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# Principles for Designing a Curriculum to Develop and Assure Student Learning Outcomes

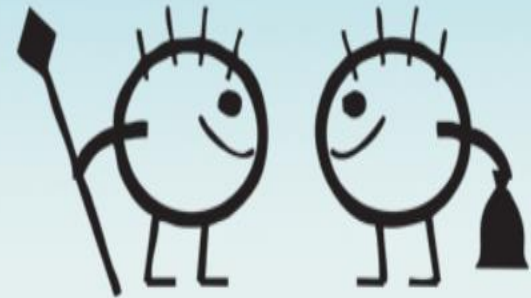
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Australia*

# Assuring Learning

OLT Strategic Priority Project: Hunters & Gatherers

funded by



## **Hunters & Gatherers: Strategies for Curriculum Mapping and Data Collection for Assurance of Learning**

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### 2013 OLT National Teaching Fellow



Associate Professor Romy Lawson

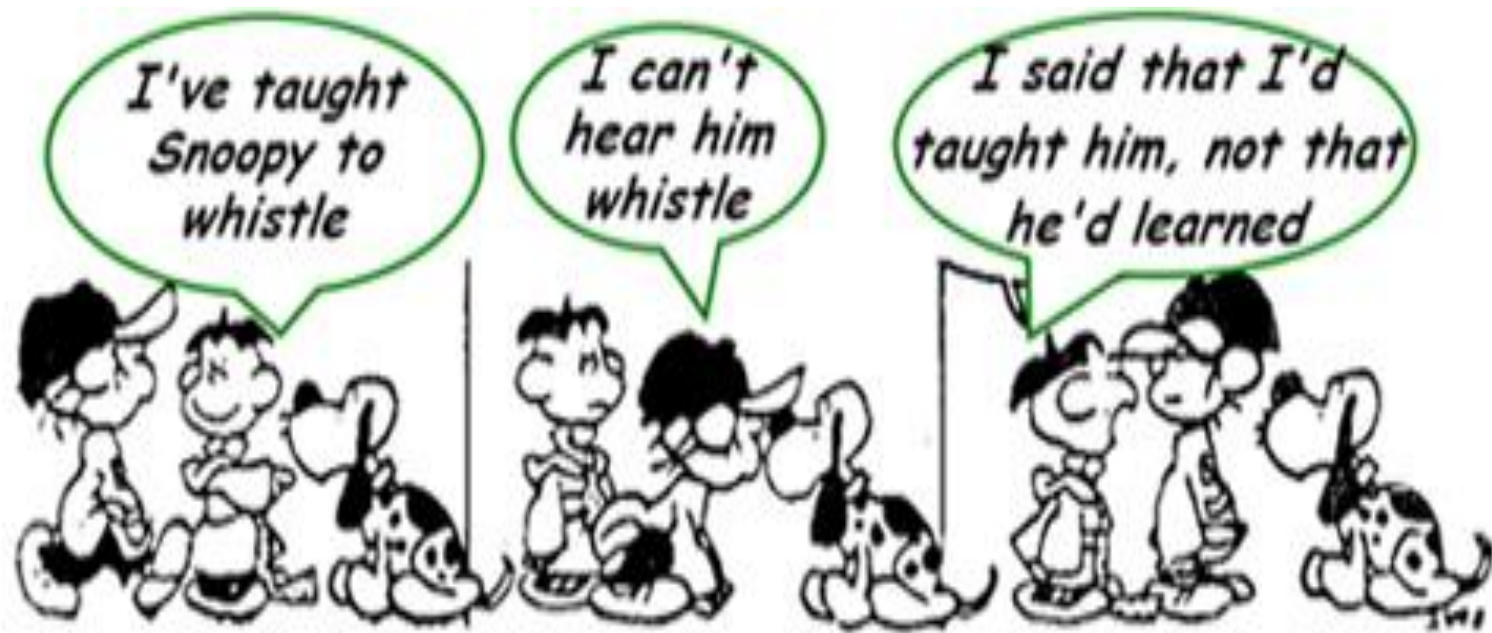
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University of Wollongong  
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Why are YOU here?

