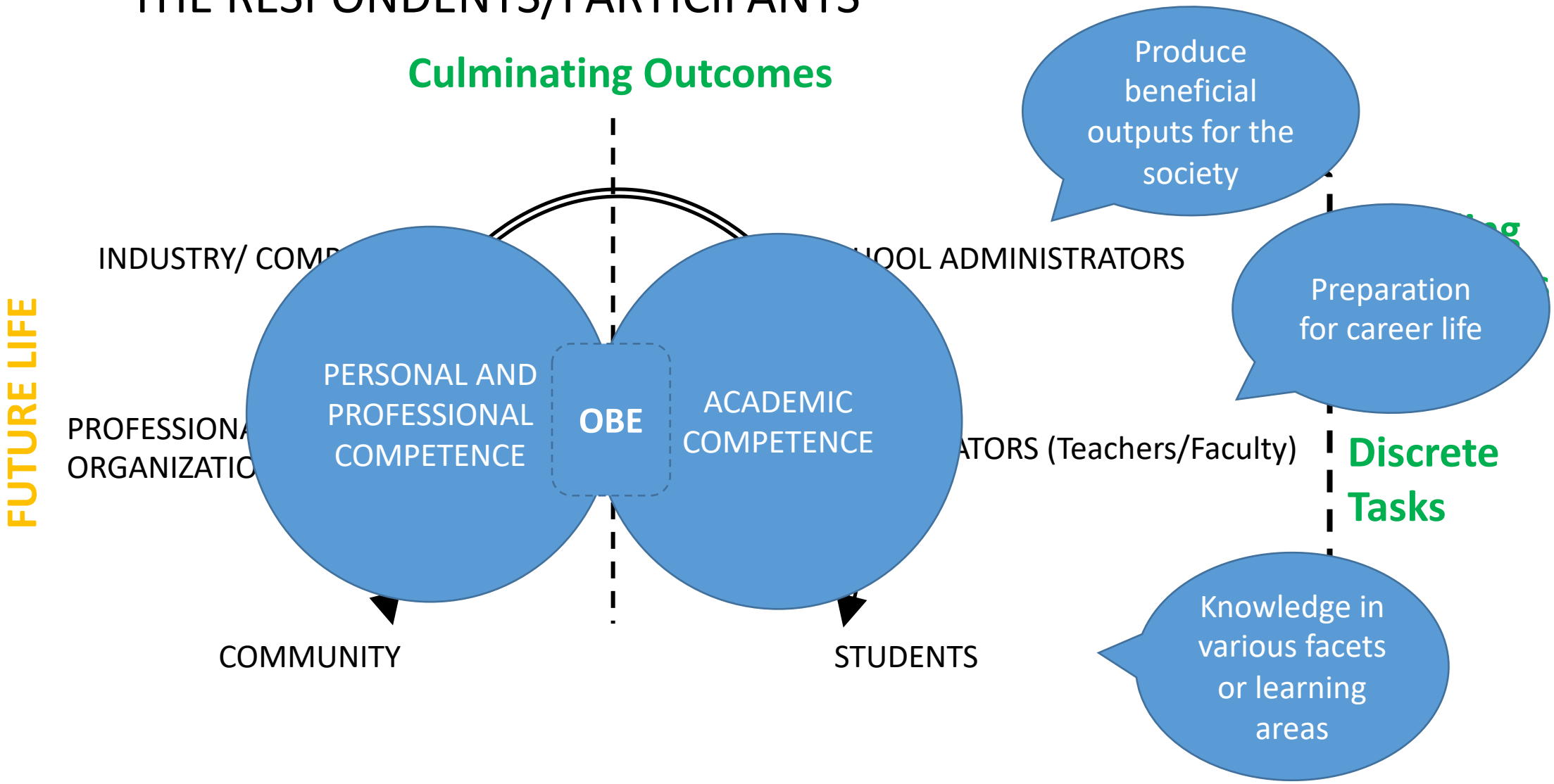
PARADIGM SHIFT

The *ARC* Model of Generating/Developing/Stating Outcomes



The *ARC* Model of Generating/Developing/Stating Outcomes

THE RESPONDENTS/PARTICIPANTS



Being Outcomes-Minded

Culminating Outcomes:
(Desirable Outcomes of Education)

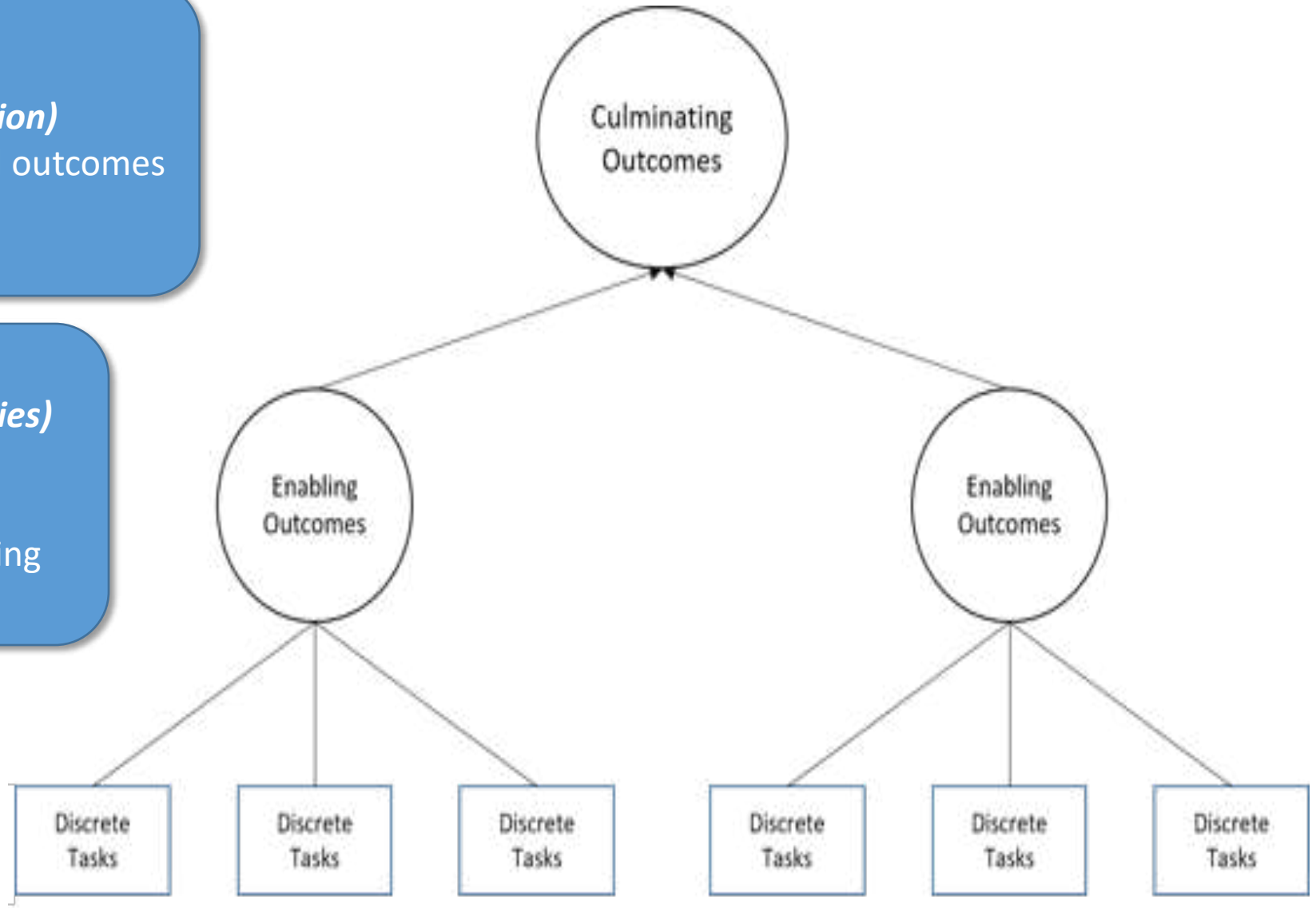
- Transcend education/school related outcomes
- Life Performance Roles

