Sri Lanka Institute of Information Technology

STAFF DEVELOPMENT PROGRAMME

Curriculum Development & Revision

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University of Peradeniya

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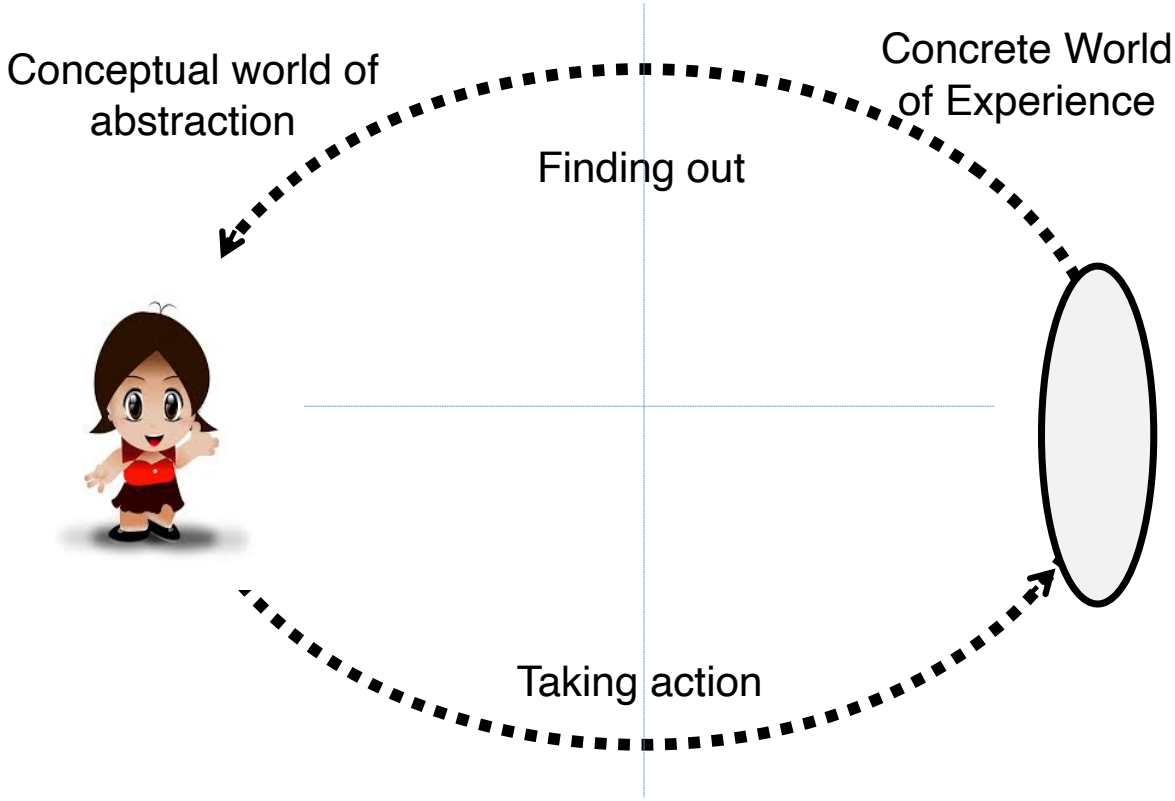
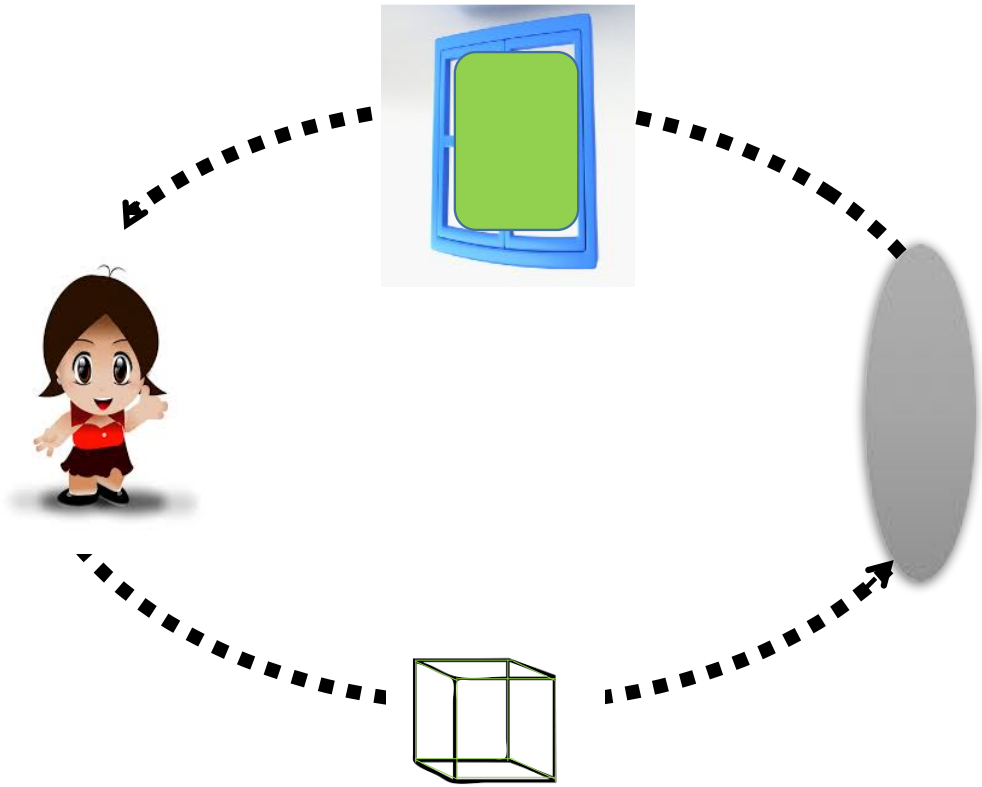
What we “do” in the world is essentially how we “see” it

The Process of Inquiry



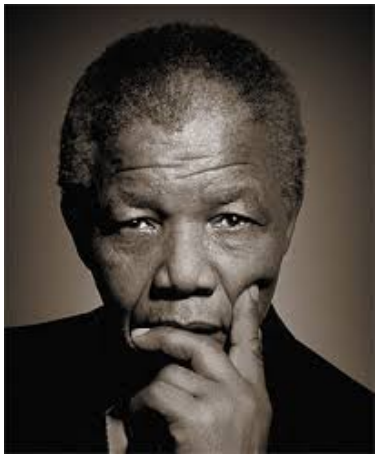
Make Graduates with a Global Worldview



Global worldview

“ Education is the most powerful weapon which you can use to change the world ”

Nelson Mandela

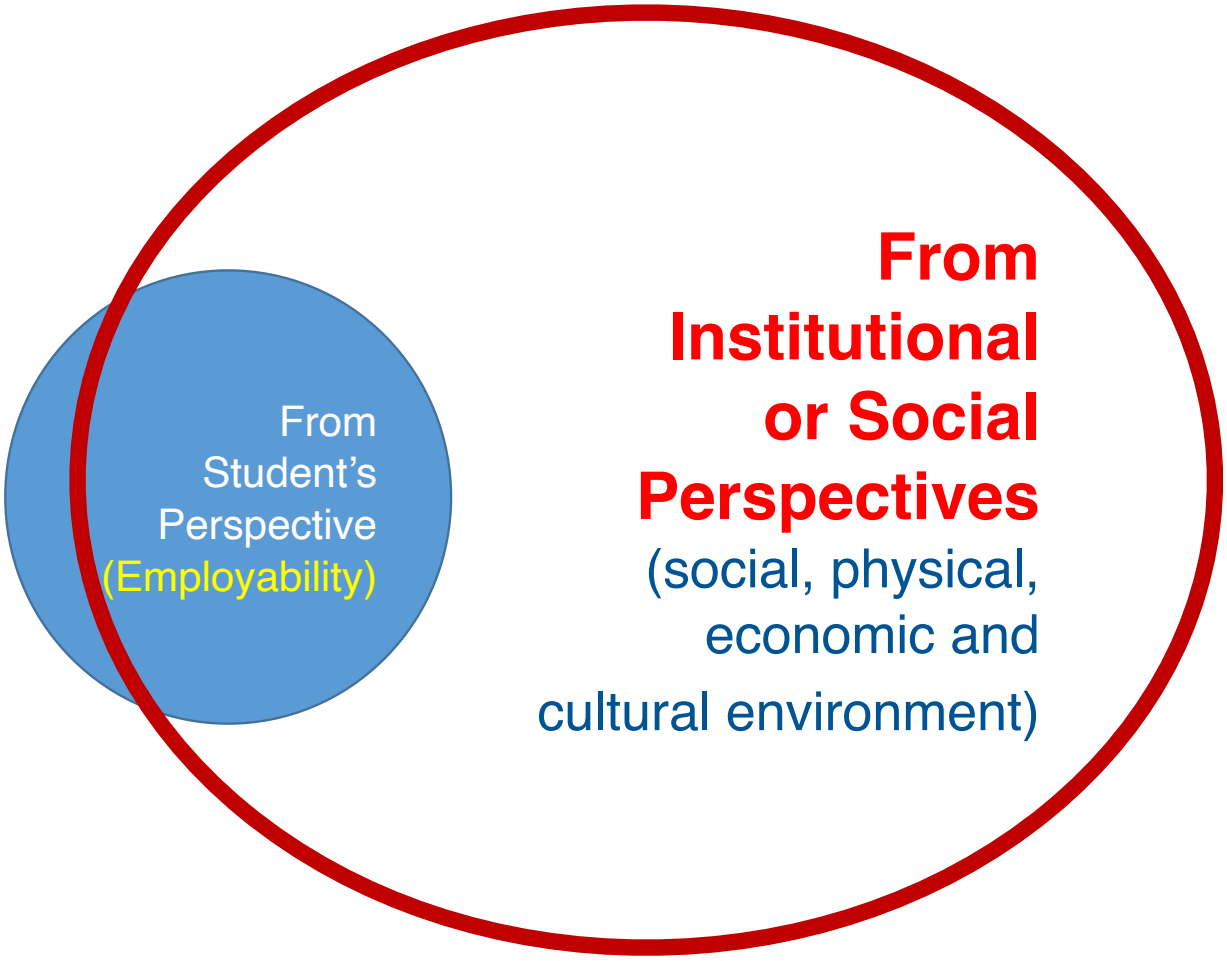


In the broader social context: Logic Model

Inputs	T-L processes (Activities)	Outputs	Outcomes
What we put in	What happens in the University	Production from the University	Immediate result in the society
E.g.: The intake Human and physical resources Infrastructure Etc.	E.g.: # of lectures/ Practicals/ Exams Etc.	E.g.: # of graduates # of 1st, 2nd classes Etc.	E.g.: High # of graduates getting employed/ being available for employment
			Unemployment Underemployment

Consider the Purpose of Higher Education In Designing Curricula….

?? HEI Survival



OBE:

Clearly

focusing and organizing

everything in an educational system

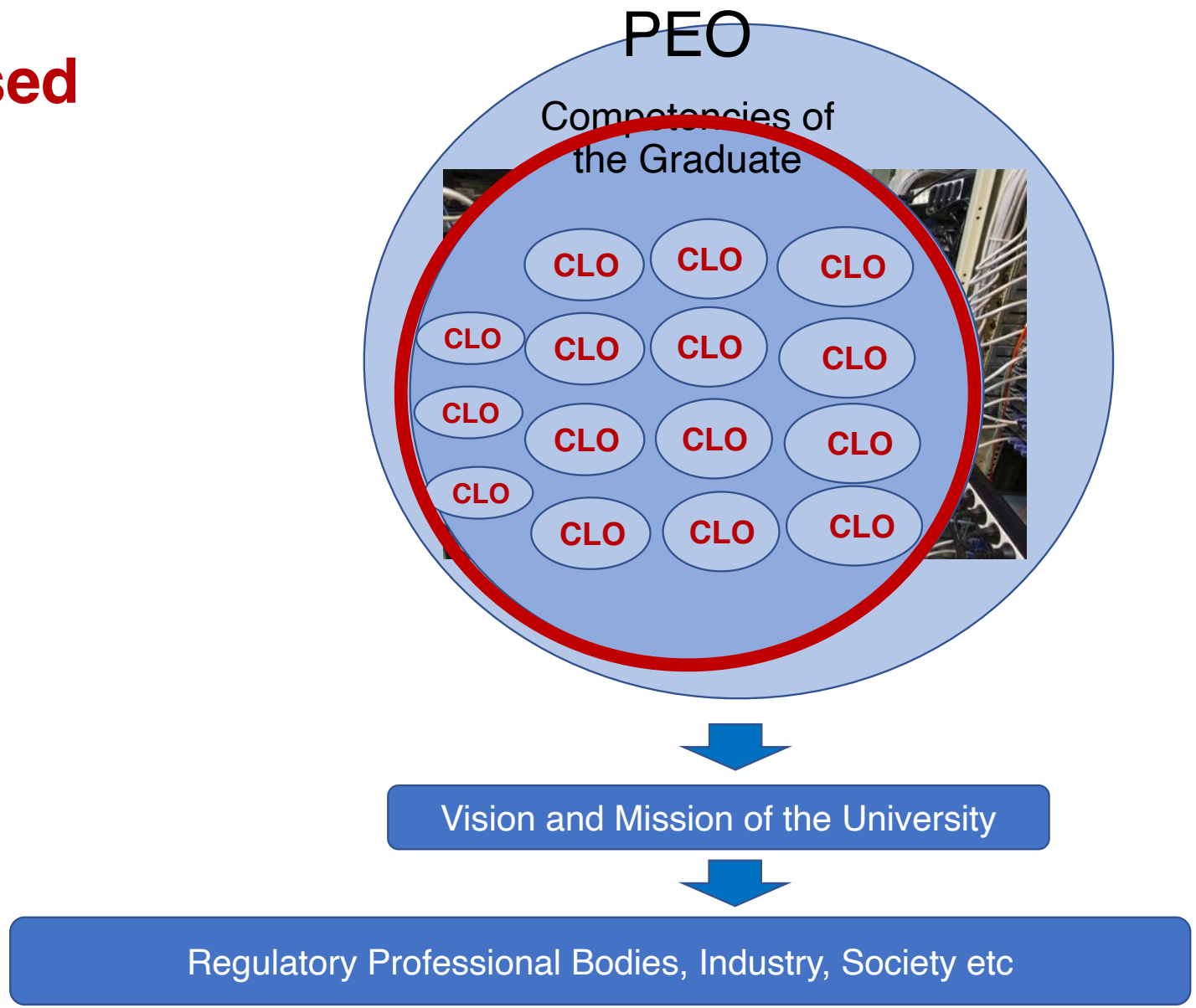
around what is essential for all students to be like

at the end of their learning experiences

not on what is taught, but on what the learner will be able to demonstrate at the end