What do we mean by Assurance of Learning (AoL)?

# What do we mean by Assurance of Learning (AoL)?



# Why do we do it?

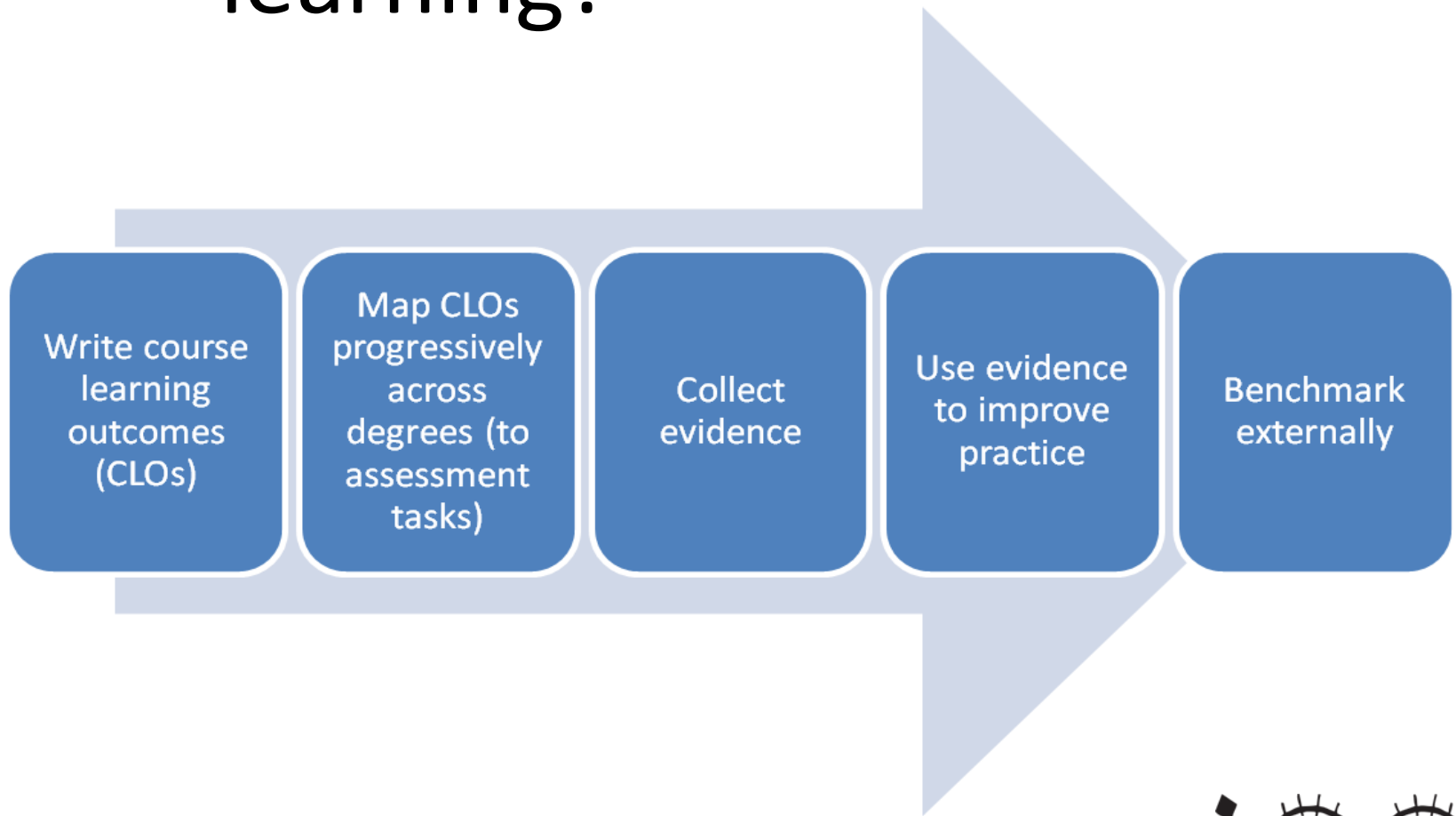
- Assurance of Learning Standards evaluate **how well the course accomplishes the educational aims** at the core of its activities.
- Measures of learning can **assure external constituents** such as potential students, trustees, public officials, supporters, and accreditors, that the organization meets its goals (**Qualifications Framework**).
- Another important function for measures of learning is to **assist the school and faculty members to improve** courses and subjects.