Curricular Outcomes:
(Demonstrable skills and competencies)

- Aggregated learnings tasks
- Across subjects/courses/lessons
- Enables the attainment of culminating outcomes

Intended Learning Outcomes:
(Specific Learning Tasks)

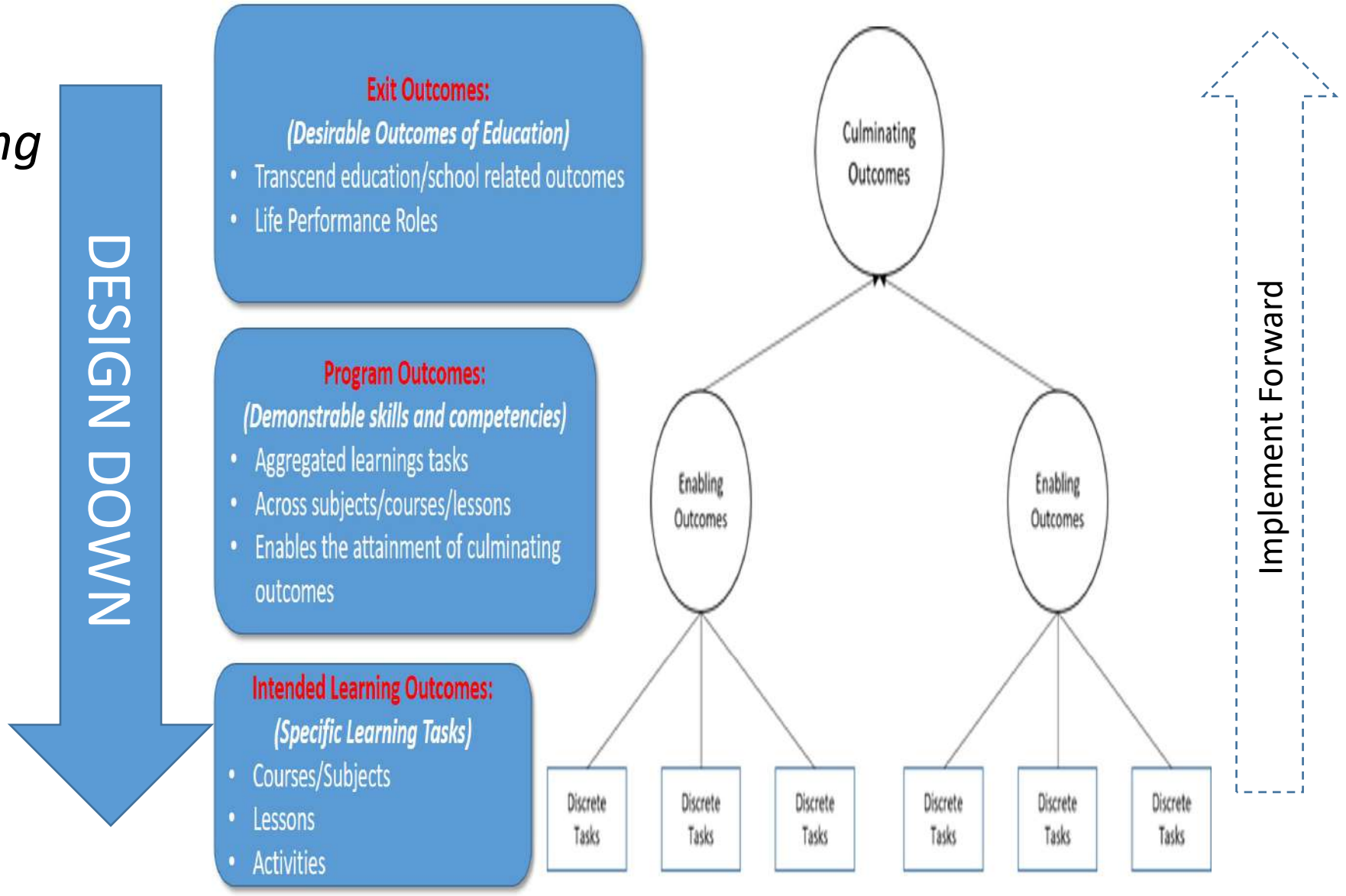
- Courses/Subjects
- Lessons
- Activities



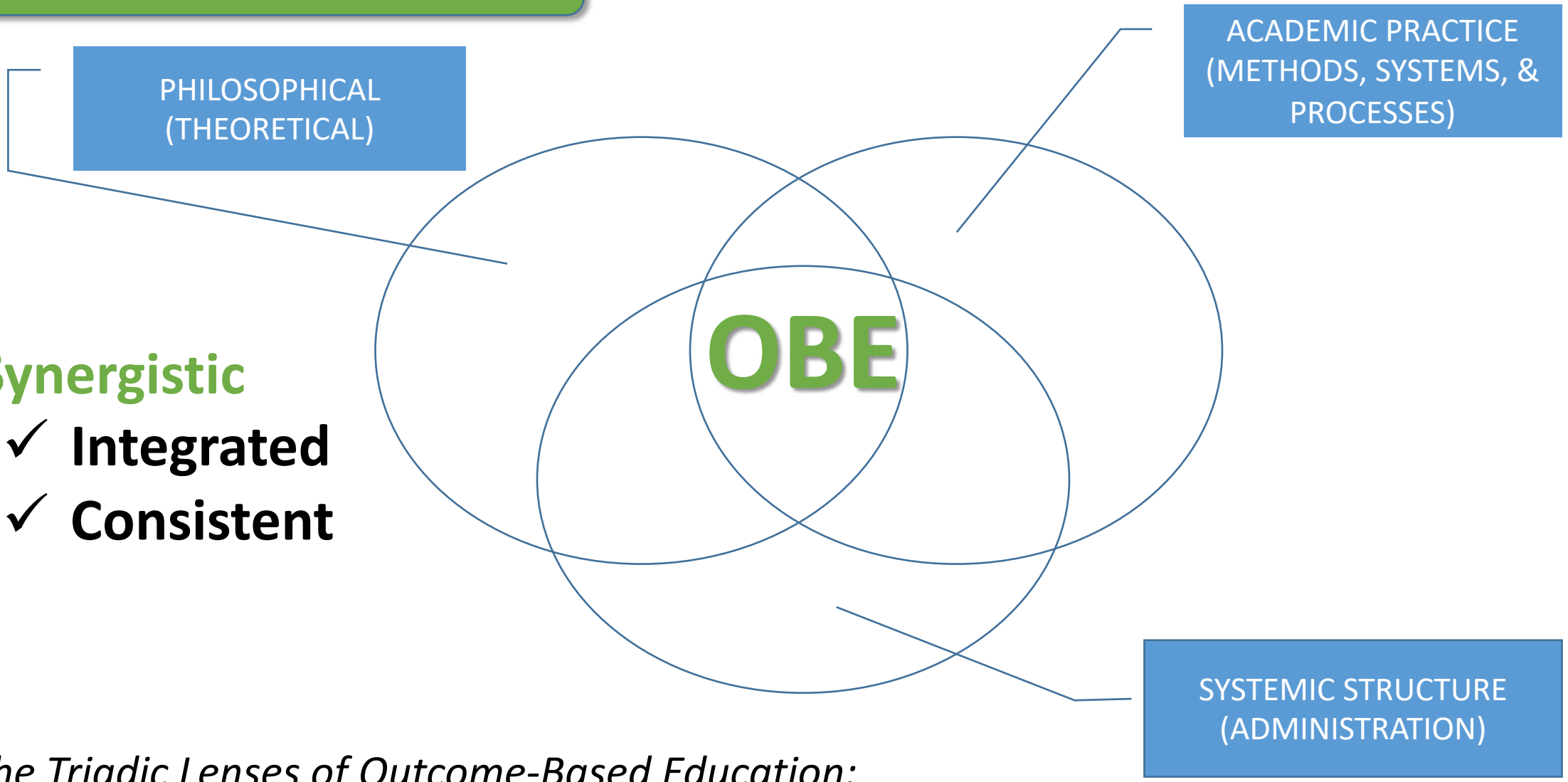
Being Outcomes-Minded

What should be the sequence of developing these outcomes?