Outcome Based Education

Through
Student Centered
Learning



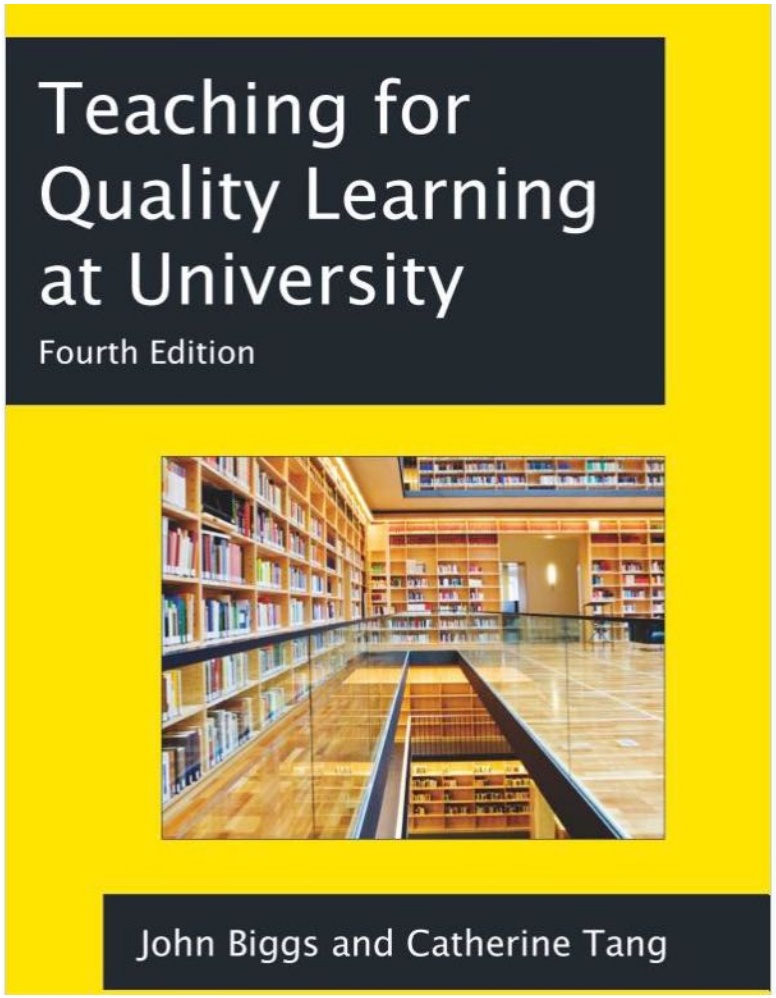
Advantages of OBE

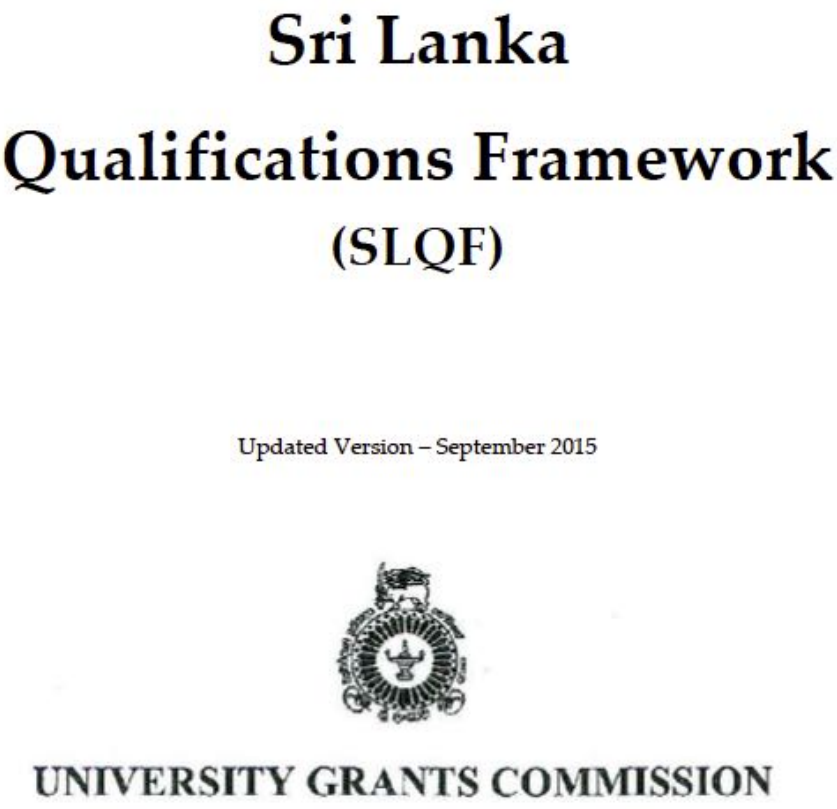
- Many
  - .
  - .
  - .
  - .

- At the end, we cannot say

"I taught them, but they didn't learn"

The Challenge is to design the curricula to promote OBE





http://hust.edu.oak.arvixe.com/media/197963/-John_Biggs_and_Catherine_Tang-_Teaching_for_Quali-BookFiorg-.pdf

A pathway towards a goal!

What is a curriculum?

Curriculum in simplest terms

- It makes teachers clear about
  - **Why (Aims and Objectives)**
  - **What (Content)**
  - **How** they need to
    - **Deliver (Teaching Strategies)** and
    - **Assess (Assessments)**
  - **What to be assessed (ILO)**

Study Program vs Course of Study

- Study Program: The aligned series of courses +all assessments
  - → degree/diploma/certificate

- Course: a unit of teaching that typically lasts one academic term/semester (or an individual subject).
  - → a grade/ academic credit

Structure of the Program

Semester	Code	Course Name	Credits
Sem1	DS1101	Blood and Circulation	4
	DS1102	Cell, Tissues and Molecular Genetics	4
	DS1103	Reproduction and Early Development	2
	DS1104	Respiratory System	2
	DS1105	Thorax and Abdomen	2
	DS1106	Introduction to Dentistry	1 n/GPA*
	DS1107	English 1	1 n/GPA*
Sem2	DS1201	Alimentation and Nutrition	2
	DS1202	Endocrinology, Metabolism & Excretion	3
	DS1203	Head and Neck	3
	DS1204	Nervous System	4
	DS1205	Teeth and Supporting Structures	3
	DS1206	English 2	1 n/GPA*
Sem3	DS2101	Oral Biology	4
	DS2102	Tooth Morphology and Occlusion	3
	DS2103	Human Diseases -1	3
	DS2104	Human Diseases -2	5
	DS2105	Dental Biomaterials	2
Sem4	DS2201	Human Diseases-3	5
	DS2202	Human Diseases-4	5
	DS2203	Introduction to Clinical Dentistry, Ethics & Professionalism	5
Sem5	DS3101	Operative Dental Procedures	6
	DS3102	Population Oral Health 1	2
	DS3103	Introduction to Adult Oral Health	2
	DS3104	Clinical and Diagnostic Oral Sciences 1	2
	DS3105	Child and Adolescent Oral Health Care 1	2
Sem6	DS3201	Population Oral Health 2	2
	DS3202	Management of Adult Dental Diseases	6
	DS3203	Clinical and Diagnostic Oral Sciences 2	4
	DS3204	Child and Adolescent Oral Health Care 2	4
Sem7	DS4101	Adult Oral Health Care 1	6
	DS4102	Clinical and Diagnostic Oral Sciences 3	6
	DS4103	Child and Adolescent Oral Health Care 3	4
	DS4104	Basic Statistics and Research Methodology	2
Sem8	DS4201	Adult Oral Health Care 2	6
	DS4202	Clinical and Diagnostic Oral Sciences 4	6
	DS4203	Child and Adolescent Oral Health Care 4	4
Sem9	DS5101	Adult Oral Health Care 3	4
	DS5102	Comprehensive Oral Care 1	6
	DS5103	Advanced Treatment Clinic 1	3
	DS5104	Research Project	4
Sem10	DS5201	Adult Oral Health Care 4	6
	DS5202	Comprehensive Oral Care 2	6
	DS5203	Advanced Treatment Clinic 2	2
	DS5204	Maxillo-Facial Surgical Care	4

Why revise curricula

- **<u>Most important measure of quality Assurances</u>**
  - **It should be an inner motivation**
- Make it outcome based
- Maintain relevance
- Stay in the competitive education market
- Facilitate arranging logistics/ make delivery effective and efficient
- Stake holder needs/demands
- Incorporate student centered learning/updated T-L methods

Why revise curricula….

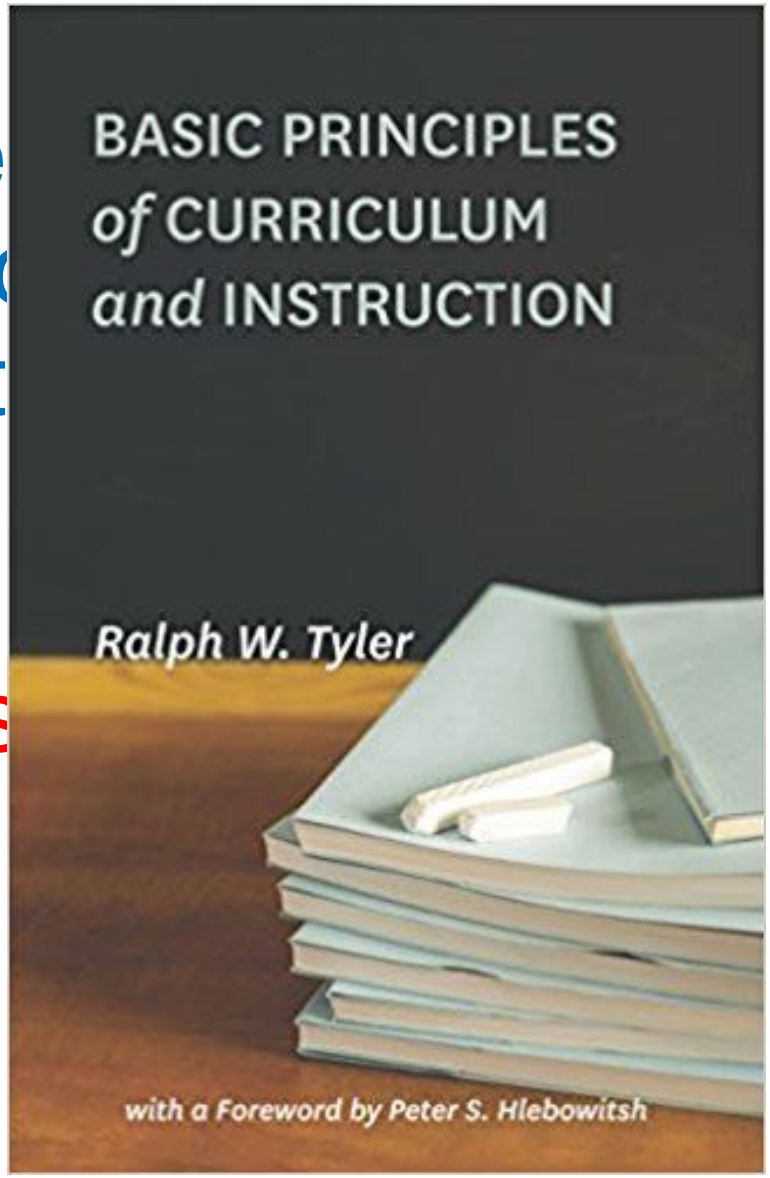
- Improve on the structure and integration
- To correct learning volumes
- To make programs more attractive
- Needs of the country/ world (Changing development plans and economic models)
- Feedback from students/External reviewers
- Years of untamed progression of a program
- **Challenge to your existence**

General Challenges in HE

- Mass higher education,
- Reduced public funding,
- Students are paying and demand more for their education
- Having to trade off between quality and quantity
- Greater diversity among student population. E.g.,
  - At entry level qualifications
  - Language
- Having to meet the demands of financial, academic and vocational reasons of the countries

Learning take
through the ac
of the student

it is,
what he does
learns,
not what the



Ralph W. Tyler (1949)

Four Fundamental Questions

Ralph Tyler

A. What is the educational purpose of the curric
   - What kind of graduate do we need?

B. What experiences should be provi
   - What do they learn?

C. How can this experience be organi
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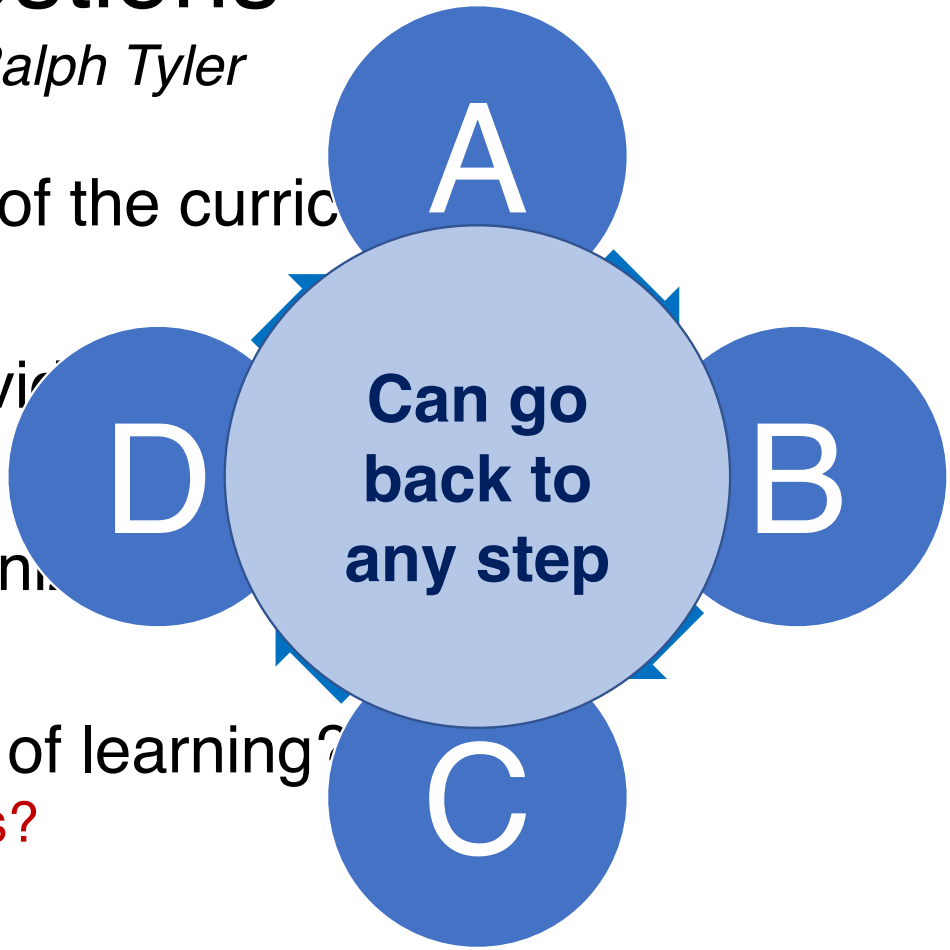
D. How to determine the attainment of learning?
   - How to assess the learning outcomes?



A. What educational purpose shall the curriculum serve?

What kind of individual/employee do we need?

How do we decide? What are the determinants?

1. .
2. .
3. .
4. .
5. .

A. What educational purpose shall the curriculum serve?

What kind of individual/employee do we need?

Need Analysis

Curriculum determinants

1. Graduate Profile
2. Benchmarks
3. Stakeholders feedback (Surveys/ workshops etc..)
    A. Educational advances
    B. Employability
    C. Social and industrial needs & advances
4. National employment generation policies
5. Resources available

Graduate attributes

Wider abilities that the typical student is expected to have developed by the end of the study programme.

Outcomes of the total university experience

Graduate Profile

- The description of graduate attributes that students will develop as outcomes of their learning in the study program

- Can be written at:
  - Institution level
  - Qualification level

E.g.: Sydney Graduate

All stakeholders' views should be considered

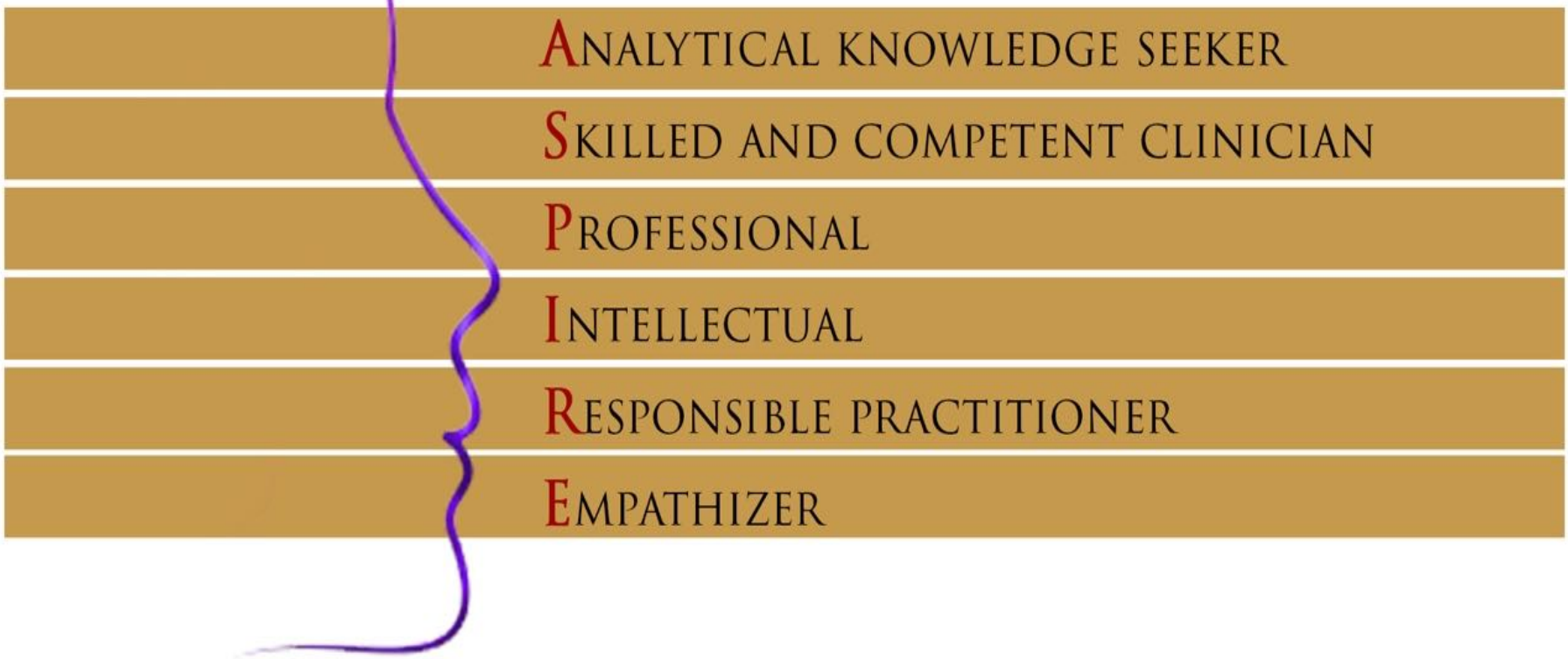
Two levels of graduate attributes

- Three overarching graduate attributes
- Developed through the study program curriculum

These will be interpreted and contextualized differently in different study programs

http://www.itl.usyd.edu.au/graduateAttributes/facultyGA.cfm?faculty=Dentistry

BDS Graduate



1. Analytical Knowledge Seeker

The graduate is equipped with analytical and problem-solving skills and is capable of making rational clinical decisions in dentistry.