# Pedagogical Advantages of Process

- **Progression** – students will be introduced, and further developed in the graduate attributes before assessed for assurance
- **Clarity** – students will be able to see the links and development of graduate attributes through clearly stated learning objectives, and through the interactive use of assessment rubrics
- **Control** – due to progressive nature with explicit objectives students can take control of their learning through regular tutor feedback and self assessment



# How do we assure learning?



# The problem

- **Graduate attributes/course learning outcomes** are an orienting statement of education outcomes used to inform curriculum design and the provision of learning experiences at a university (Barrie, Hughes & Smith, 2009).
- While all Australian universities make such claims in policy and curriculum documentation, the **effective integration** of these into courses and therefore virtual or physical classroom has been somewhat intangible (Taylor et al., 2009), resulting in **students not fully engaging** with the expectations of degree programs.

# What academics say . . .

- “But I am not an English teacher . . .”
- The ALTC funded *B Factor* Project (2009) found that academic staff beliefs about graduate attributes/course learning outcomes and their **low levels of confidence and willingness to teach and assess them must be acknowledged** if universities are to progress in ensuring that graduates are equipped for the world of work.

De la Harpe et al (2009).

# The magic words . . .

- Holistic
- Integrated
- Collaborative
- Maintainable



# The magic words . . .

- **Holistic** - a whole of program approach was important to ensure students' progress in a way that ensures graduate attributes can be introduced and then further developed before they are asked to demonstrate the standards expected in each graduate attribute on completion of their award.
- **Integrated** - in order for graduate attributes to be valued by academic teaching staff and students they had to be embedded into the curriculum, and linked to assessment.
- **Collaborative** - the process had to be developed in conjunction with the academic teaching staff in an inclusive rather than top down approach, so that staff engaged with, and recognized the importance of the process.
- **Maintainable** - any process that is implemented has to be sustainable to ensure it is not reliant on individuals or resources.