- Which one should be developed first, next, and last?



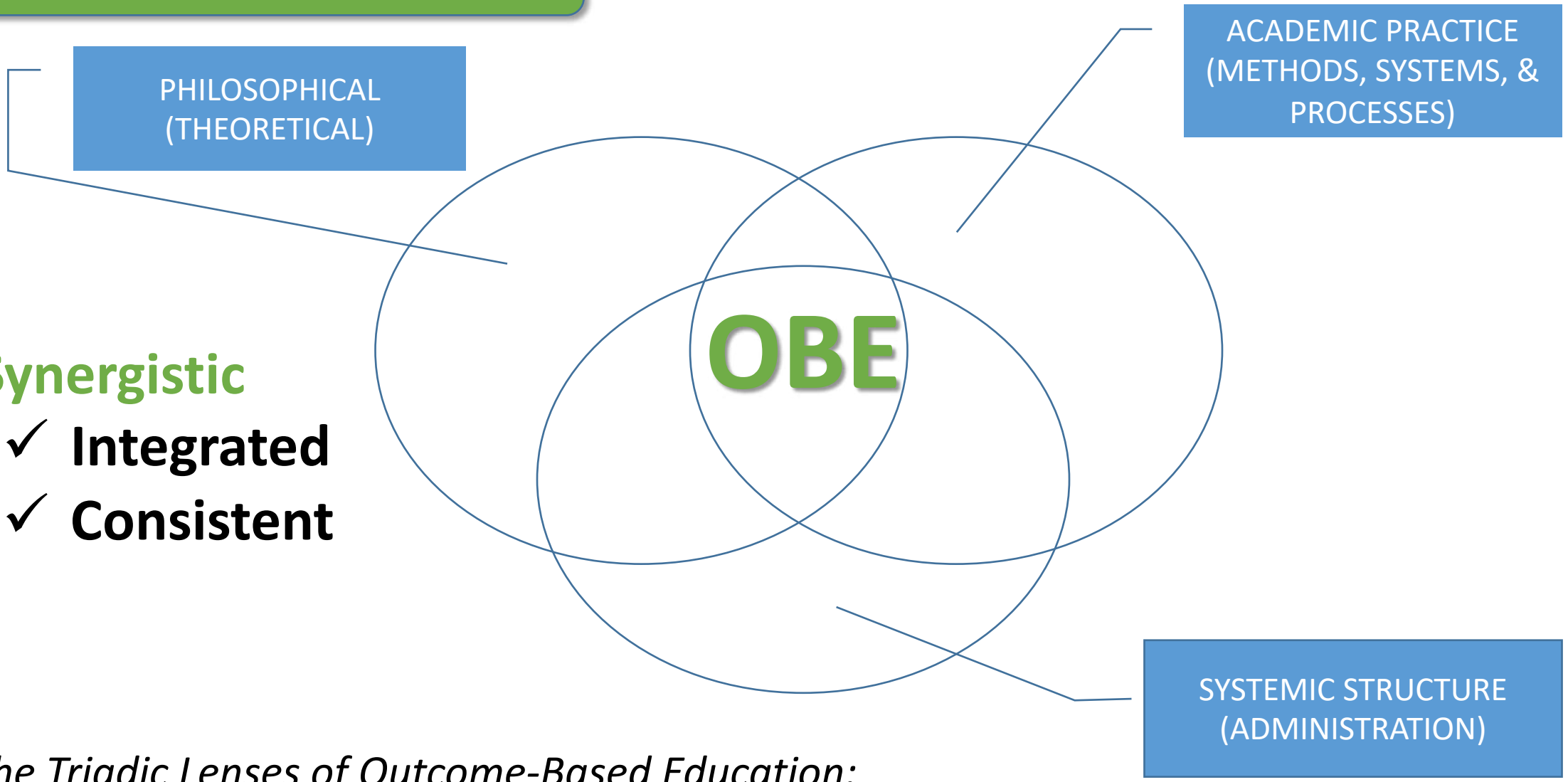
Know and Understand OBE



- **Synergistic**
  - ✓ **Integrated**
  - ✓ **Consistent**

The Triadic Lenses of Outcome-Based Education: An Implementation Model

Know and Understand OBE



- **Synergistic**
  - ✓ **Integrated**
  - ✓ **Consistent**

The Triadic Lenses of Outcome-Based Education: An Implementation Model

OBE'S OPTIMISTIC and FUTURE-ORIENTED PHILOSOPHY:

"SUCCESS FOR ALL"

<u>What and Whether students learn successfully</u> is more important than When and How they learn it…

3 PHILOSOPHICAL PREMISES OF OBE

The Philosophy of OBE

The Basic Premises of OBE :

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

P.2. Successful **learning** promotes even more successful learning ("Success breeds success").

P.3. The **schools** (and teachers) control the conditions that determine whether or not students are successful at school learning

4 OPERATING PRINCIPLES OF OBE

Clarity of Focus

The focus is on the OUTCOME; thus,

- The way OUTCOMES are stated should be clear and precise.
- This guides education implementers (educators and administrators) in the *planning*, *execution*, and *evaluation* of the academic interventions.
- More importantly, this helps students in their *preparation*, *engagement*, and *demonstration* of learning.

High Expectations

- As we ***clarify the focus*** of education by clearly and precisely stating the desirable OUTCOMES, we are at the same time setting the criteria of performance that will be used to assess the quality of demonstration of these outcomes.
- **High and Challenging Standard of Performance**

High Expectations

- As we ***clarify the focus*** of education by clearly and precisely stating the desirable OUTCOMES, we are at the same time setting the criteria of performance that will be used to assess the quality of demonstration of these outcomes.
- **High and Challenging Standard of Performance**