2. Skilled and Competent Clinician

The graduate is competent in all skills required in management of dental and oral diseases and conditions. He/she is equipped with relevant generic skills and ready to steer the oral health care team with adequate flexibility.

3. Professional

The graduate is an adaptable, disciplined individual with high ethical and moral integrity. He/she is able to maintain the highest professional conduct.

4. Intellectual

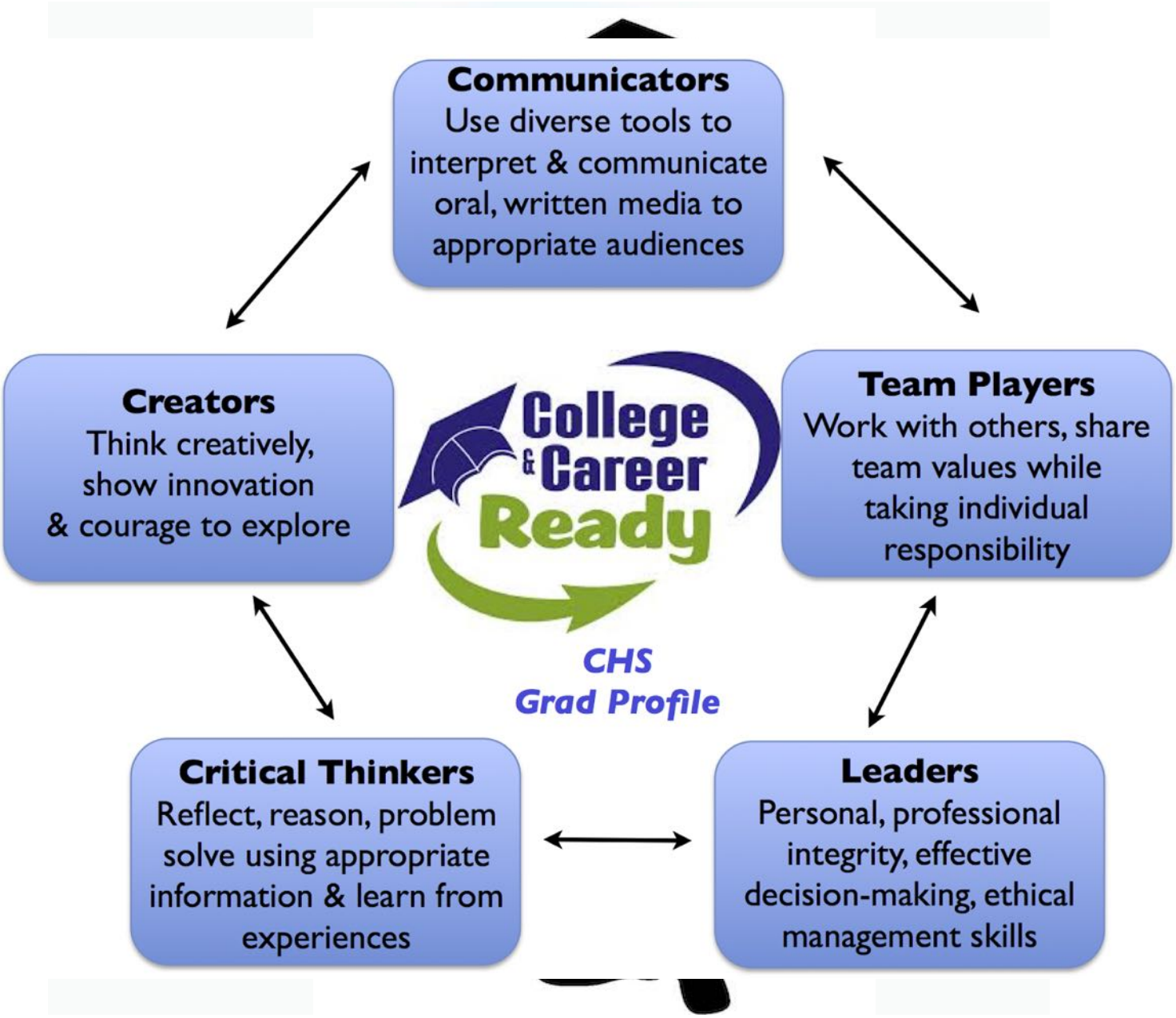
The graduate is an intellectual who is ready for continuous professional development and strives to practice evidence-based dentistry.

5. Responsible Practitioner

The graduate follows guidelines and protocols in clinical dentistry and fulfills all other duties and responsibilities. The graduate is socially responsible, accountable, law abiding and a committed citizen.

6. Empathizer

The graduate is a compassionate, socially and culturally sensitive practitioner.

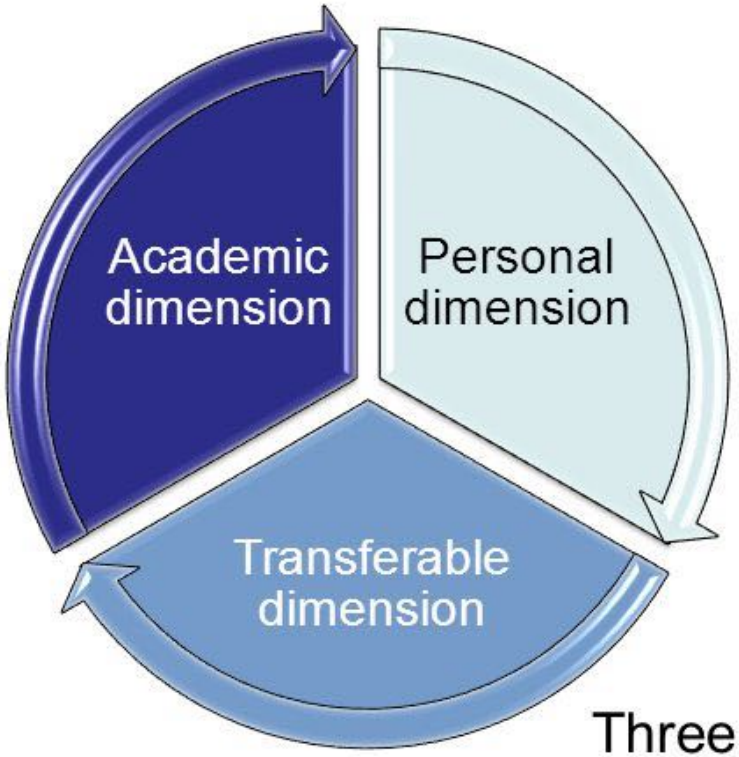

Communicators
Use diverse tools to interpret & communicate oral, written media to appropriate audiences
Creators
Think creatively, show innovation & courage to explore
College & Career Ready
Team Players
Work with others, share team values while taking individual responsibility
CHS
Grad Profile
Critical Thinkers
Reflect, reason, problem solve using appropriate information & learn from experiences
Leaders
Personal, professional integrity, effective decision-making, ethical management skills

University of Glasgow

University of Glasgow's Graduate Attribute Framework

10 Graduate Attributes:

1. Subject specialists
2. Investigative
3. Independent and critical thinkers
4. Resourceful and responsible
5. Effective communicators
6. Confident
7. Adaptable
8. Experienced collaborators
9. Ethically and socially aware
10. Reflective learners



Three inter-dependent dimensions

Written in 3 levels

- Level 1: **Captures the University's overarching strategic aspirations** for all its students. (opportunity to become scholars, innovators, leaders and global citizens)

- Level 2: Six interrelated domains or themes: Disciplinary Knowledge and Practice, Critical Thinking, Solution Seeking, Communication and Engagement, Integrity and Independence and Social and Environment Responsibilities

- Level 3: The way that each qualification interprets and delivers each theme is captured by a set of qualification specific capabilities, referred to as an embedded graduate profile

https://www.auckland.ac.nz/en/students/forms-policies-and-guidelines/student-policies-and-guidelines/graduate-profile.html

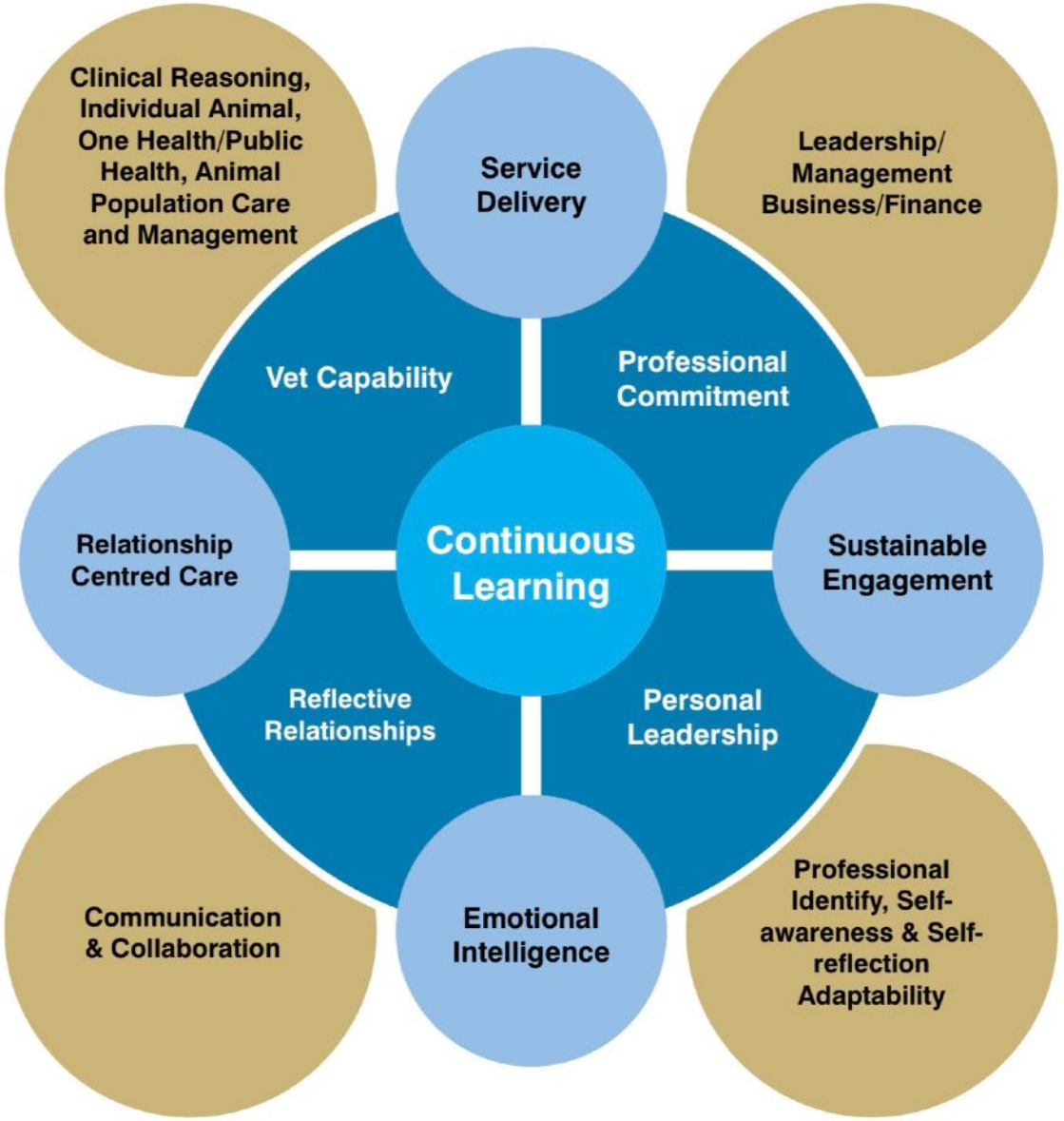
Graduate Profile for the BSc

- **Specialist knowledge**
  - An understanding of concepts, theories and empirical results in their chosen major(s), meeting entry-level requirements of employers in science-based institutions and/or sufficient for progression to post-graduate study.
  - Practical, analytical and/or research skills which enable access to work in a related field and/or progression to post-graduate study.
  - An understanding of scientific methods and approaches, the ability to reason logically, think critically and analytically, and use scientific principles to analyse or solve complex problems.
  - An understanding of current issues and debates in the majoring fields of knowledge.

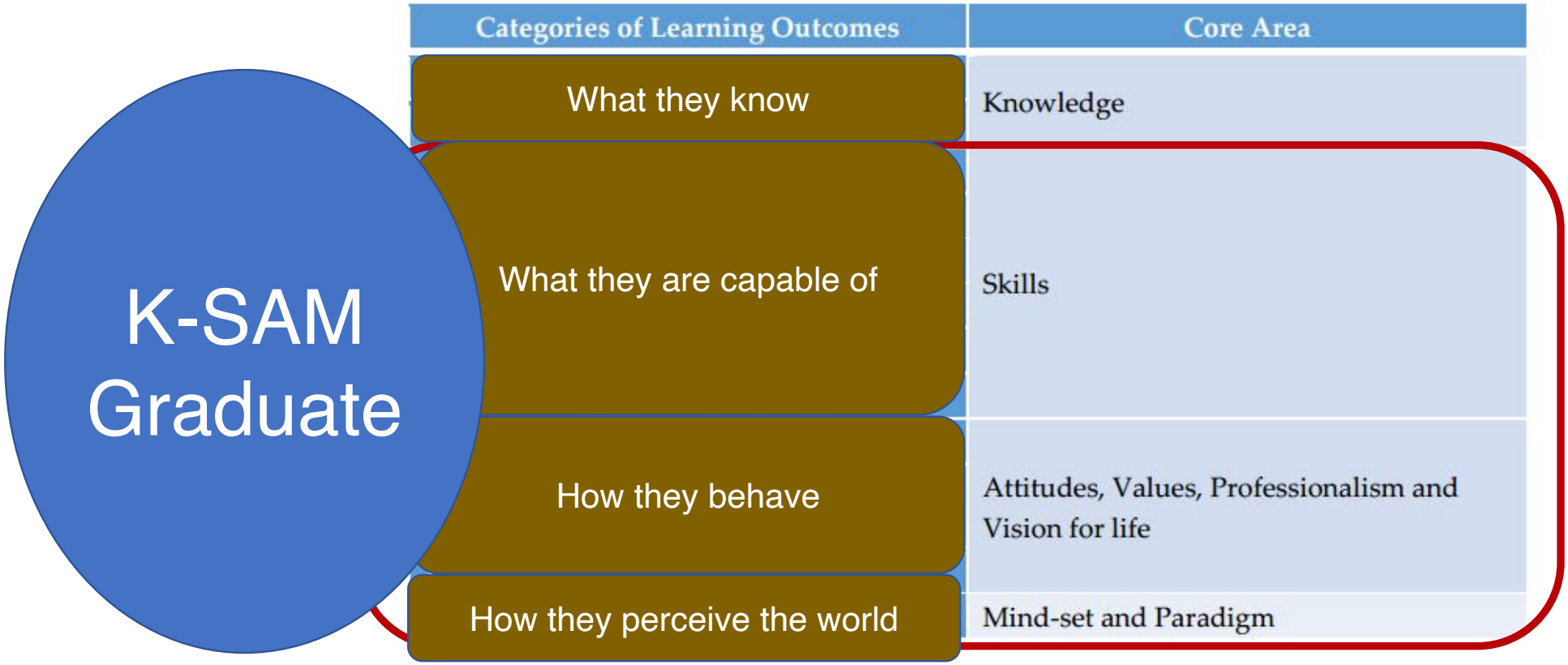
- **General intellectual skills and capacities**
  - An ability to find information, and evaluate it critically. An ability to use, manage, present, and communicate information in English and/or Māori, including with the use of modern information technology.
  - A level of numeracy and computational literacy which enables competent performance of functions expected of a science graduate, and an understanding of qualitative and quantitative information as required.
  - Personal and professional integrity, and respect for the ethics of research and scholarly activity.
  - An awareness of international and global dimensions of intellectual, political and economic activities, and of the distinctive qualities of Āotearoa/New Zealand.