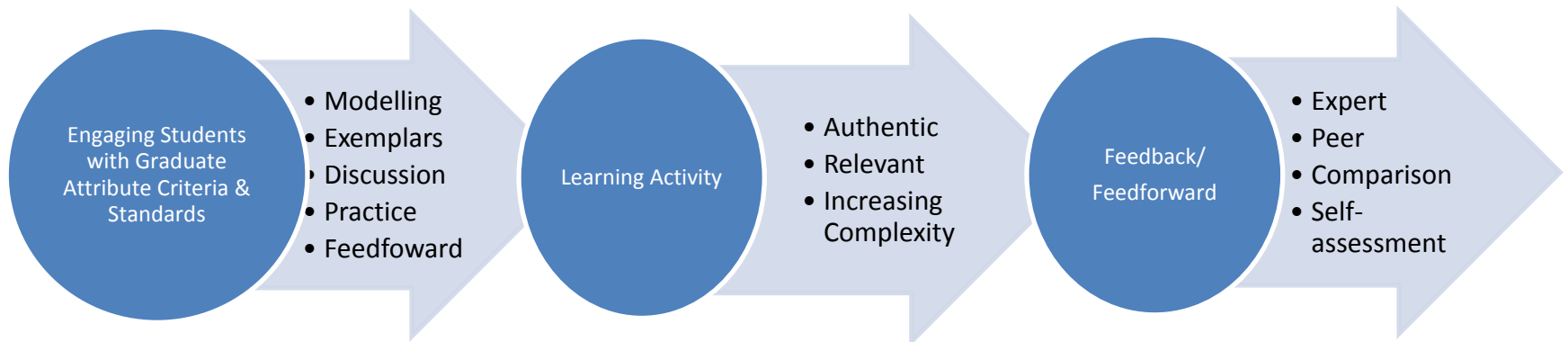


# Principles for Design

- **Holistic:**
  - whole of course approach;
  - setting expectations;
  - creating rubrics;
  - calibrating understanding;
  - engaging students (whole of course)
- **Integrated:**
  - authentic, scaffolded assessment;
  - teaching activities;
    - embedded;
    - modeling & exemplars;
  - feedforward
- **Collaborative:**
  - vision
  - executive support
  - guiding team
  - training
  - reward and recognise
  - empowerment
  - communicate for buy-in

# Whole of Course Approach

- The proposed whole of course approach model three parts to it:
  - Engaging students
  - Facilitating learning activities
  - Providing feedback/forward which then feeds into the engaging students for the next progressive task.



# Setting Appropriate Performance Statements

- Clear, explicit criteria or objectives require:
  - clear indication of **what** the student needs to perform, for example, a critical analysis; an appraisal; a discussion
  - level that needs to be achieved in order to meet the **standards** of the learning task, for example, thorough analysis; comprehensive discussion; detailed examination.
- Making explicit the performance statements for both the task in hand as well as for the completion of the degree.



# Streamlined Approach

GLD QF (External)

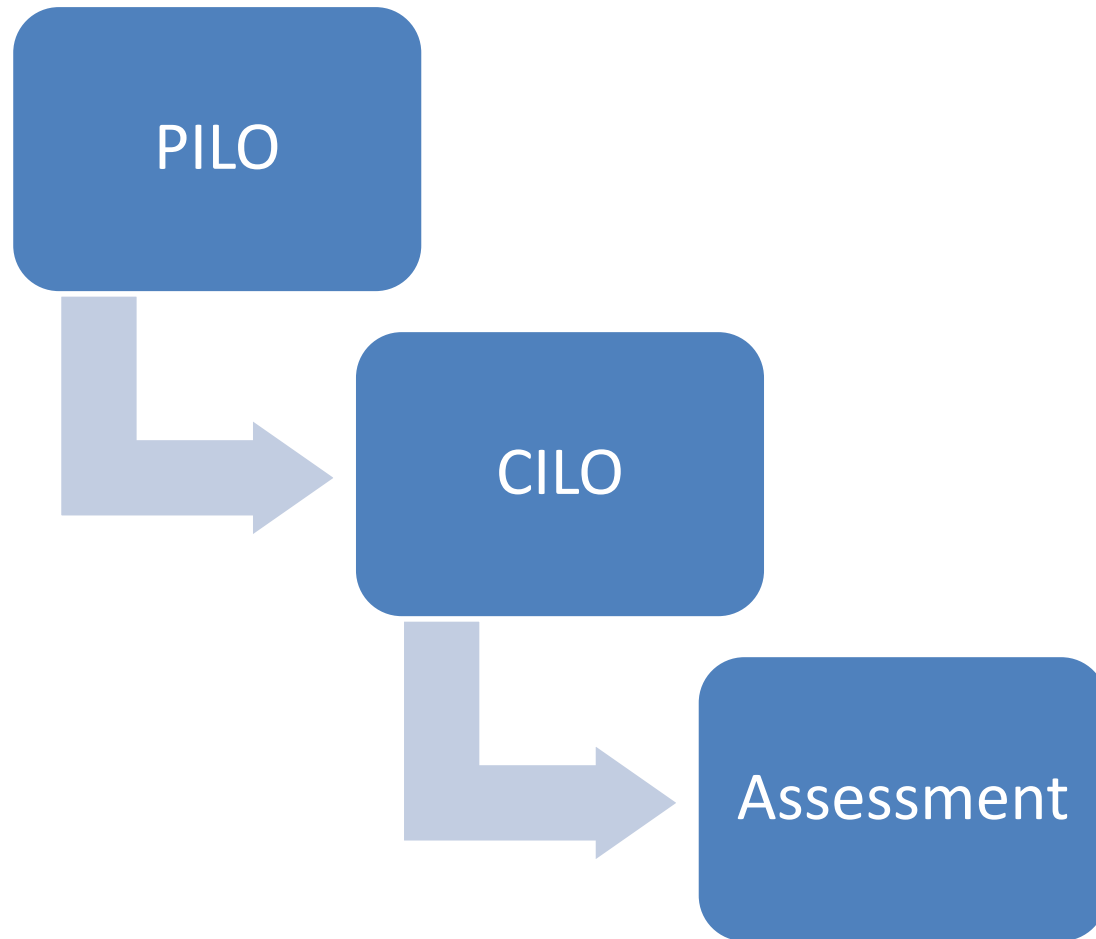
A light blue downward-pointing arrow indicating a flow from the first step to the second.