RUBRIC OF PERFORMANCE

EXCELLENT

VERY GOOD

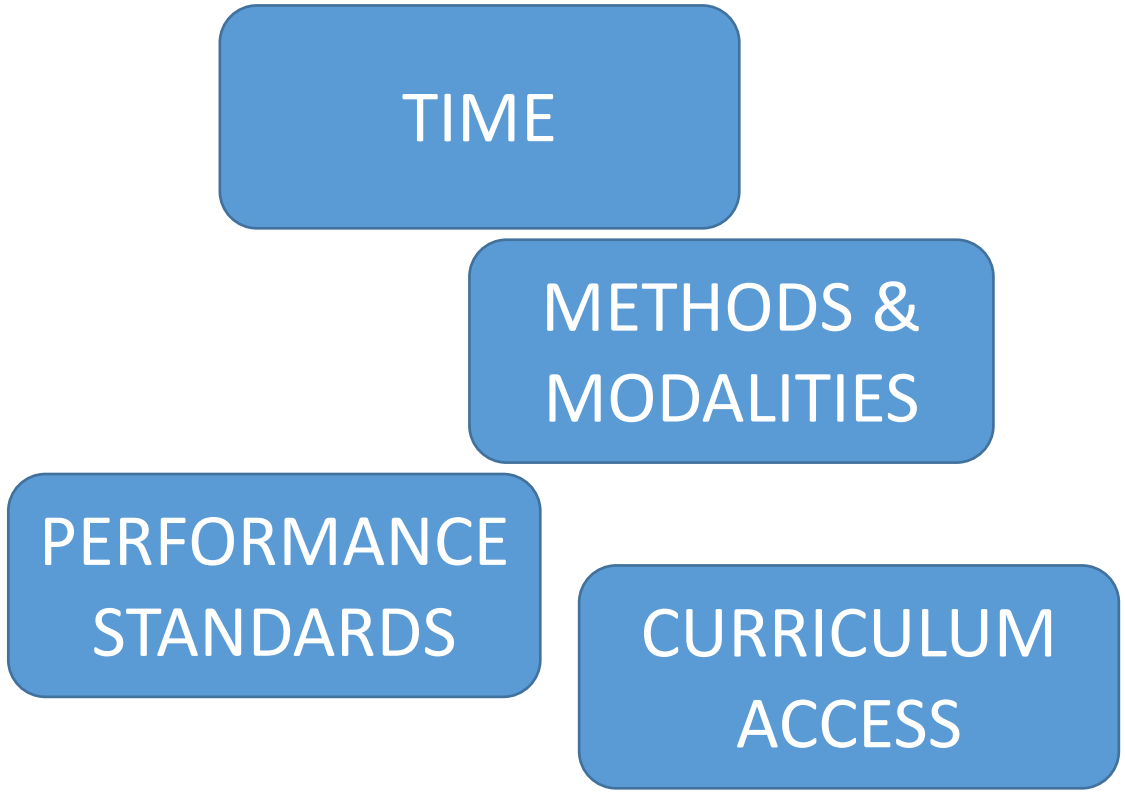
GOOD

FAIR

POOR

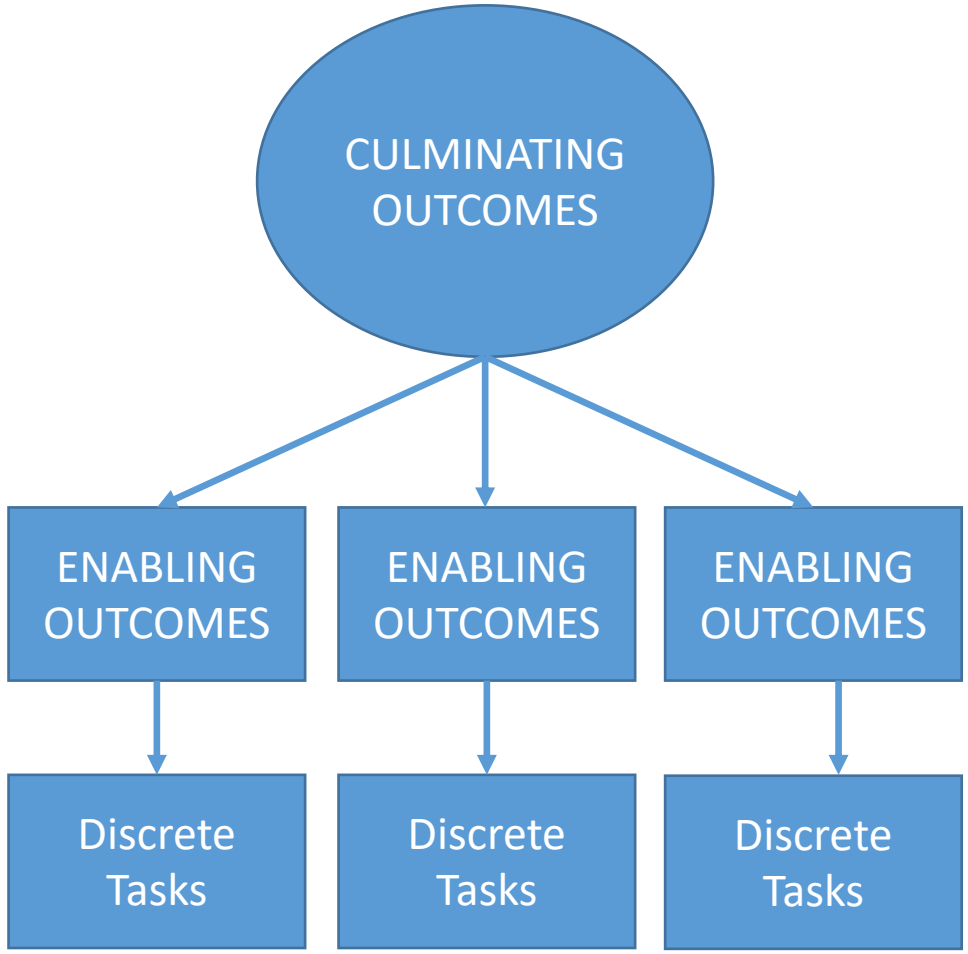
Expanded Opportunities

- As we ***clarify the focus*** of education (Outcomes) and set ***high expectations*** to a level of challenging standards of performance, we should also consider accommodating diversities among learners and expand their opportunities to ensure successful attainment of desirable outcomes.



Design Down

- In order to ensure successful attainment of desirable **OUTCOMES** that we have ***clarified as the focus of education***, that we have ***set using high standards***, and that we are implementing flexibly by ***expanding students' opportunities***, we should identify and state these outcomes using the **TOP – DOWN** approach.



C – Clarity of Focus

H – High Expectations

E – Expanded Opportunities

D – Design Down

BEING OUTCOMES MINDED:
Setting-up an OBE System

SHOULD BE ADDRESING THE DESIRABLE OUTCOMES OF EDUCATION

Step #1
State & Define the Culminating Outcomes

CULMINATING (Ultimate/Exit Level)

- **Mission Statements**

University X
Mission Statement
The school aims to provide students with significant learning experiences that will enable them to:

a. Independently and collaboratively work in multidisciplinary and multicultural contexts.

A **mission statement** is a public declaration that schools or other educational organizations use to describe their founding purpose and major organizational commitments—i.e., what they do and why they do it. A mission statement may describe a school's day-to-day operational objectives, its instructional values, or its public commitments to its students and community.

- **In OBE, mission statements** are broader goal statements that should transcend education outcomes and reflect qualities (i.e., competencies and skills) that graduate will manifest in a real life setting.

BEING OUTCOMES MINDED:
Setting-up an OBE System

University X

Mission Statement

The school aims to provide students with significant learning experiences that will enable them to:

a. Independently and collaboratively work in multidisciplinary and multicultural contexts.

At the end of the program, students should be able to successfully demonstrate the following competencies:

1. Communicate proficiently both oral and written across various contexts: socio-cultural, organizational, and interpersonal levels.

Step #1
State & Define the Culminating Outcomes

SHOULD BE BASED FROM THE CULMINATING OUTCOMES (MISSION STATEMENTS)

Step #2
Determine the Specific Program Outcomes: competencies/skills to be demonstrated

Fundamental Rules in Writing Outcome Statements

- Use Specific Action Words that are demonstrable (Concrete & Measurable)

✓ Example:
- *Evaluate, Synthesize, Design, Create, Deliver, Solve, Construct, etc.*

- Avoid abstract words that cannot not be easily measured/observed or open to different interpretations

✗ Example:
- *Know, Appreciate, Understand, Enjoy, etc.*

BEING OUTCOMES MINDED:
Setting-up an OBE System

University X
Mission Statement
The school aims to provide students with significant learning experiences that will enable them to:

a. Independently and collaboratively work in multidisciplinary and multicultural contexts.