- **Personal qualities**
  - An enthusiasm for ideas, discovery and learning, and intellectual curiosity as a basis for lifelong learning and for an informed contribution to society.
  - An ability to work independently, with the ability and self-discipline to plan and achieve personal and professional goals.
  - An ability to work collaboratively with others, interacting effectively and demonstrating respect for others and an appreciation of human and cultural diversity.
  - An ability to lead in the community, including a willingness to engage in constructive public discourse and accept social and civic responsibilities.

Royal College of Veterinary Surgeons.



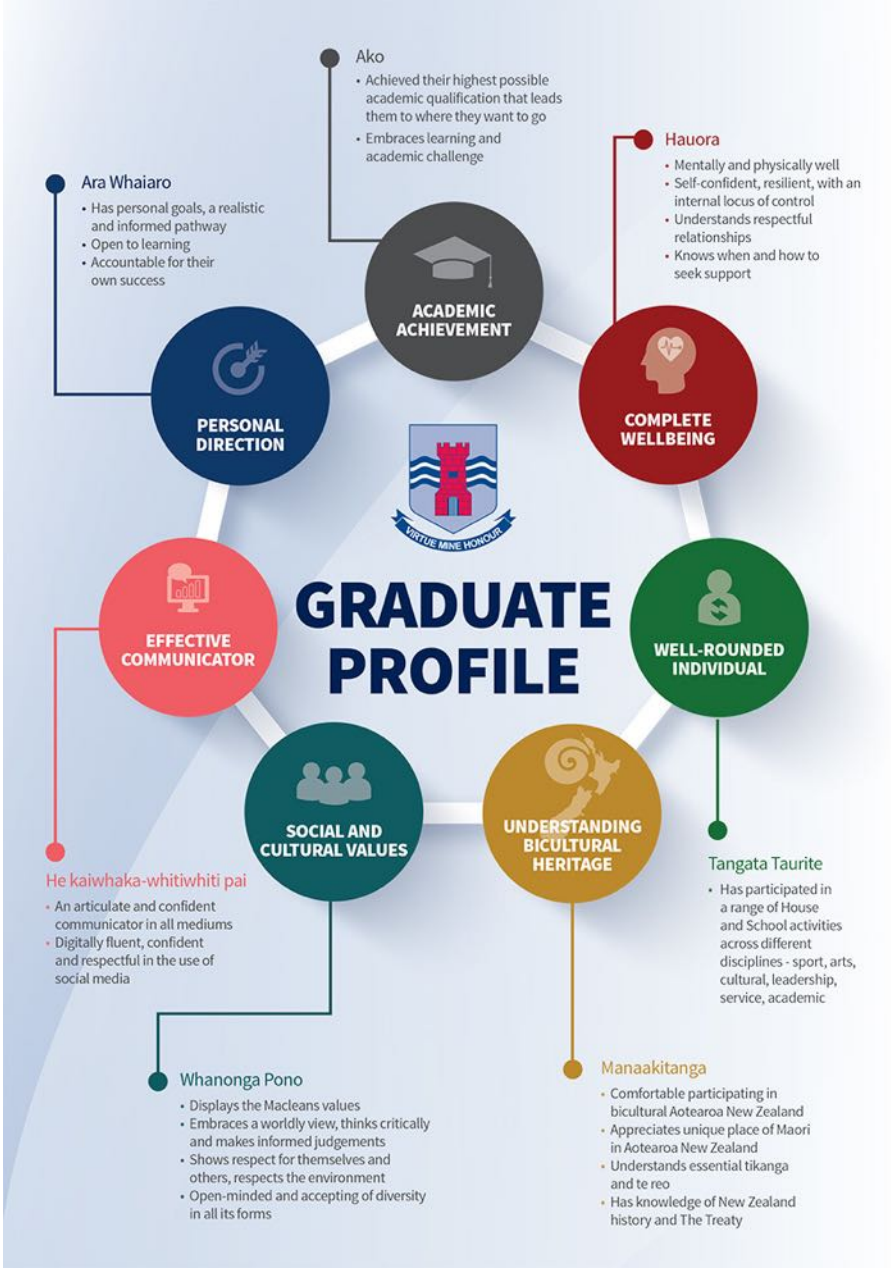
- The following twelve learning outcomes identified by the Ministry of Higher Education in Sri Lanka as of national importance have been customized as level descriptors to suit each level of qualification. The categorization of the learning outcomes according to the principal K-SAM components is as follows:



Categories of Learning Outcomes	Core Area
What they know	Knowledge
What they are capable of	Skills
How they behave	Attitudes, Values, Professionalism and Vision for life
How they perceive the world	Mind-set and Paradigm

Develop the Desired Graduate Profile for your Graduate……

- ANALYTICAL KNOWLEDGE SEEKER
- SKILLED AND COMPETENT CLINICIAN
- PROFESSIONAL
- INTELLECTUAL
- RESPONSIBLE PRACTITIONER
- EMPATHIZER



Program Learning Outcomes/ Key Competencies/Day 1 Competencies

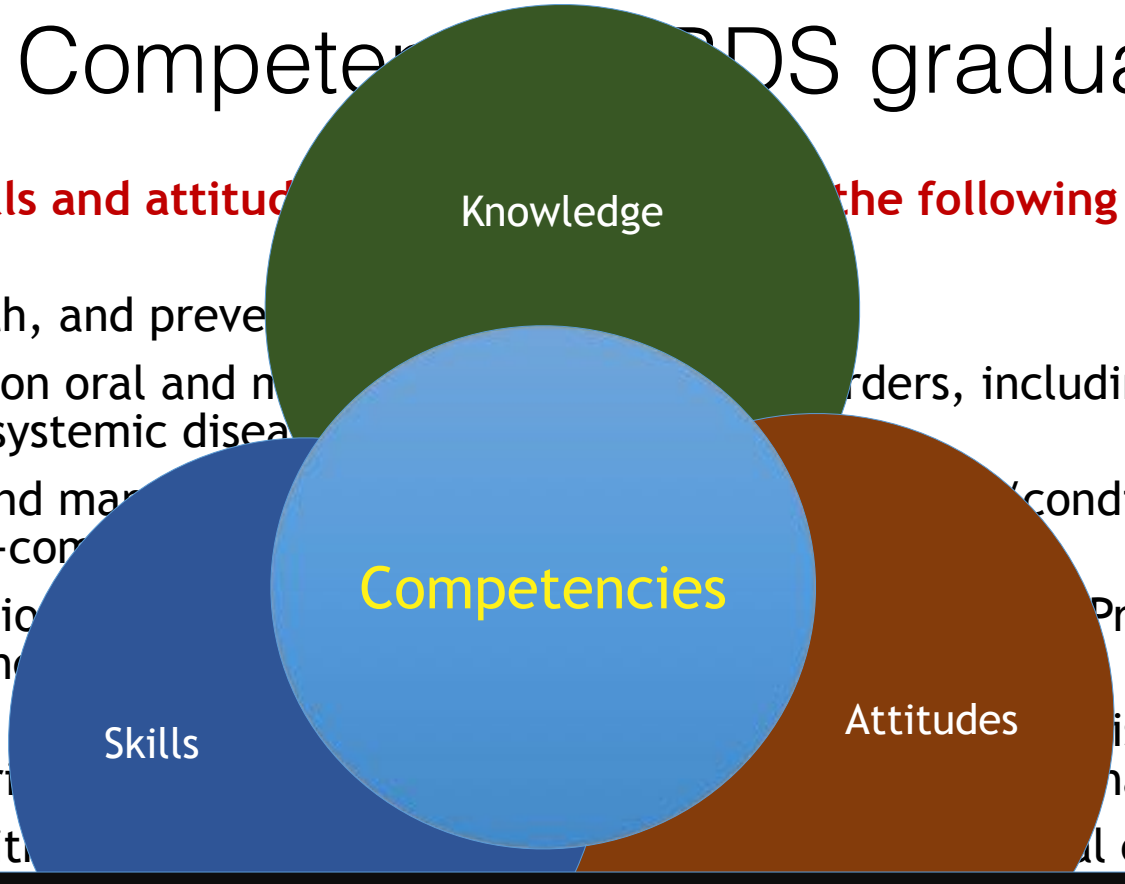
PLOs

- Sets the purpose for the life of the graduate
- Make to very clear to the program manager (YOU) what to do with the students
- Explain how the graduates would be contributing to the society
- Tell the world what capabilities these graduates have and how they can maximally utilize them
- Help the state to make policy decisions

Key Competen DS graduate)

The knowledge, skills and attitud he following broad competencies.

- Promote oral health, and preve
- Diagnose all common oral and m rders, including oro-facial manifestations of systemic disea
- Effectively treat and ma conditions, including those in medically-com
- Identify the conditio Practitioner, and refer patients for n
- Screen all patients isorders and other potentially deleteri nagement,
- Deal effectively wit l clinic,
- Inculcate mpathy, to be compas e to acceptabl
- Work effectively and harmoniously as a member or leader of a health care team.



A competent Individual is one that has necessary knowledge, skills and attitudes

Four Fundamental Questions

Ralph Tyler

A. What is the educational purpose of the curriculum?
   - What kind of graduate do we need?

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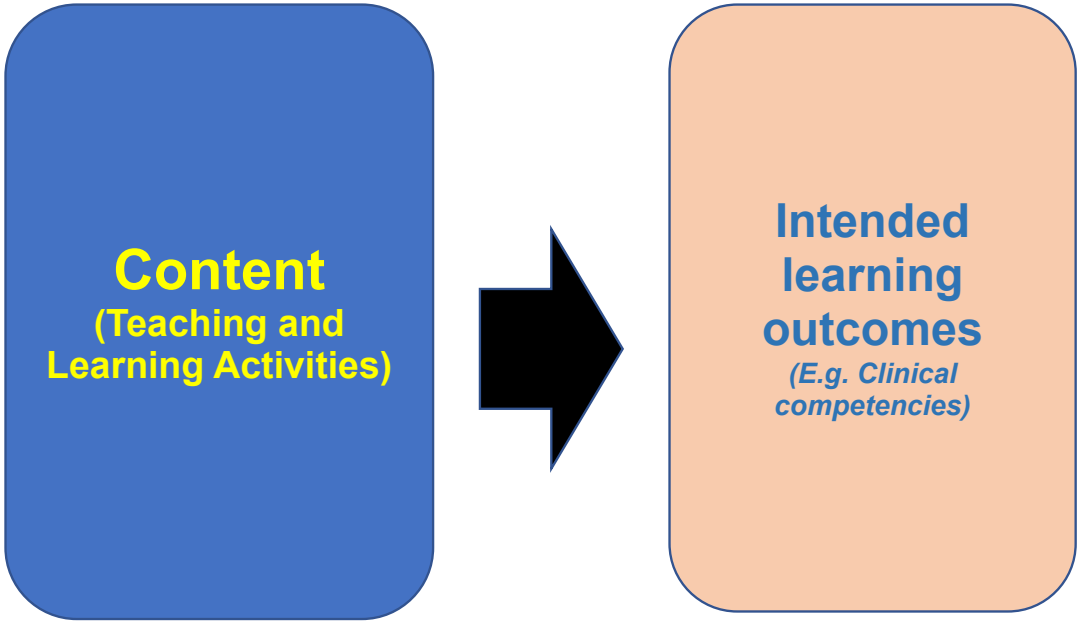
   - What do they learn?

C. How can this experience be organized effectively?
   - How do they learn?

D. How to determine the attainment of learning?
   - How to assess the learning outcomes?

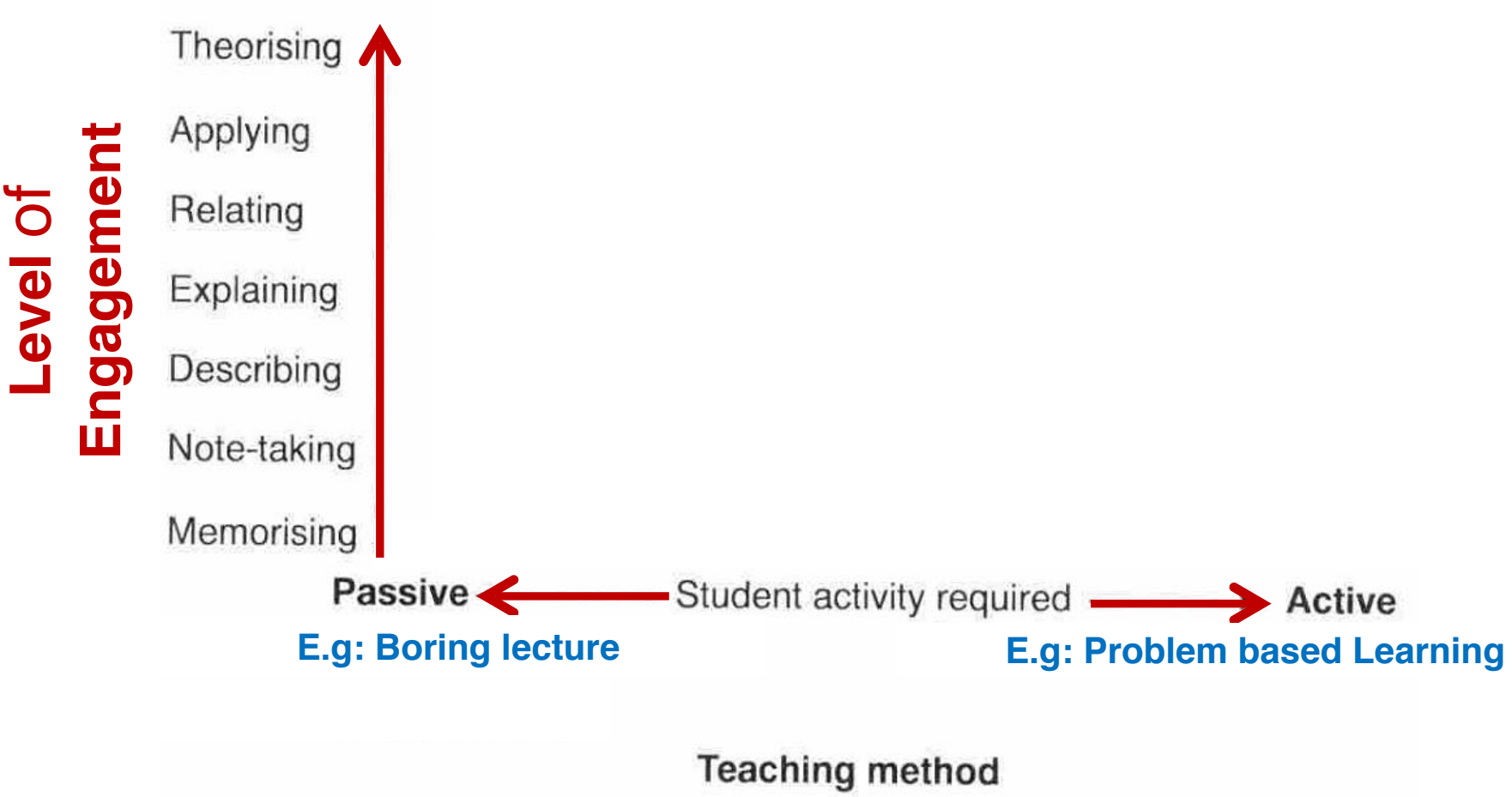
B. What experiences should the institution and its faculty provide to meet these expressed purposes?