University GA

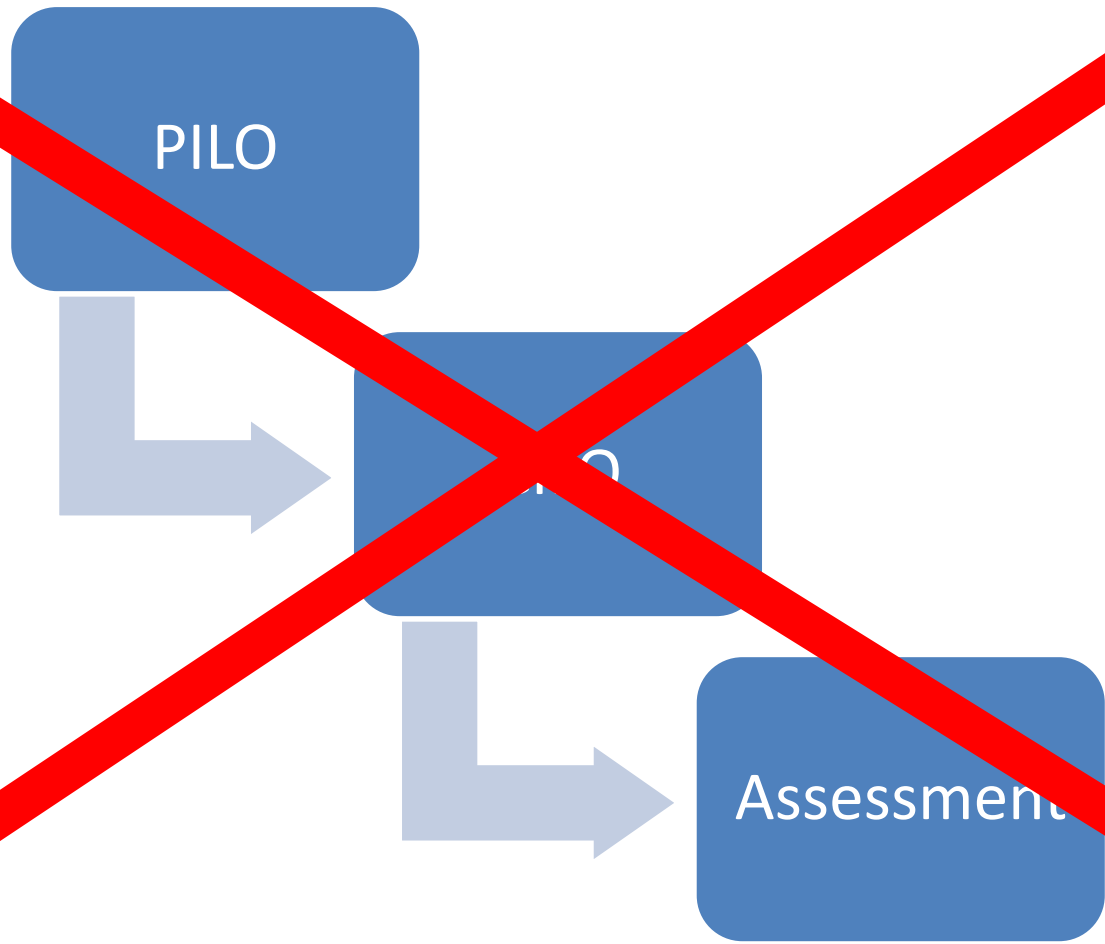
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**PILO**