At the end of the program, students should be able to successfully demonstrate the following competencies:

1. Communicate proficiently both oral and written across various contexts: socio-cultural, organizational, and interpersonal levels.

DESIGN DOWN PRINCIPLE

Step #1
State & Define the Culminating Outcomes

Step #2
Determine the Specific Program Outcomes: competencies/skills to be demonstrated

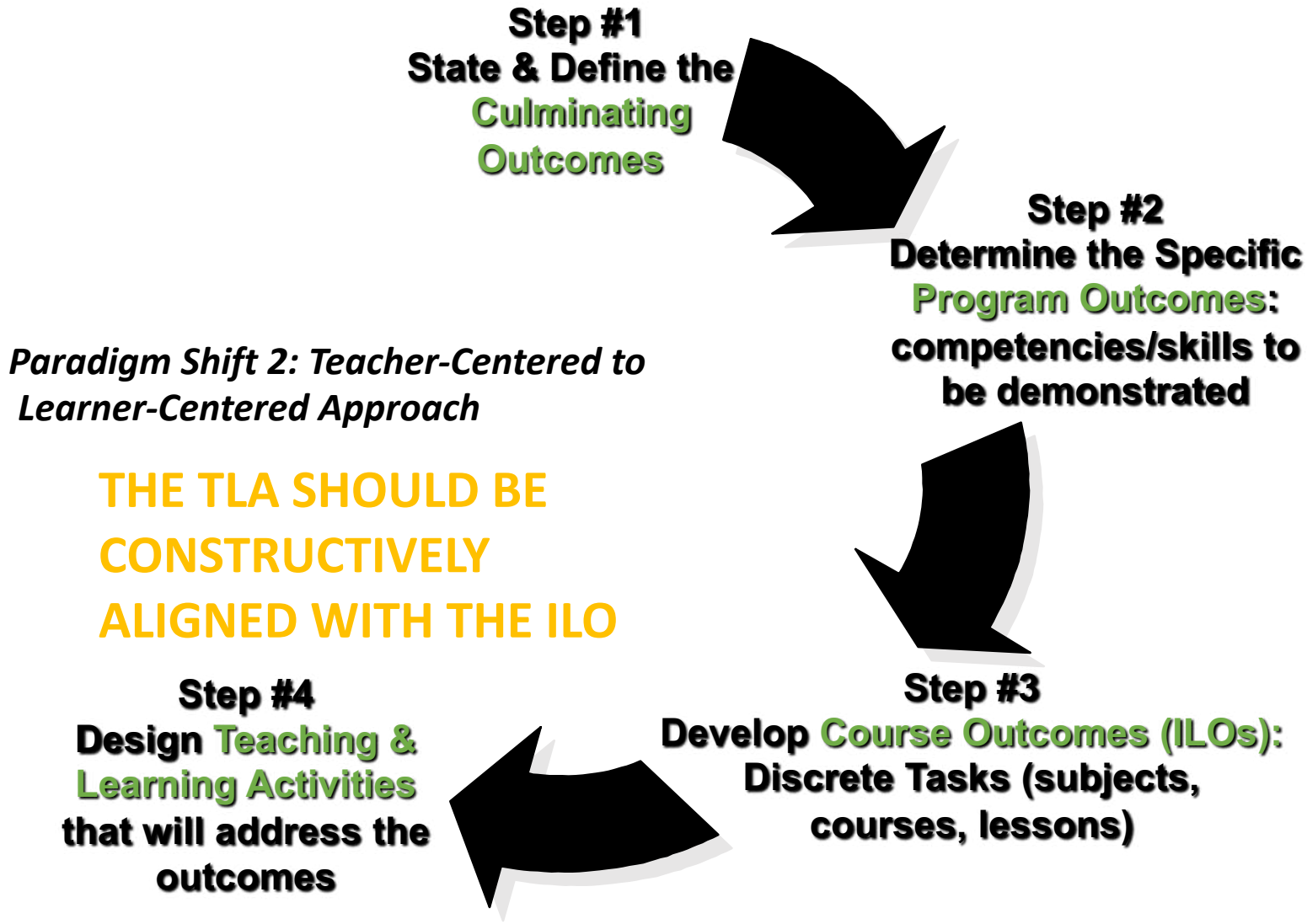
Apply the Fundamental Rules in Writing Outcome Statements

SHOULD BE CONSISTENT WITH THE HIGHER OUTCOMES

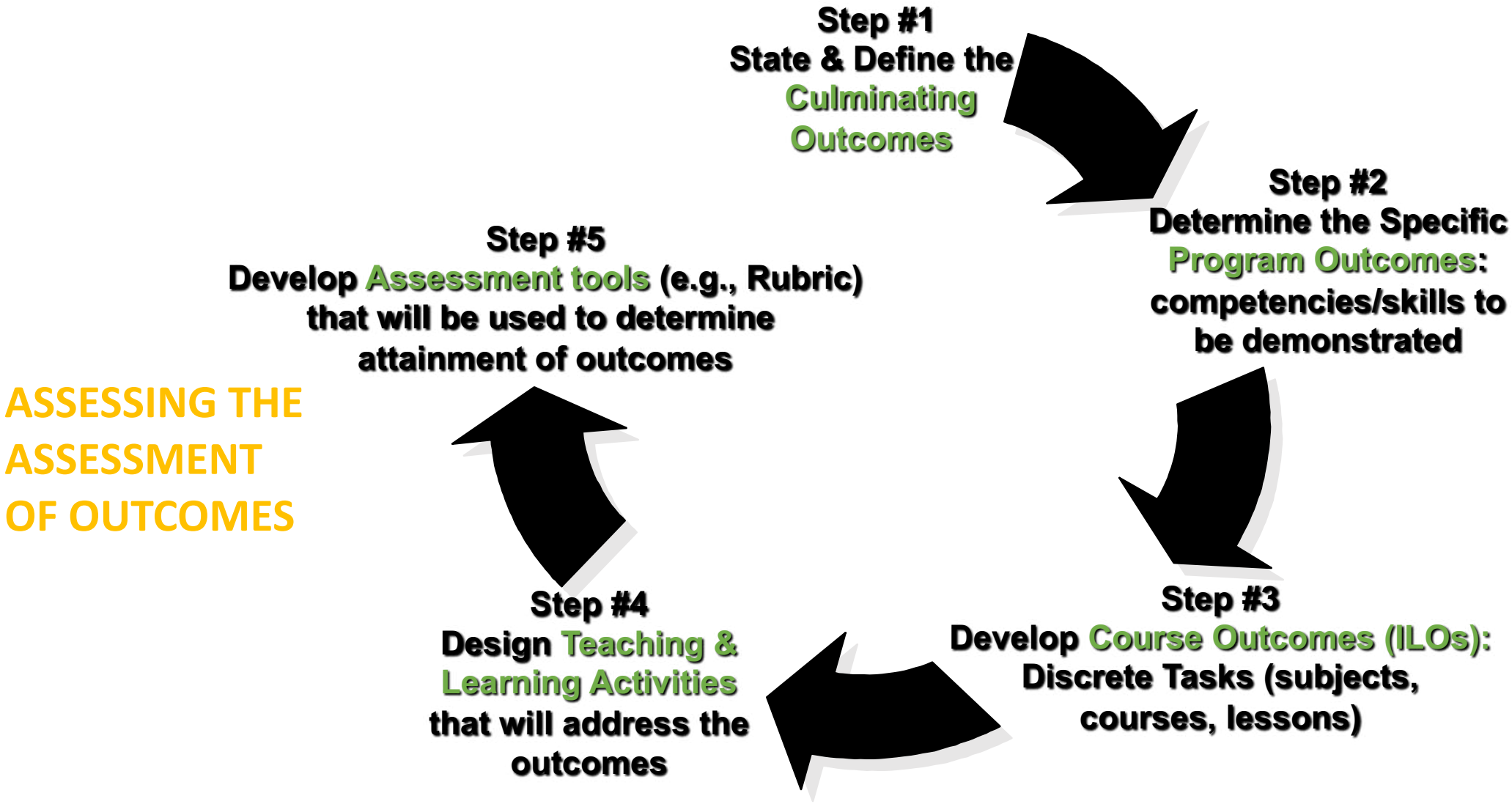
Step #3
Develop Course Outcomes (ILOs): Discrete Tasks (subjects, courses, lessons)