SLQF-2015

Page 15

Categories of Learning outcomes	Student-centred teaching and learning methods
1. Subject / Theoretical Knowledge	Independent learning activities, interactive lectures, team-based learning, and other small group activities
2. Practical Knowledge and Application	Problem-based learning, team-based learning, inquiry-based learning, practical classes, laboratory sessions, role play
3. Communication	Student presentations, role play, debates, dramas
4. Teamwork and Leadership	Group projects, industrial training, small group learning; e.g. problem-based learning, games
5. Creativity and Problem Solving	Assignments, projects, small group learning activities; e.g. problem-based learning
6. Managerial and Entrepreneurship	Group projects, industrial training, small group learning; e.g. problem-based learning, games, simulated training, industrial (workplace-based) training
7. Information Usage and Management	Assignments, presentations, projects, case studies
8. Networking and Social Skills	Student presentations, role-play, debates, dramas
9. Adaptability and Flexibility	Group projects, industrial training, small group learning; e.g. problem-based learning, role plays, portfolios
10. Attitudes, Values and Professionalism	Group projects, industrial training, small group learning; e.g. problem-based learning, role play, portfolios
11. Vision for Life	Portfolios, reflective practice
12. Updating Self / Lifelong Learning	Portfolios, reflective practice



Biggs, J. "What the Student Does: Teaching for Enhanced Learning." Higher Education Research & Development, 1999, 18 (1), 57-75.

Factors in Selecting Content

- Validity/ Relevance: C drive the learner to the LOs
- How Significant: to achieve LOs
- How useful: to achieve LOs or the GP
- Interest: Can the content be made interesting to learners? (from the learner's perspective)
- Entry criteria/level of the students/prerequisites
- Learnability: at respective levels.

Factors in Selecting Content….

- Variety: learning experiences must
  - Cater to the needs of different types of learners
  - provide different types of experience

- Multiple Learning: a single learning experience leading to multiple outcomes. (important in professional training)

- Overall Design: coherent, effective and efficient

List the content that should go into the curriculum to develop the identified competencies (with the identified gaps bridged…….

- Will you bridge the identified gaps in the GP if you have the same content that you have now?
- What is the content that should be pursued to achieve the desired GP?
- What new content be introduced?
- What existing content is redundant?

BDS PLOs to Course ILO map: 1st Semester

Course	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6
Blood and Circulation						
Cell, Tissues and Molecular Genetics						
Reproduction and Early Development						
Respiratory System						
Thorax and Abdomen						
Introduction to Dentistry						
English 1						
IT 1						

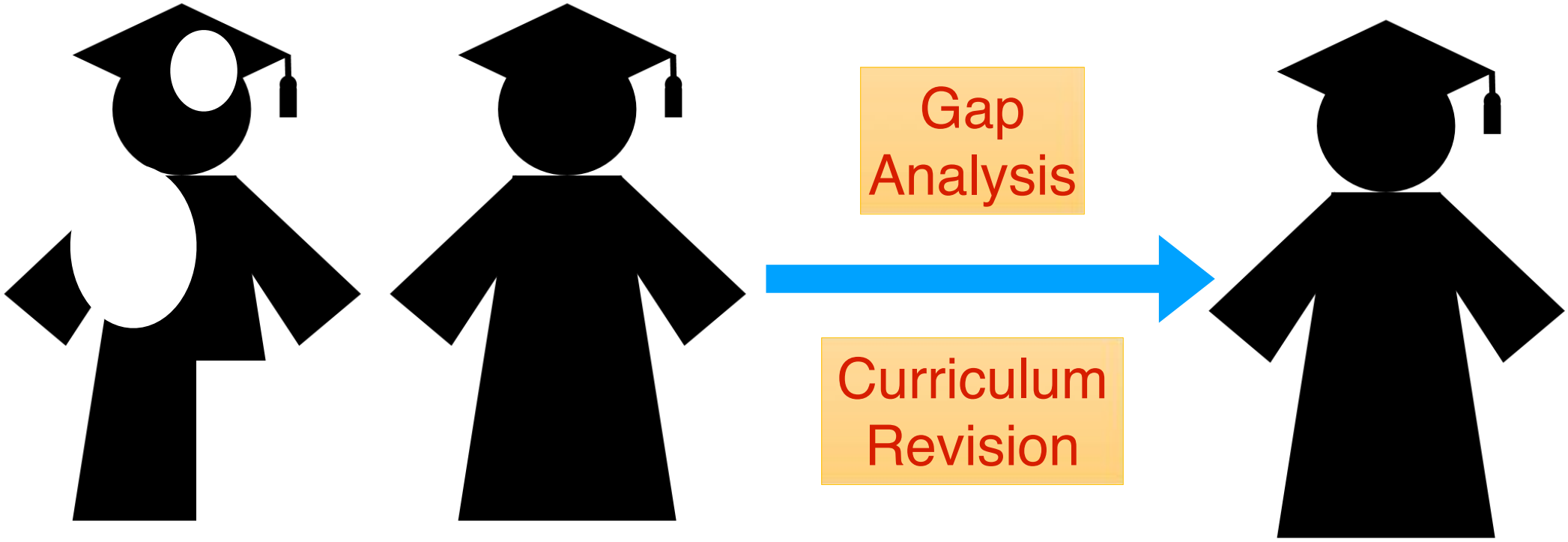
Curriculum Revision

You Decided now

Analysed Profile of GP in 2020

Ideal GP Determined in 2020

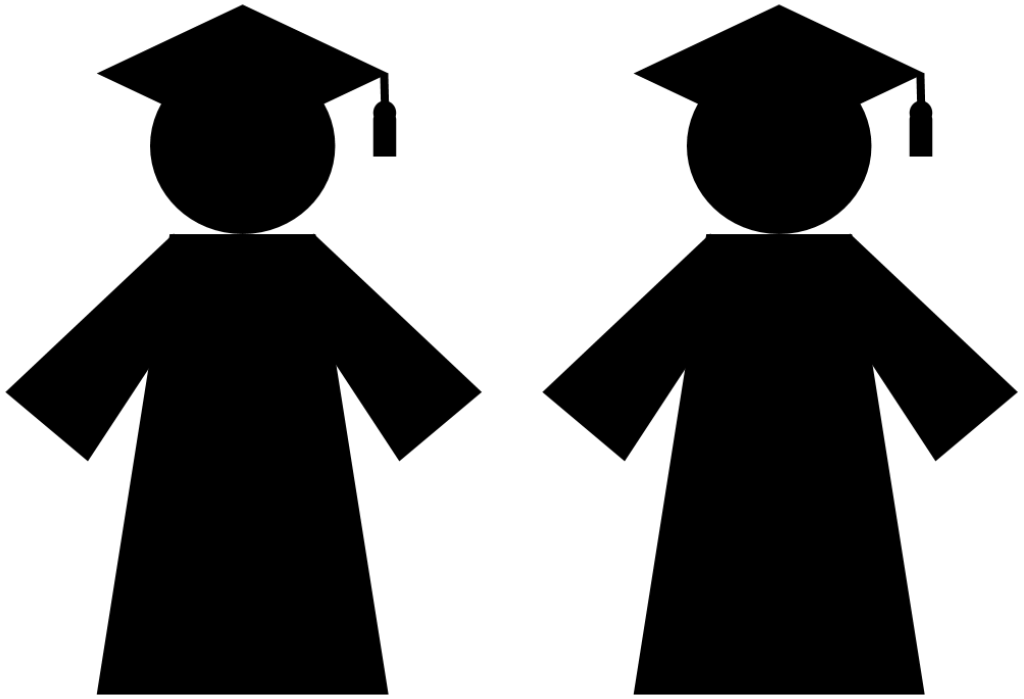
Ideal Graduates created with the new curriculum in 2025



Gap in the current profile:

Analyzed Profile of GP in 2019

Ideal GP Determined in 2019

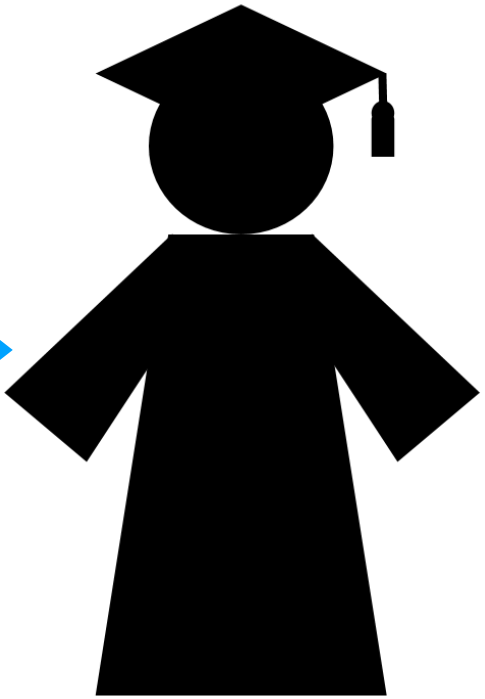


Gap Analysis

No Gap

No Curriculum Revision Required

Graduates with the Ideal created in the new curriculum in 2024



Four Fundamental Questions

Ralph Tyler

A. What is the educational purpose of the curriculum?
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C. How can this experience be organized effectively?
   - How do they learn?

D. How to determine the attainment of learning?
   - How to assess the learning outcomes?

C. How can this experience be organized most effectively (Structure)?

- How do they learn?
  - Organization of the experience with determined objectives
  - Meaningful Logical flow
- LOs based on Levels
- Should be cumulative: experiences should build on earlier ones (Learning driven)
- Course workload in Credit

Mapping the Study Program

Study Program									
Level 1			Level 2			Level 3			
C1	C2	C3	C1	C2	C3	C1	C2	C3	C4
CLO	CLO	CLO	CLO	CLO	CLO	CLO	CLO	CLO	CLO

Lesson Objectives

PLO

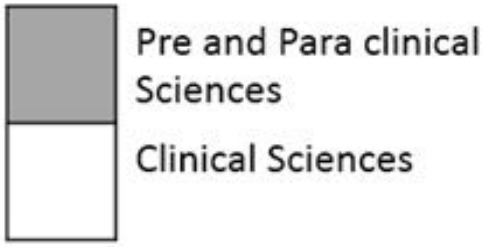
Dispositions

PEO

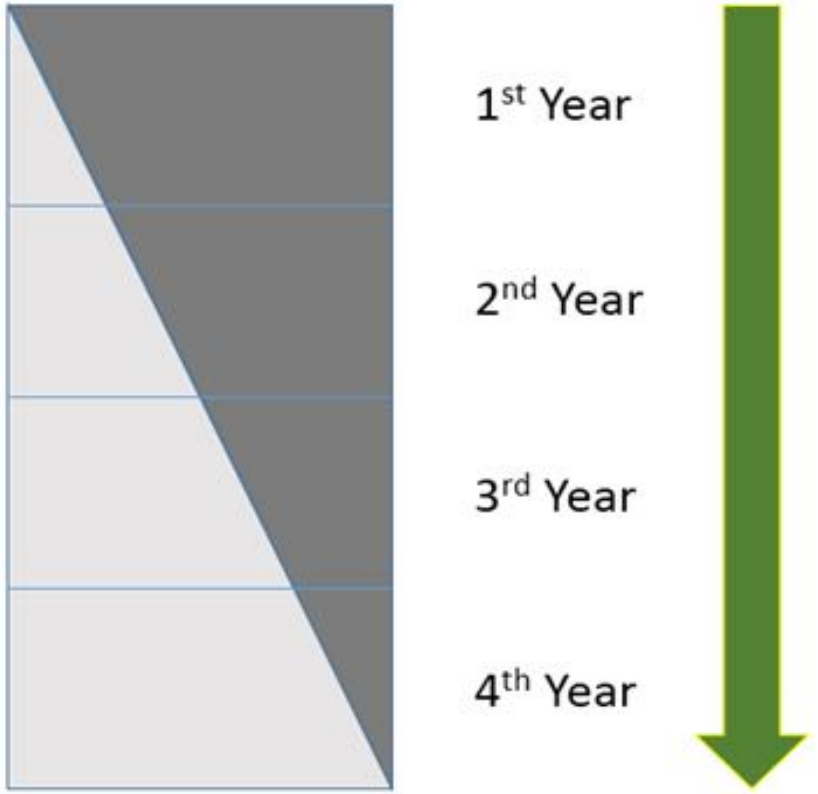
.....Think Backward

Workload on Students

- Structure
- On average
  - 30 credits per/year, 15 credits/semester
  - 2 semesters /year