At the end of the course (Communication Skills), students should be able to:
1. Express fluently thoughts and ideas through oral conversation and written correspondence for various purposes

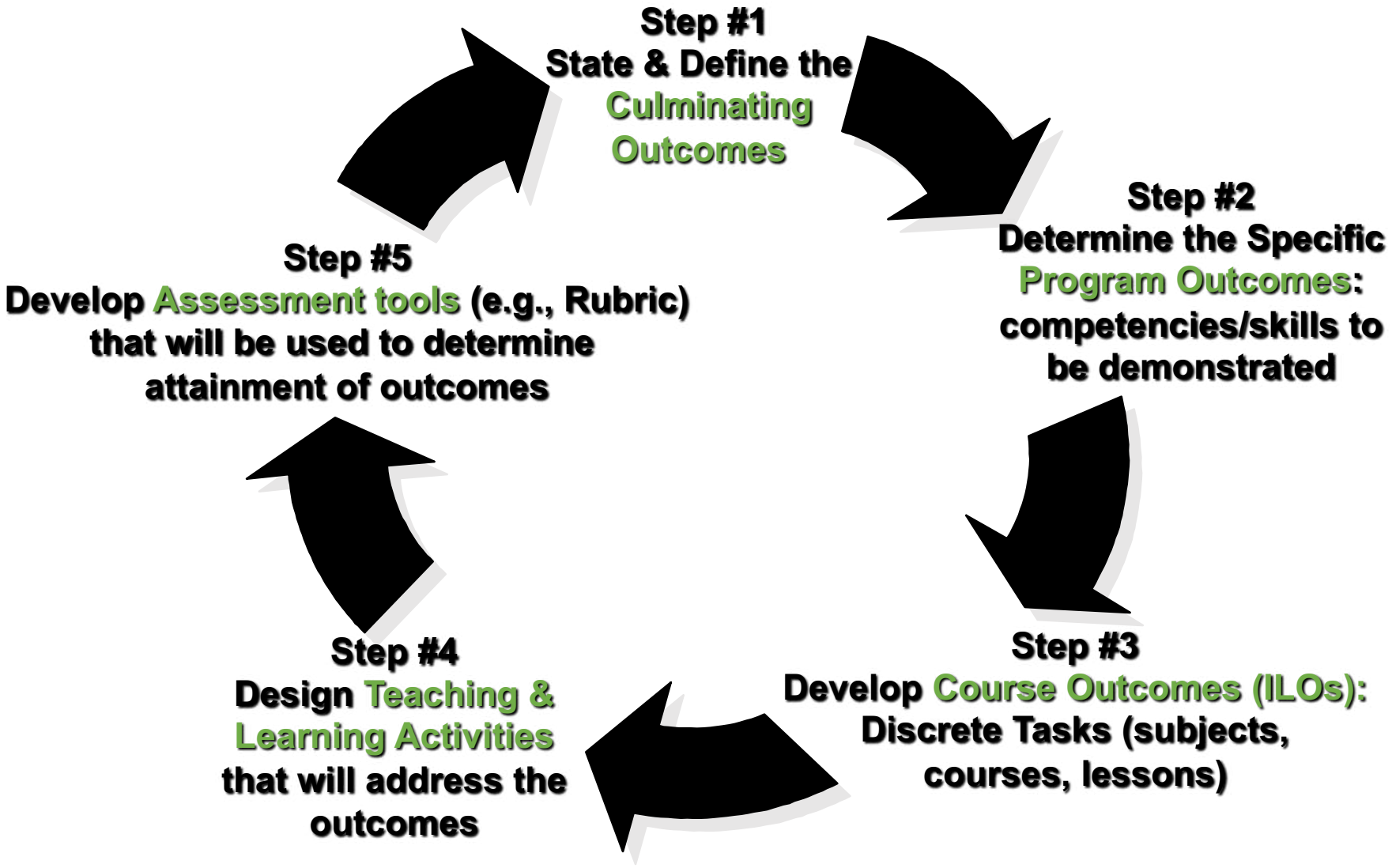
BEING OUTCOMES MINDED:
Setting-up an OBE System



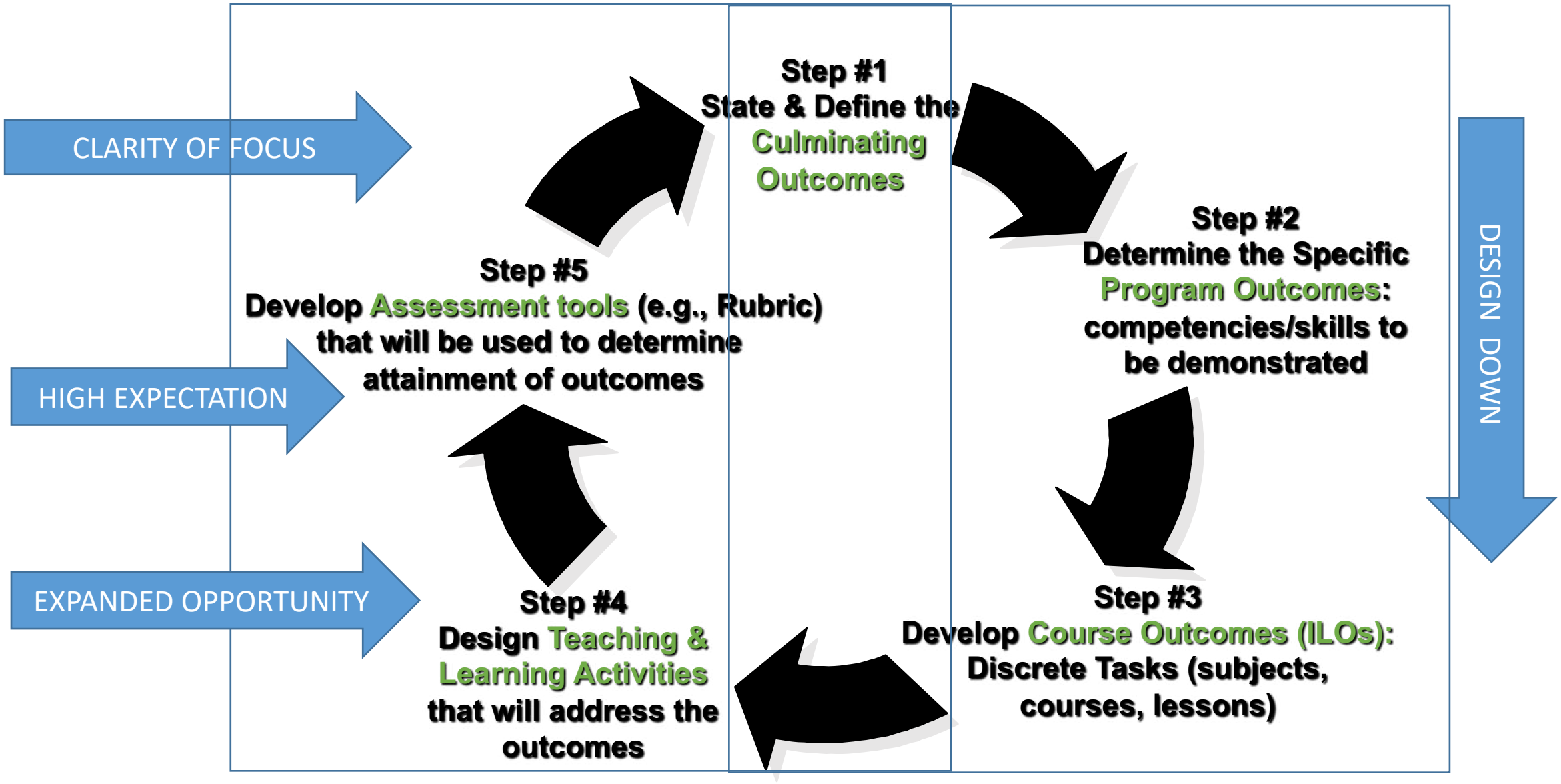
BEING OUTCOMES MINDED:
Setting-up an OBE System