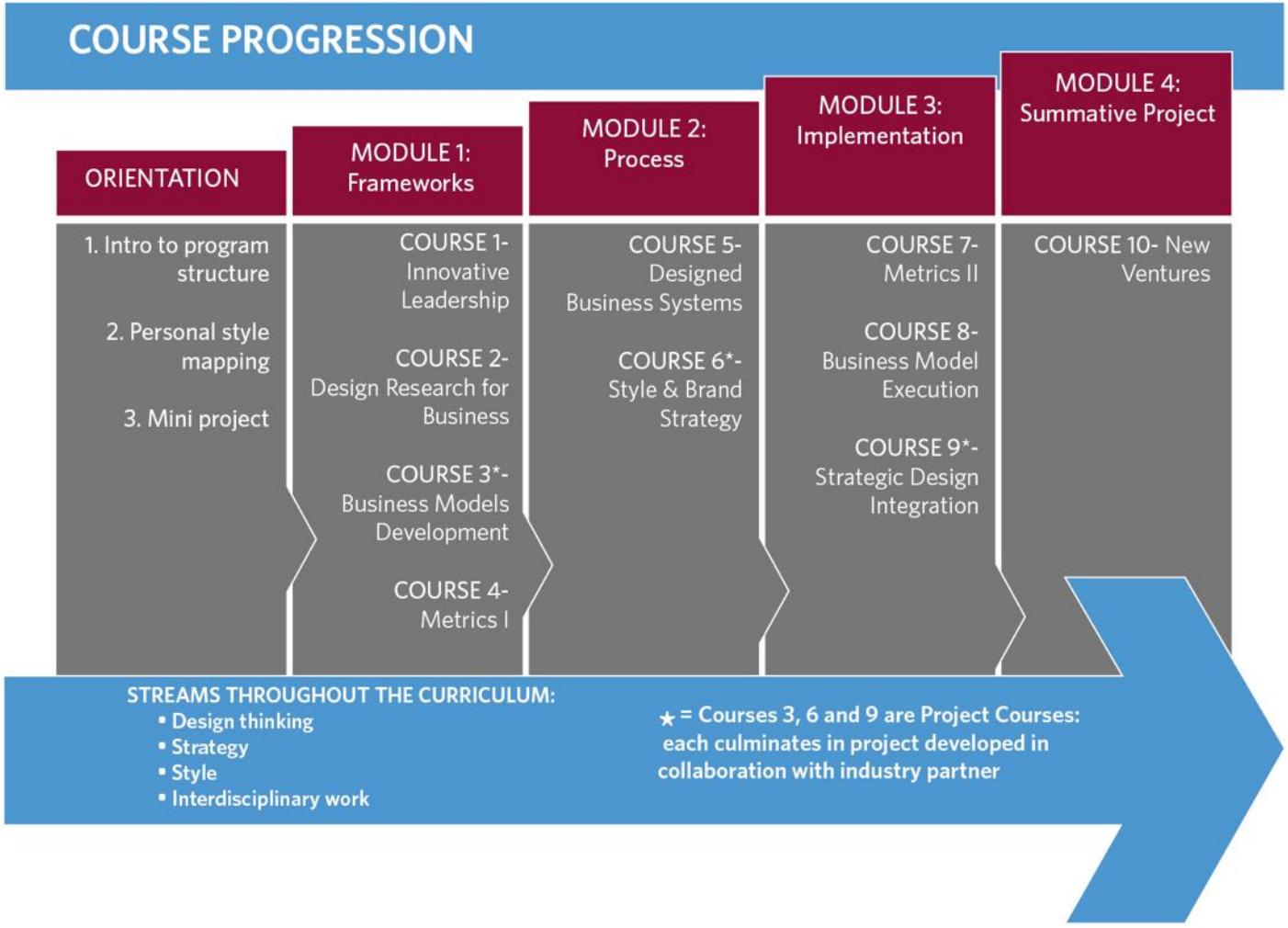


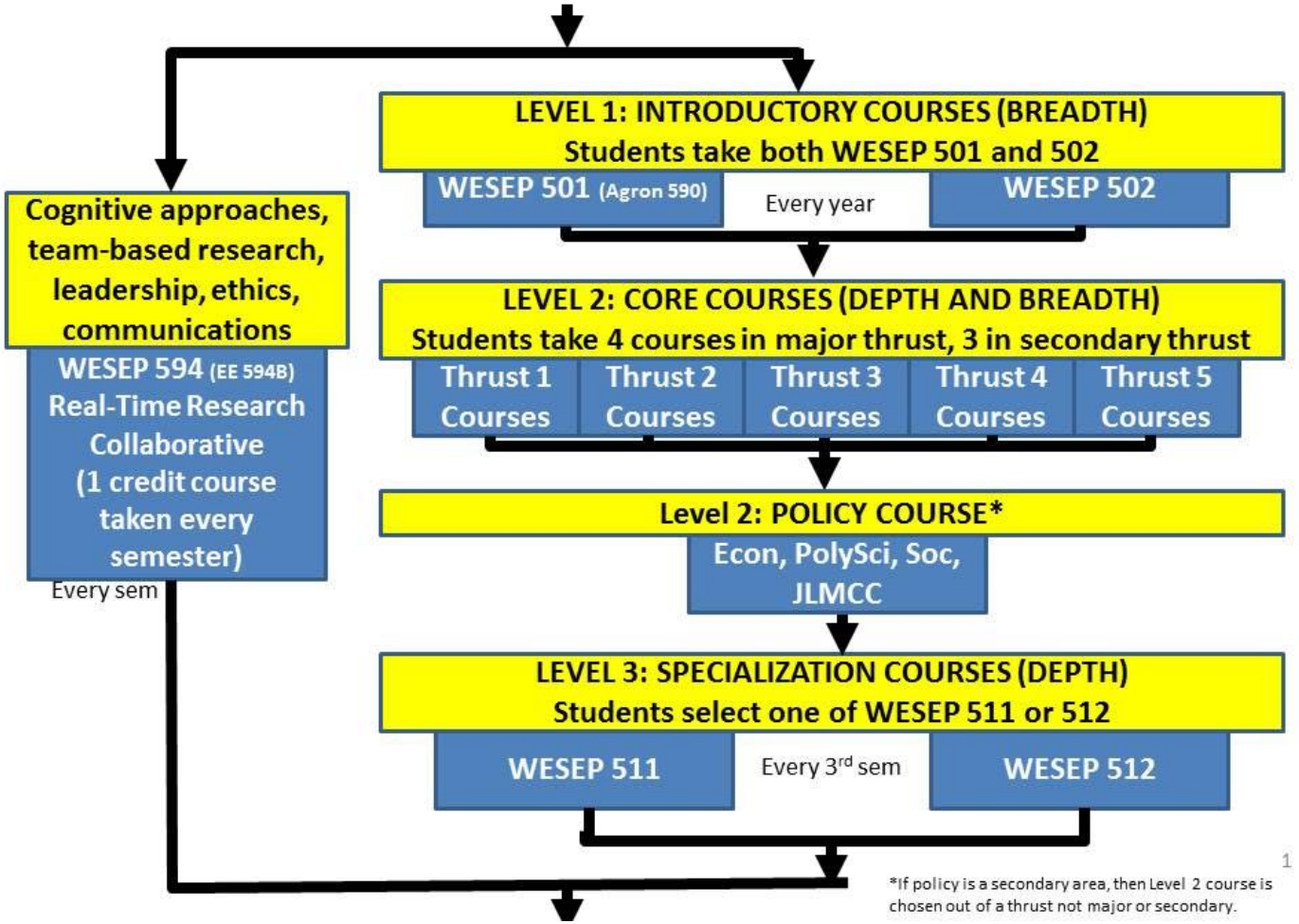
Program Structure

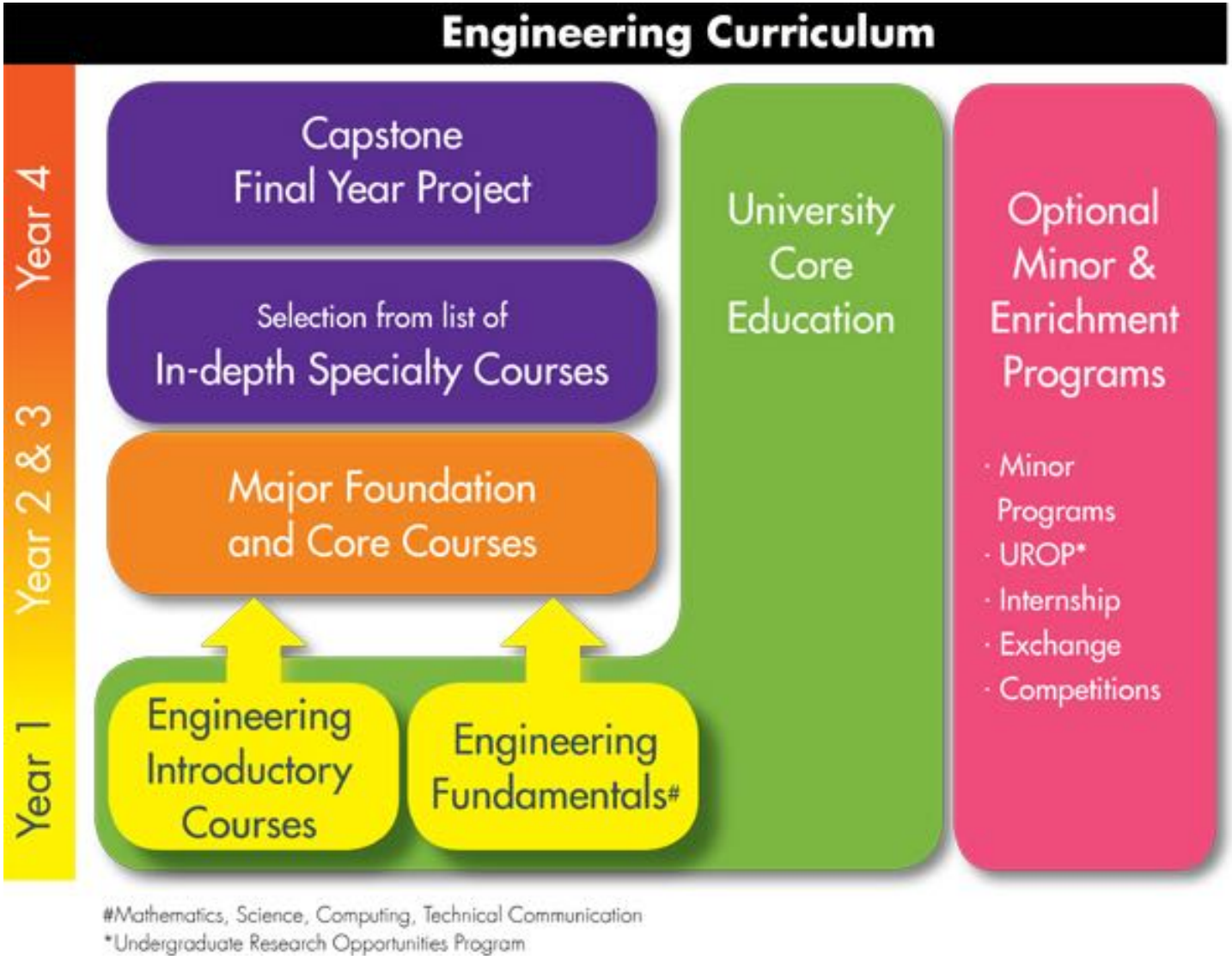


Better if a bit of flexibility/options/ electives are given

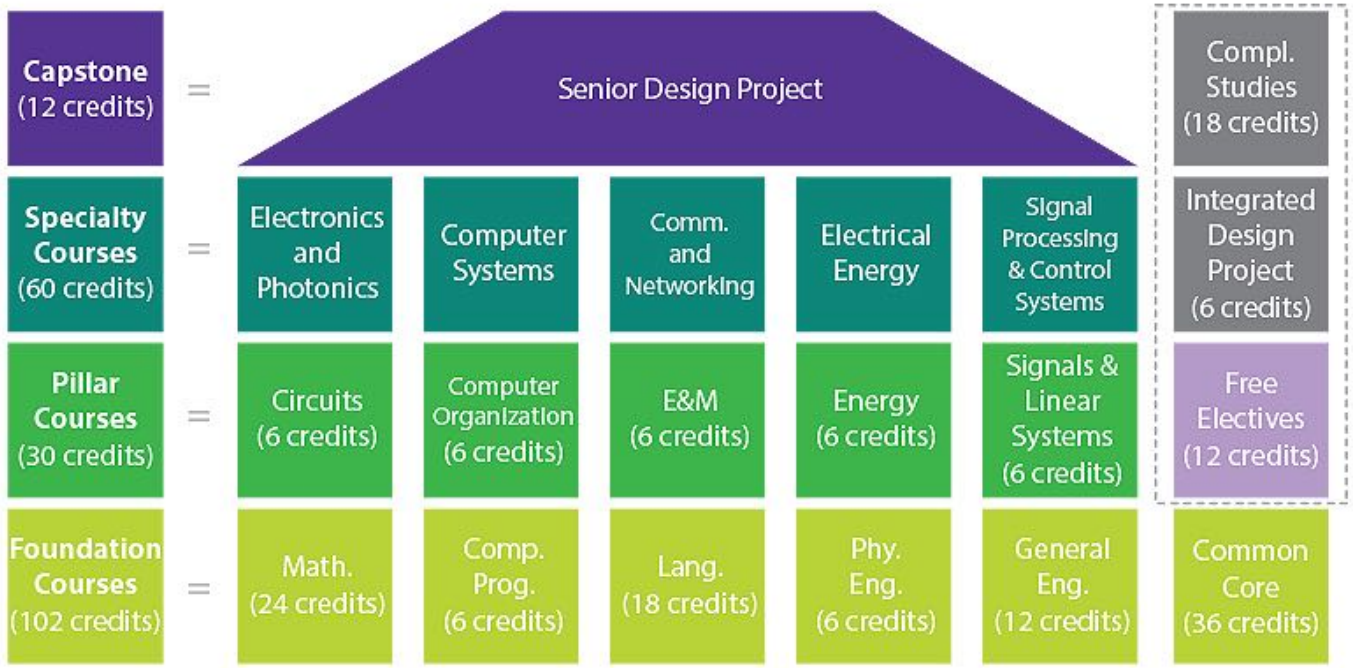
Curriculum matrix…


COURSE PROGRESSION
ORIENTATION
MODULE 1: Frameworks
MODULE 2: Process
MODULE 3: Implementation
MODULE 4: Summative Project
1. Intro to program structure
2. Personal style mapping
3. Mini project
COURSE 1- Innovative Leadership
COURSE 2- Design Research for Business
COURSE 3*- Business Models Development
COURSE 4- Metrics I
COURSE 5- Designed Business Systems
COURSE 6*- Style & Brand Strategy
COURSE 7- Metrics II
COURSE 8- Business Model Execution
COURSE 9*- Strategic Design Integration
COURSE 10- New Ventures
STREAMS THROUGHOUT THE CURRICULUM:
• Design thinking
• Strategy
• Style
• Interdisciplinary work
★ = Courses 3, 6 and 9 are Project Courses: each culminates in project developed in collaboration with industry partner


LEVEL 1: INTRODUCTORY COURSES (BREADTH)
Students take both WESEP 501 and 502
WESEP 501 (Agron 590)
Every year
WESEP 502
Cognitive approaches, team-based research, leadership, ethics, communications
WESEP 594 (EE 594B) Real-Time Research Collaborative (1 credit course taken every semester)
Every sem
LEVEL 2: CORE COURSES (DEPTH AND BREADTH)
Students take 4 courses in major thrust, 3 in secondary thrust
Thrust 1 Courses
Thrust 2 Courses
Thrust 3 Courses
Thrust 4 Courses
Thrust 5 Courses
Level 2: POLICY COURSE*
Econ, PolySci, Soc, JLMCC
LEVEL 3: SPECIALIZATION COURSES (DEPTH)
Students select one of WESEP 511 or 512
WESEP 511
Every 3rd sem
WESEP 512
*If policy is a secondary area, then Level 2 course is chosen out of a thrust not major or secondary.



#Mathematics, Science, Computing, Technical Communication
*Undergraduate Research Opportunities Program


Capstone (12 credits)
=
Senior Design Project
Compl. Studies (18 credits)
Specialty Courses (60 credits)
=
Electronics and Photonics
Computer Systems
Comm. and Networking
Electrical Energy
Signal Processing & Control Systems
Integrated Design Project (6 credits)
Pillar Courses (30 credits)
=
Circuits (6 credits)
Computer Organization (6 credits)
E&M (6 credits)
Energy (6 credits)
Signals & Linear Systems (6 credits)
Free Electives (12 credits)
Foundation Courses (102 credits)
=
Math. (24 credits)
Comp. Prog. (6 credits)
Lang. (18 credits)
Phy. Eng. (6 credits)
General Eng. (12 credits)
Common Core (36 credits)

240 credits

Organize the structure of your curriculum…..

Four Fundamental Questions

Ralph Tyler

A. What is the educational purpose of the curriculum?
   - What kind of graduate do we need?

B. What experiences should be provided?
   - What do they learn?

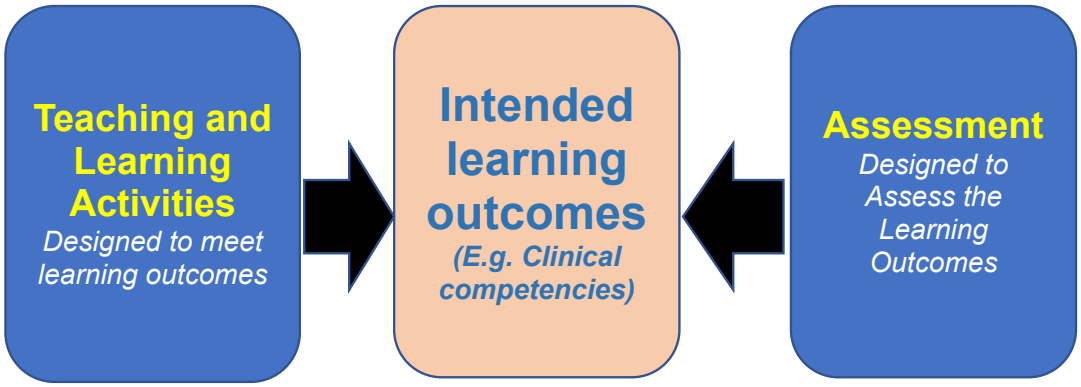
C. How can this experience be organized effectively?
   - How do they learn?