BEING OUTCOMES MINDED:
Setting-up an OBE System



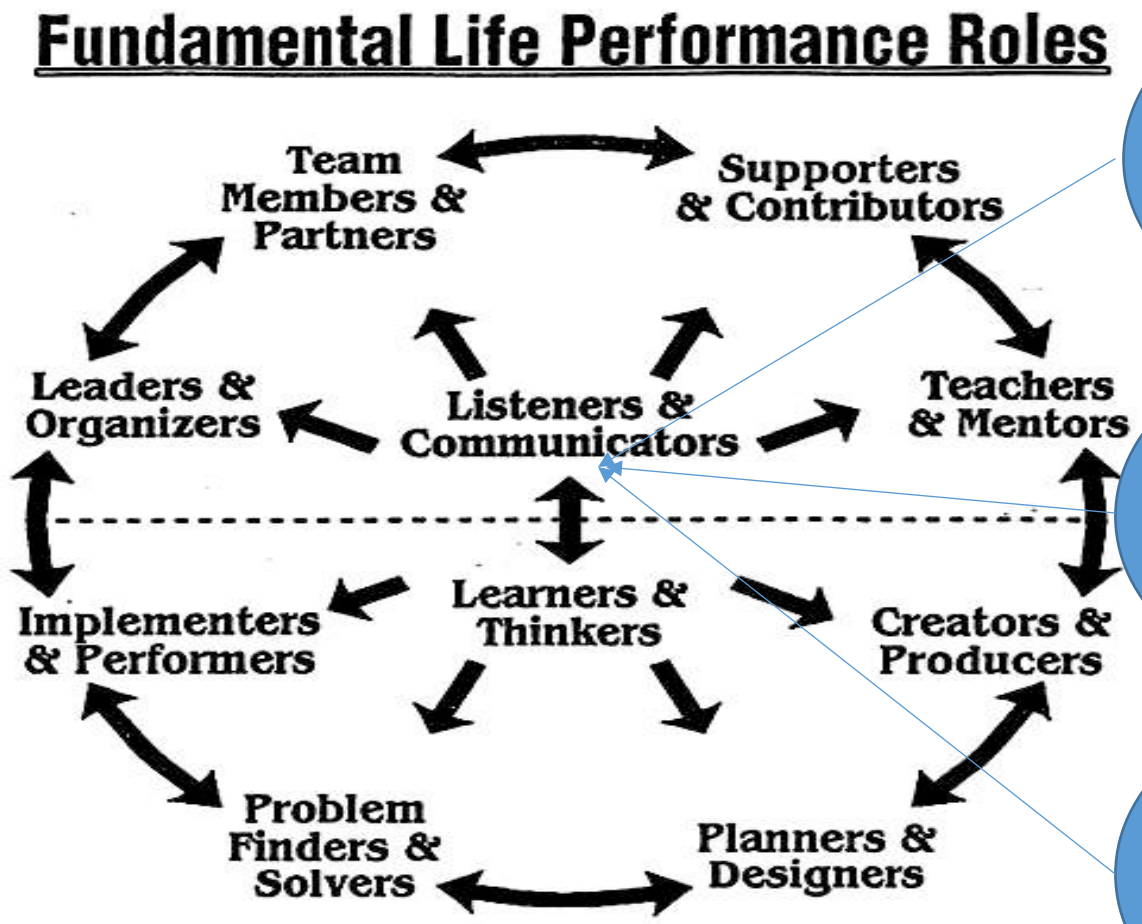
BEING OUTCOMES MINDED:
Setting-up an OBE System

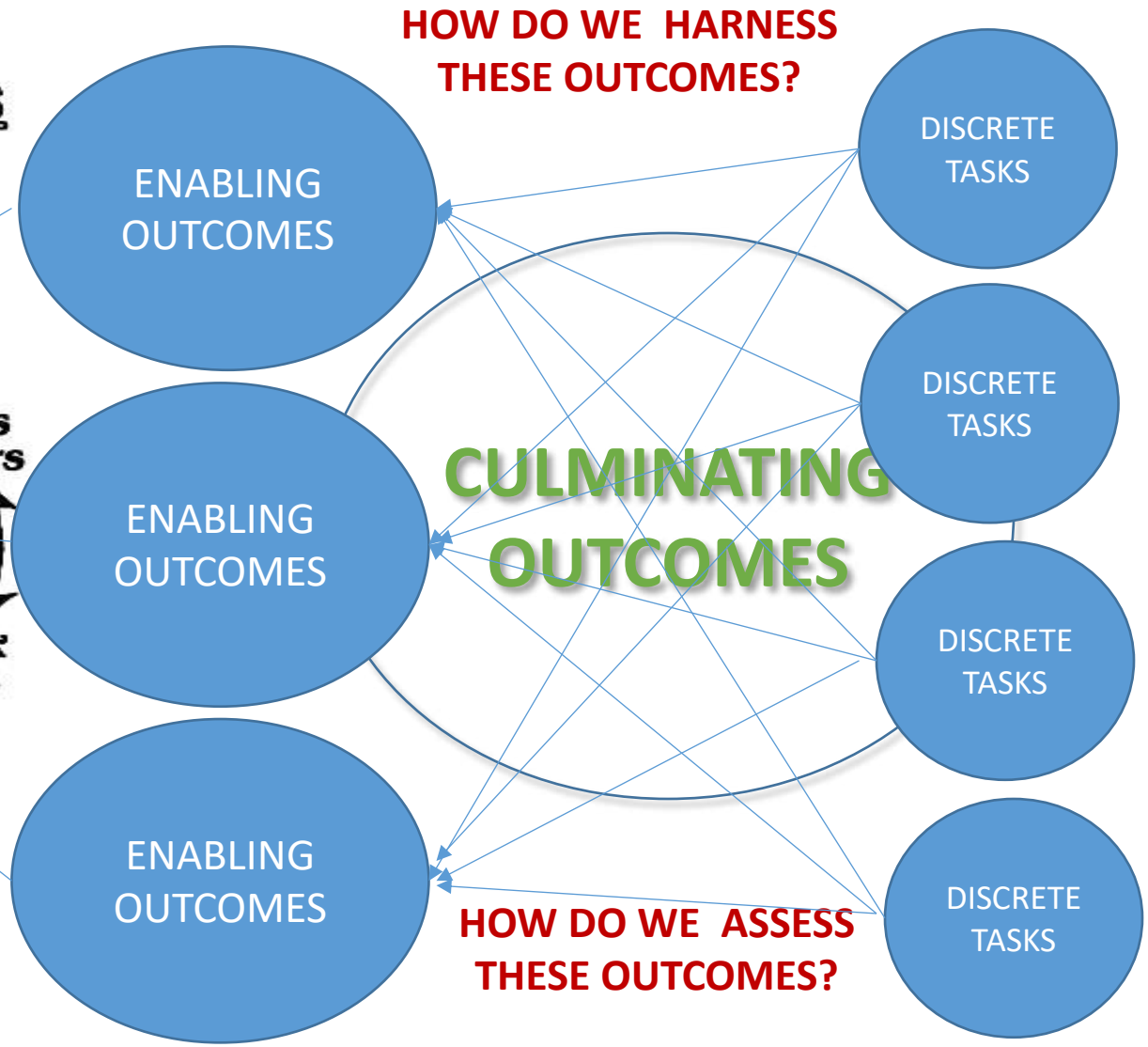


Spady's Model: Levels of Outcomes

The Culminating Outcomes

Should serve as the primary and principal bases of lower outcomes (Enabling and Discrete)