D. How to determine the attainment of learning?
   - How to assess the learning outcomes?

D. How can one best determine the outcomes of learning–the purposes and attainment of the curriculum?

- (How do we assess the learning outcomes?)
  - Determination of assessment methods that can evaluate outcomes under each course of study

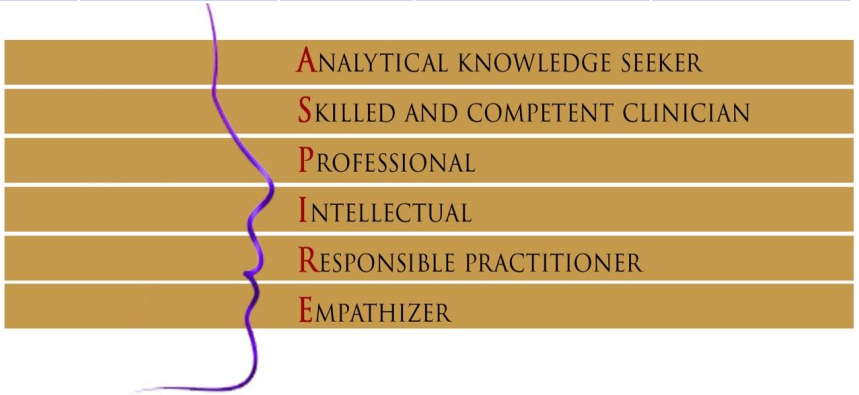
Constructively aligned



Assessments

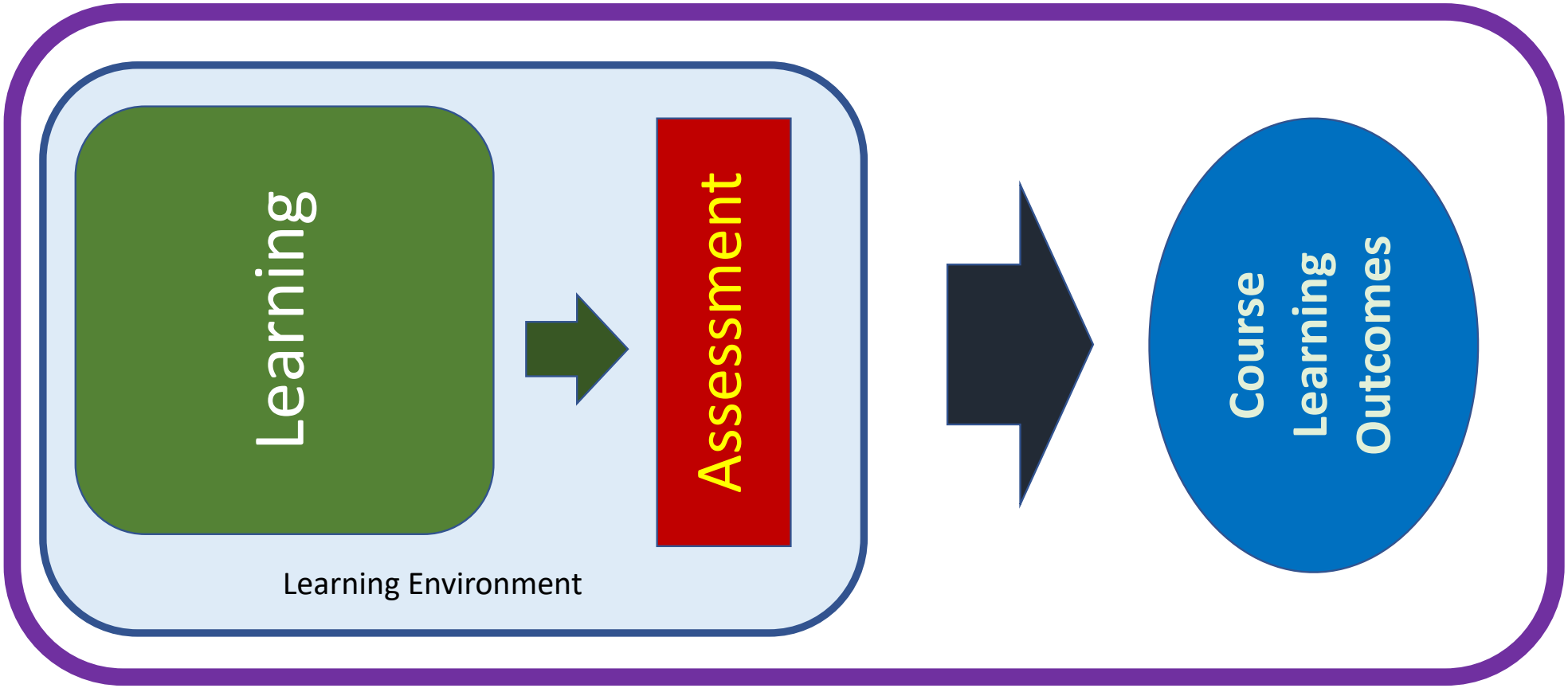
Graduate attribute-course map: 1st Semester

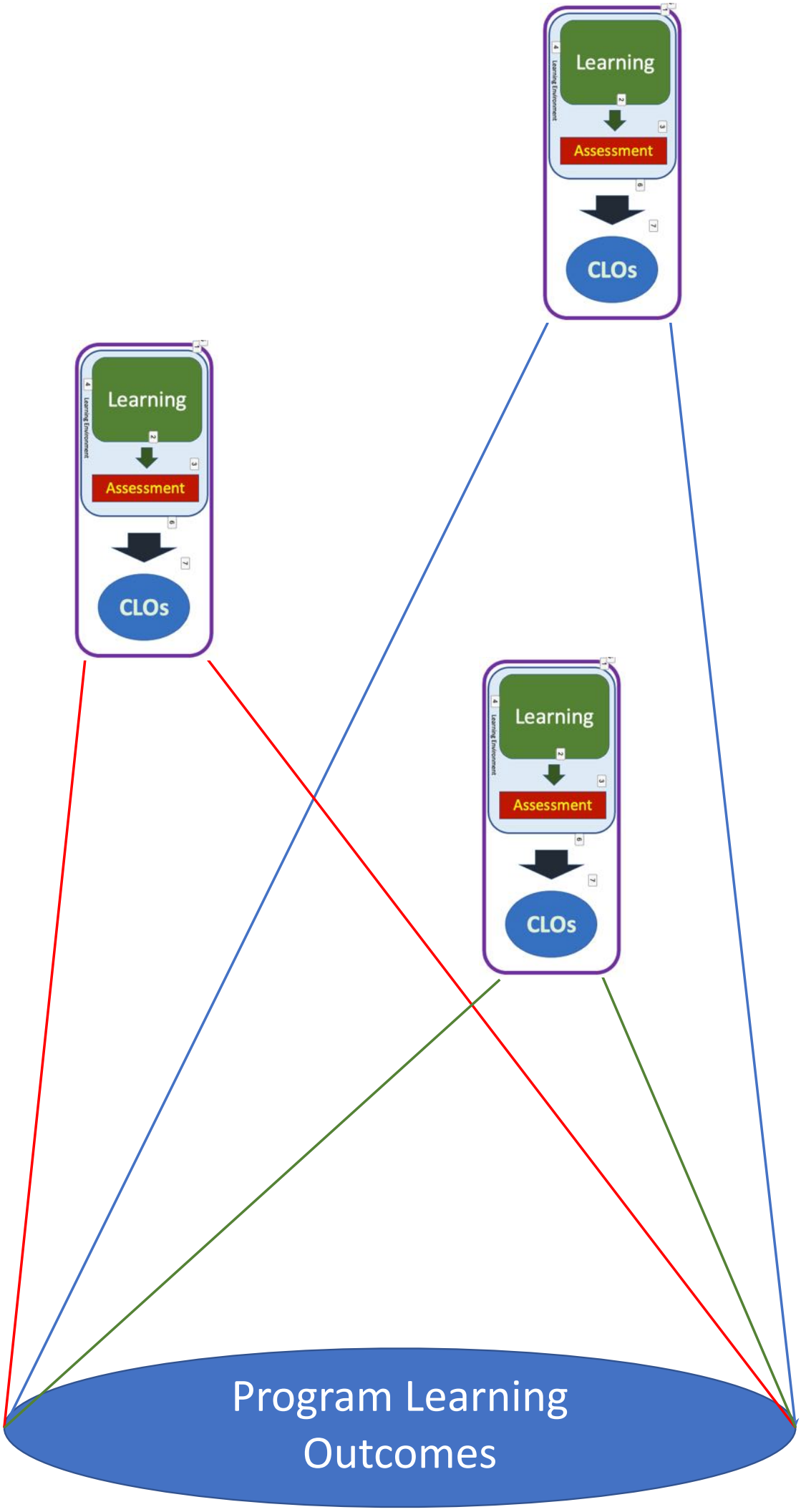
Course	AKnowS	SkCompC	Profess	Intel	RespPrac	Empath
Blood and Circulation						
Cell, Tissues and Molecular Genetics						
Reproduction and Early Development						
Respiratory System						
Thorax and Abdomen						
Introduction to Dentistry						
English 1						

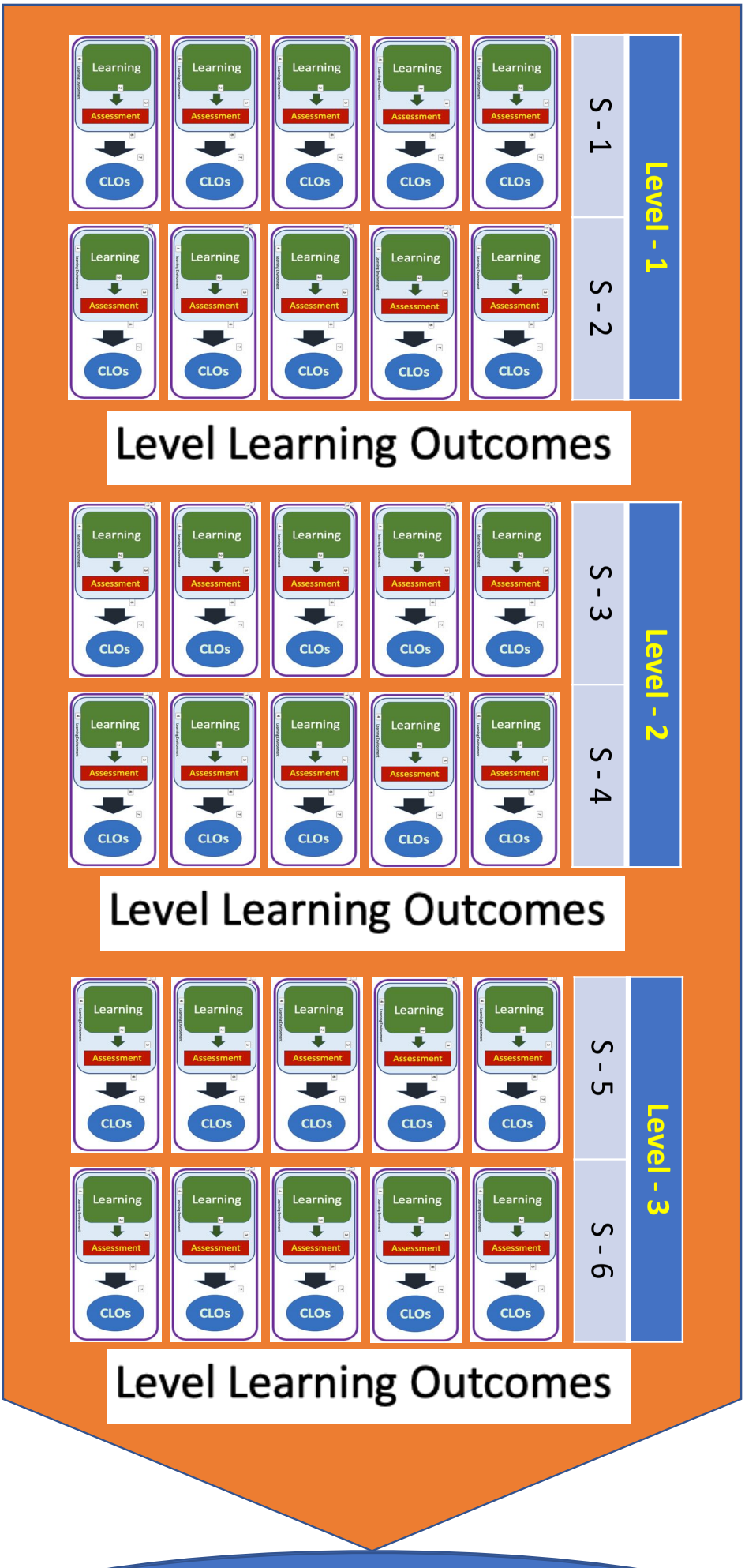


Developing a Course

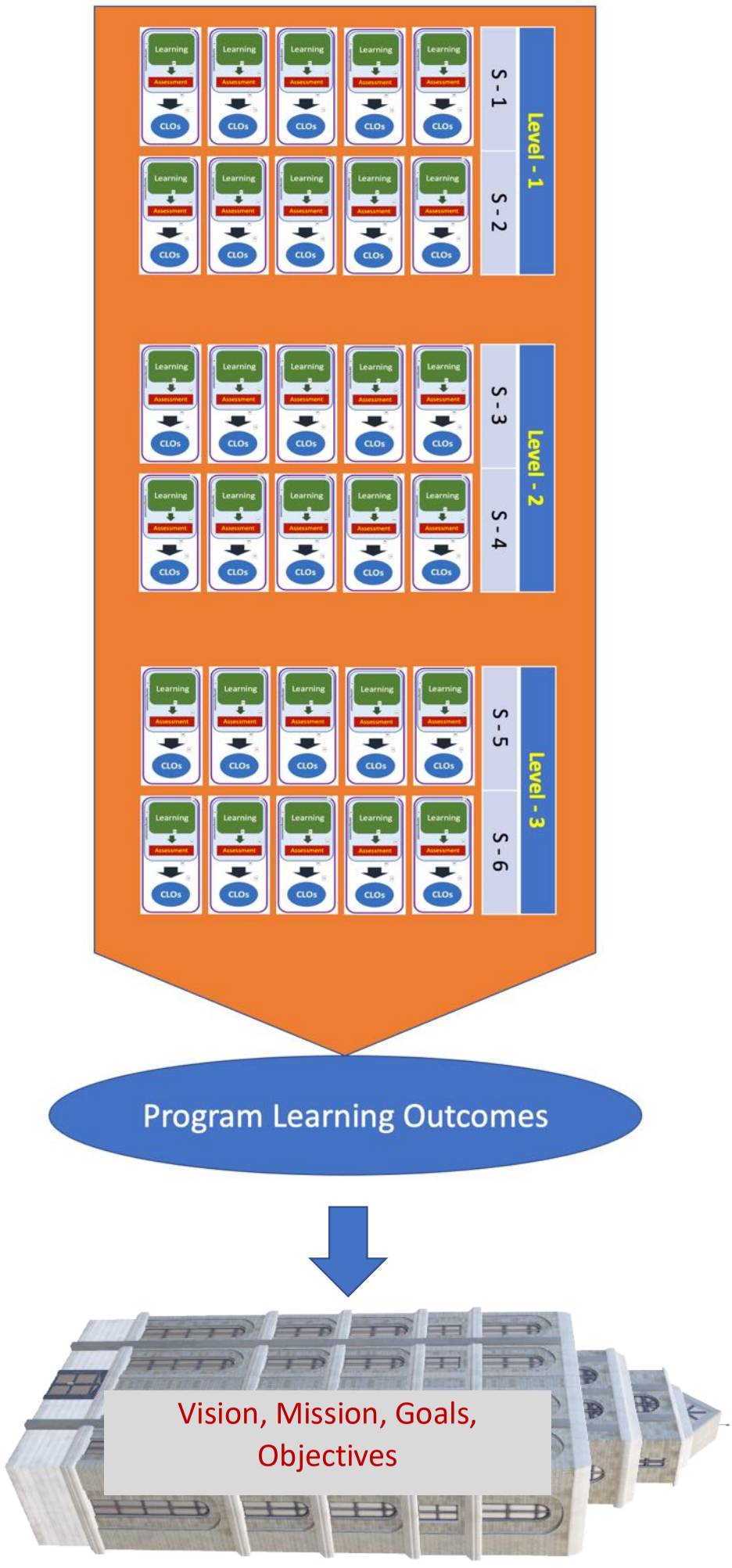
Course/Module

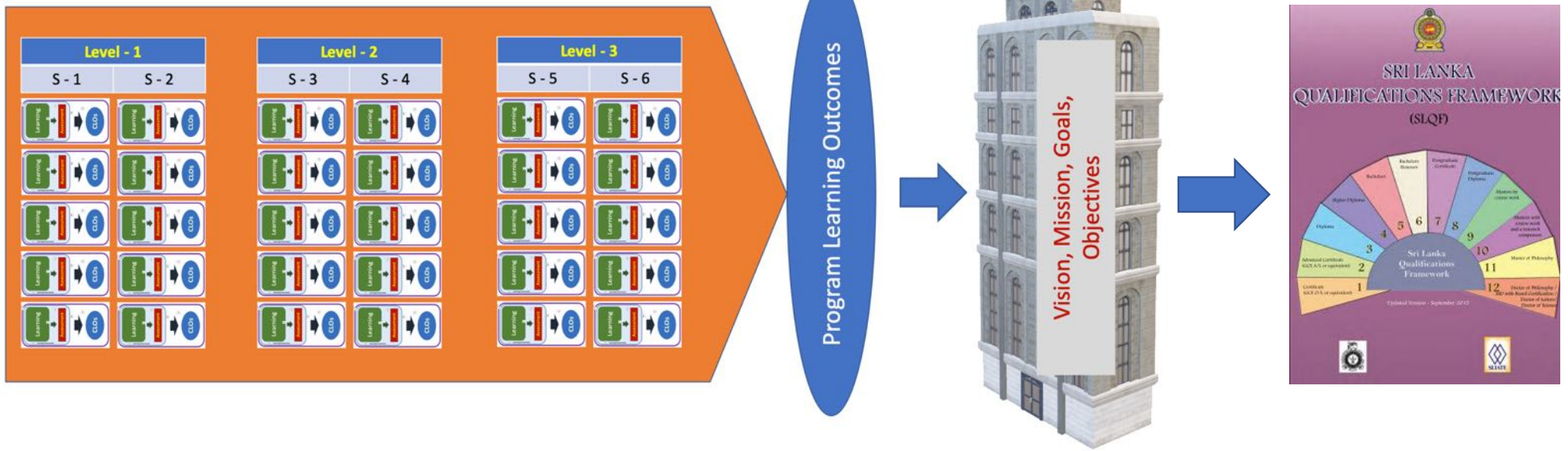



Learning
Assessment
CLOs
Learning
Assessment
CLOs
Learning
Assessment
CLOs
Program Learning Outcomes