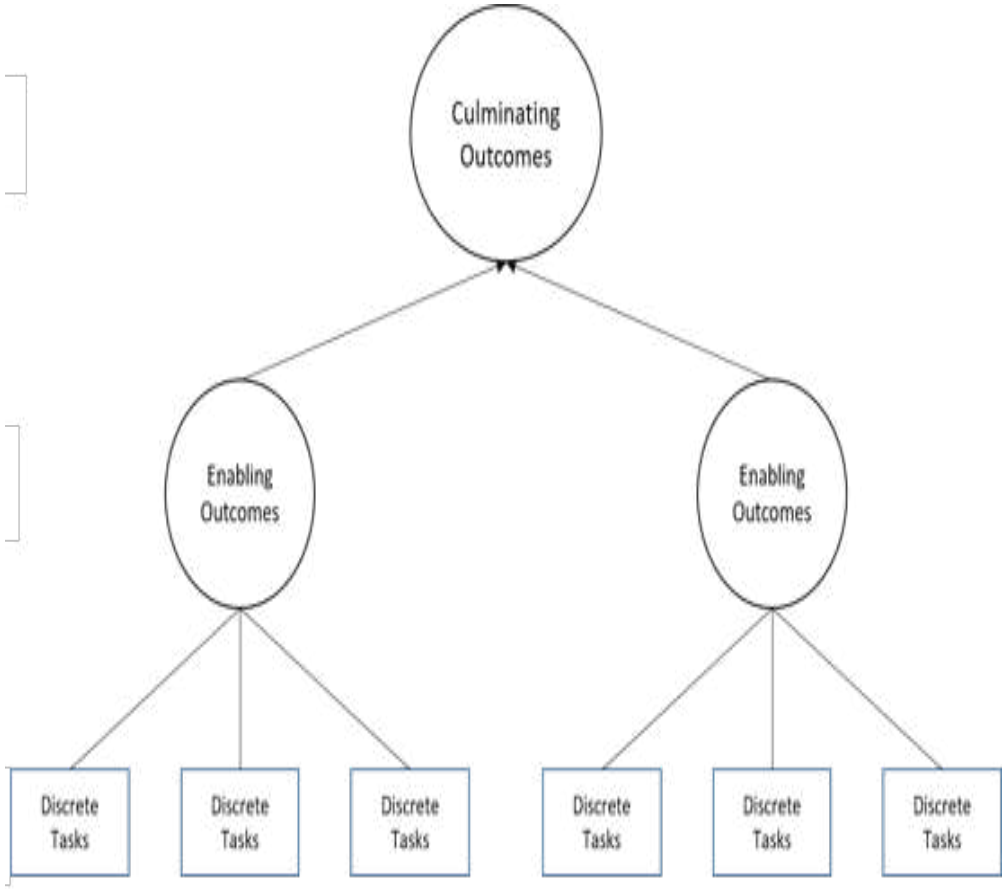


The Culminating Outcomes

Should serve as the primary and principal bases of lower outcomes (Enabling and Discrete)

Consider this question:

- What kind of person would you want your graduates to be like in the future?
  - As a COMMUNICATOR
  - As a THINKER
  - As a PERFORMER
  - As a PROFESSIONAL
  - As a LEADER



Self-Evaluation Matrix

	Educational Systems and Process	OBE Premises			Operating Principles			
		P1	P2	P3	C	H	E	D
1	Institutional Goals and Objectives							
2	Faculty							
3	Instruction							
4	Plant and Facilities							
	(a) Laboratories							
5	Student Services							
	(a) Library							
6	Social and Community Involvement							
7	Research							
8	Organization and Administration							

Self-Evaluation Matrix

	Educational Systems and Process	OBE Premises			Operating Principles			
		P1	P2	P3	C	H	E	D
1	Institutional Goals and Objectives							
2	Faculty							
3	Instruction							
4	Plant and Facilities							
	(a) Laboratories							
5	Student Services							
	(a) Library							
6	Social and Community Involvement							
7	Research							
8	Organization and Administration							

Premise No. 1. ***All students can learn and succeed, but not all in the same time or in the same way.***

How do schools adhere with P1 of OBE?

- ***Mission and Vision Statements in adherence with premises of OBE***
- ***Organizational Values in adherence with premises of OBE***
- ***Institutional Policies in adherence with premises of OBE***

Self-Evaluation Matrix

	Educational Systems and Process	OBE Premises			Operating Principles			
		P1	P2	P3	C	H	E	D
1	Institutional Goals a							
2	Faculty							
3	**Instruction**							
4	Plant and Facilities							
	(a) Laboratories							
5	Student Services							
	(a) Library							
6	Social and Community Inv							
7	Research							
8	Organization and Administration							

Clarity of Focus

High Expectation

Expanded Opportunities

Design Down

How are INSTRUCTIONS framed in adherence with the Operating Principles of OBE?

- ***Documents of practices***
- ***Sample evidences***

Course Syllabus

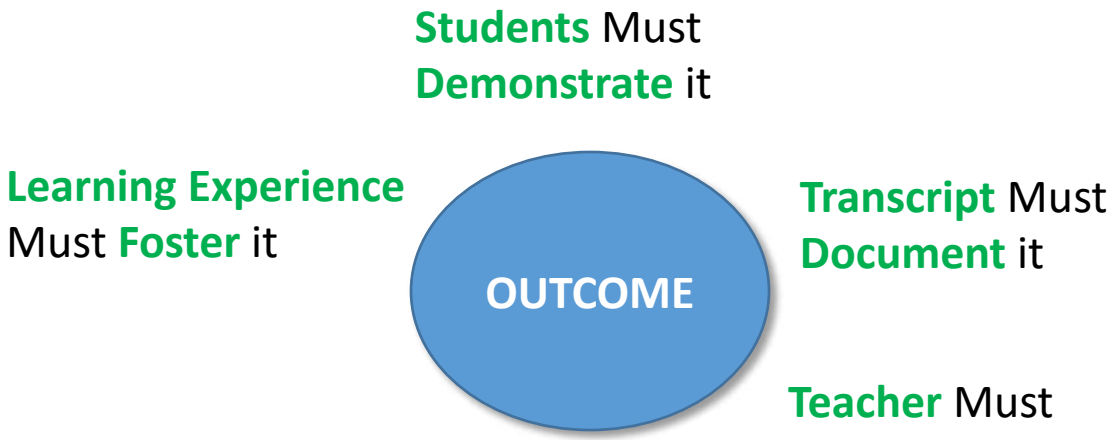
Classroom Observation Form

Sample Course Materials

Sample Students Outputs

OBE Laws of Alignment

*Everything (in the educative processes) Must **MATCH** the **Action Verbs** in the **Outcome** **Statements***



VALID

Assessment Must **Measure** it

RELIABLE

ON NUMERIC GRADES

"Not everything that can be COUNTED really COUNTS, and not everything that COUNTS can be COUNTED…"

W.B. Cameron

Thank You for Listening!