Program Learning Outcomes


Learning
Assessment
CLOs
S - 1
S - 2
Level - 1
S - 3
S - 4
Level - 2
S - 5
S - 6
Level - 3
Program Learning Outcomes
Vision, Mission, Goals, Objectives


Level - 1
S - 1
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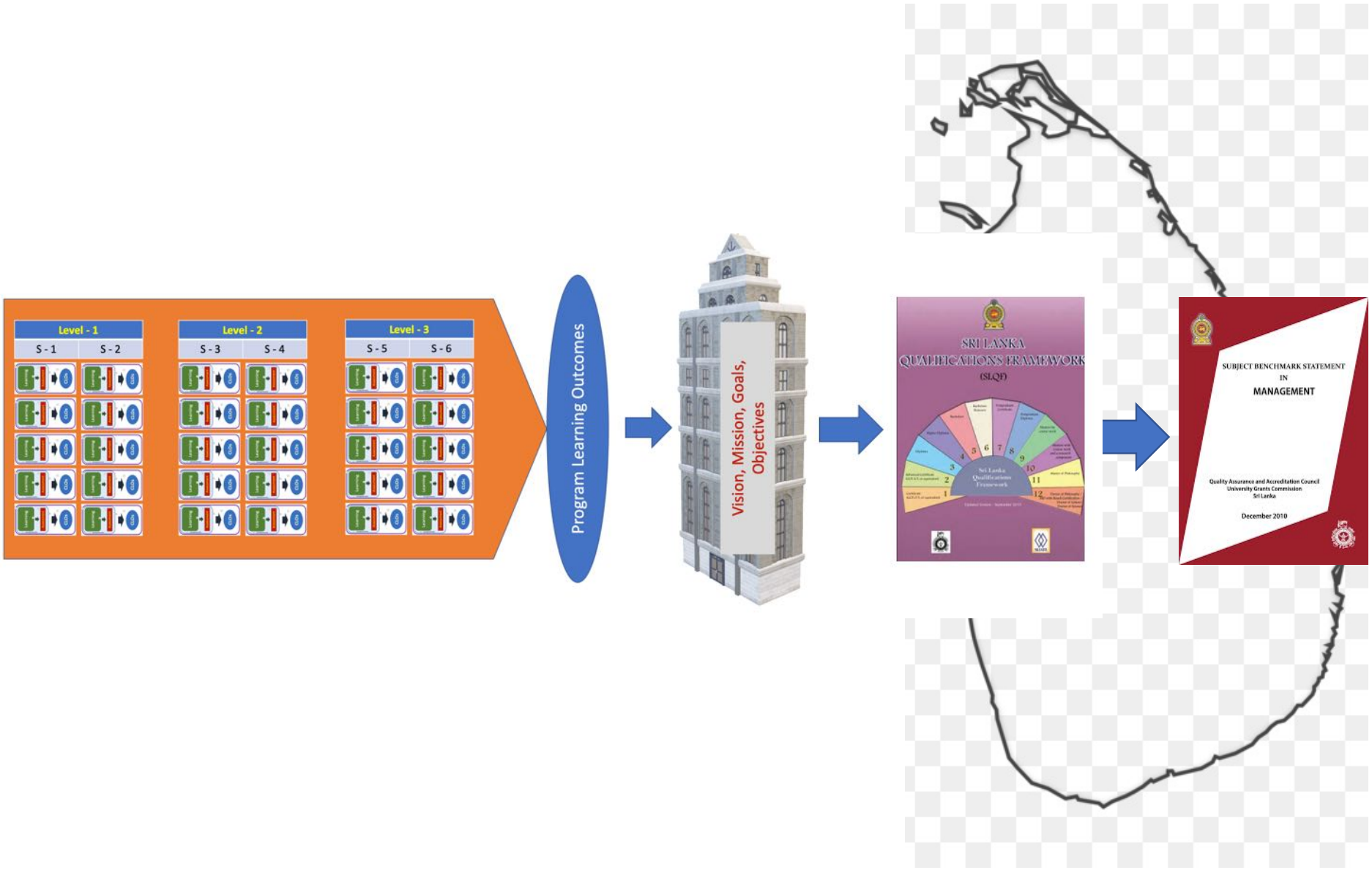
S - 4
Level - 3
S - 5
S - 6
Learning
Assessment
CLOs
Program Learning Outcomes
Vision, Mission, Goals, Objectives
SRI LANKA
QUALIFICATIONS FRAMEWORK
(SLQF)
Sri Lanka Qualifications Framework


Level - 1
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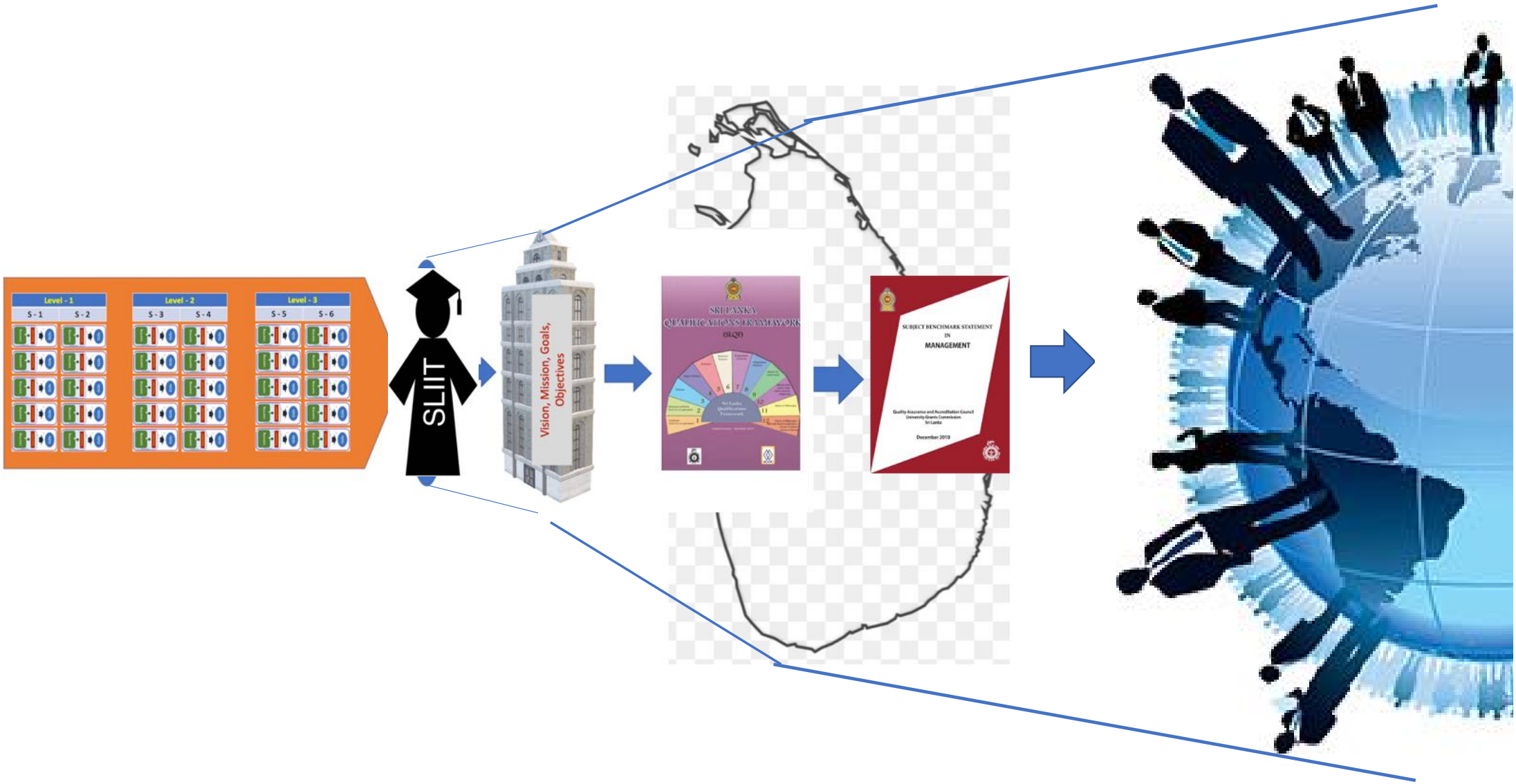
Level - 3
S - 5
S - 6
Program Learning Outcomes
Vision, Mission, Goals, Objectives
SRI LANKA
QUALIFICATIONS FRAMEWORK
(SLQF)
SUBJECT BENCHMARK STATEMENT
IN
MANAGEMENT
Quality Assurance and Accreditation Council
University Grants Commission
Sri Lanka
December 2010


Level - 1
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SLIIT
Vision, Mission, Goals, Objectives
SRI LANKA
QUALIFICATIONS FRAMEWORK
(SLQF)
SUBJECT BENCHMARK STATEMENT
IN
MANAGEMENT
December 2010

Four Fundamental Questions

Ralph Tyler

A. What is the educational purpose of the
   - What kind of graduate do we need?

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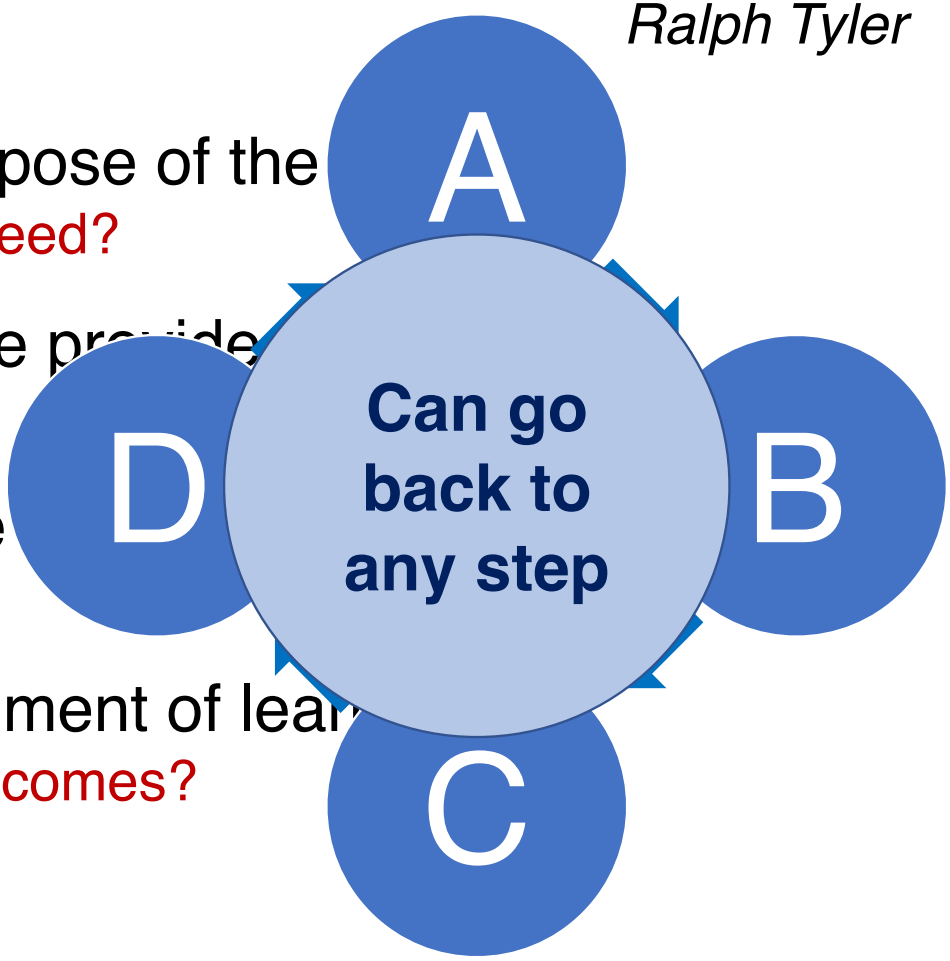

Course Aim

- The **broad long-range intentions** and **orientation** of the course
  - What the course offers to students at the end
  - Written from the teacher's point of view

E.g.:

The aim of this course is to equip the participants with an understanding, confidence and skills to apply basic principles of education in developing a undergraduate curriculum.

Intended learning outcomes (ILOs)

- Describe **significant** **ial** learning that the learner will have ach **an reliably be demonstrated** at **rse or program**

- These are evidence that the learning took place

Structure of a learning outcome

- The Condition: ***At the end of this course***
- Intended Audience: **the participants**
- Learning Behavior: ***should be able to formulate*** *coherent/complete* ***learning outcomes***
- A statement of the *criterion/standard:* ***coherent/complete*** *;* ***all key characteristics.***

At the end of this course ***the participant*** ***should be able to formulate coherent/complete learning outcomes*** *with* ***all key characteristics.***

Learning objectives

Types may be in learning domains/ combined

1. Cognitive objectives: On completion, students will know….
2. Affective objectives: On completion, students will think/care about….
3. Psychomotor (Behavioral): On completion, students will be able to do/perform….

Learning objectives

Managing Curriculum Revision….

- A well balanced curriculum team
- Administration (executive leadership) by the Dean
  - Provide Leadership
  - Use power
  - Make it a high priority -> discuss at Board M
  - Provide training/education
  - Provide resources
- Managed by an expert in curriculum revision

Curriculum Revision Team….*cont.*

- Experts of all disciplines
- Managed by an expert in curriculum revision
    - Provide leadership
    - Recognize talents and give responsibilities
    - Create sub-teams and delegate responsibilities
        - Organize stakeholder workshops & focus gap discussion
        - Researching
        - Module groups
        - A team of independent reviewers
-

Curriculum revision: Secretariat

- Adequate facilities and human resources
- Keep records
  - Minutes
  - Continuous records in progress
  - Effective communication

Subtle things to manage..

- Strategic leadership
- Shared responsibility (e.g. It is an achievement of all)
- Appreciate work and contributions
- Gain the confidence
- Win the support of key people, professional leaders
- Deal with the negative perception
- Accommodate views promote teamwork
- Adopt the strategy of keeping the subject expert silent in deciding the content

Regular review

A. What is the educational purpose of the curricu
   - What kind of graduate do we need?

B. What experiences should be provid
   - What do they learn?

C. How can this experience be organize
   - How do they learn?

D. How to determine the attainment of learning?
   - How to assess the learning outcomes?