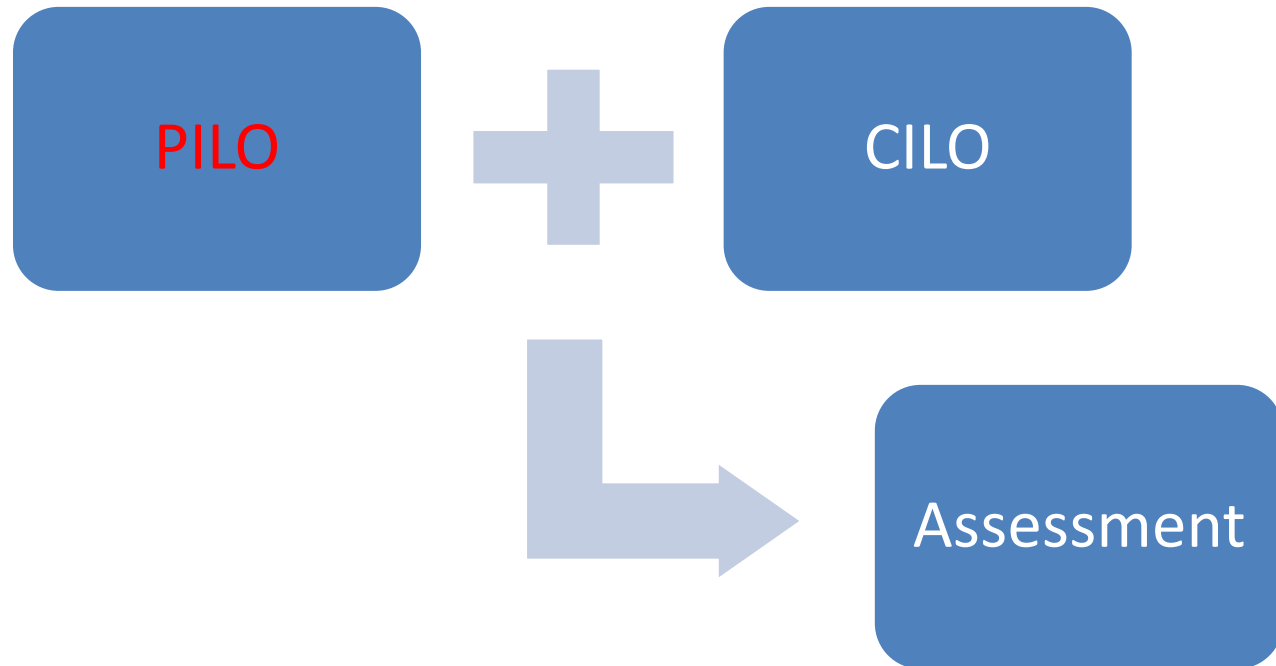
# Streamlined Approach



# Streamlined Approach



# Streamlined Approach



# 1,2,3 - Writing Learning Outcomes

1. Begin your list of 3-5 learning objectives with a one-time lead-in statement like –

“Upon successfully completing this course, students will be able to – “

“After completing this lecture, you will be able to – “

“This tutorial will prepare you to be able to do the following:”

**IT IS WHAT THE STUDENT WILL BE ABLE TO DO NOT  
WHAT YOU ARE GOING TO DO**

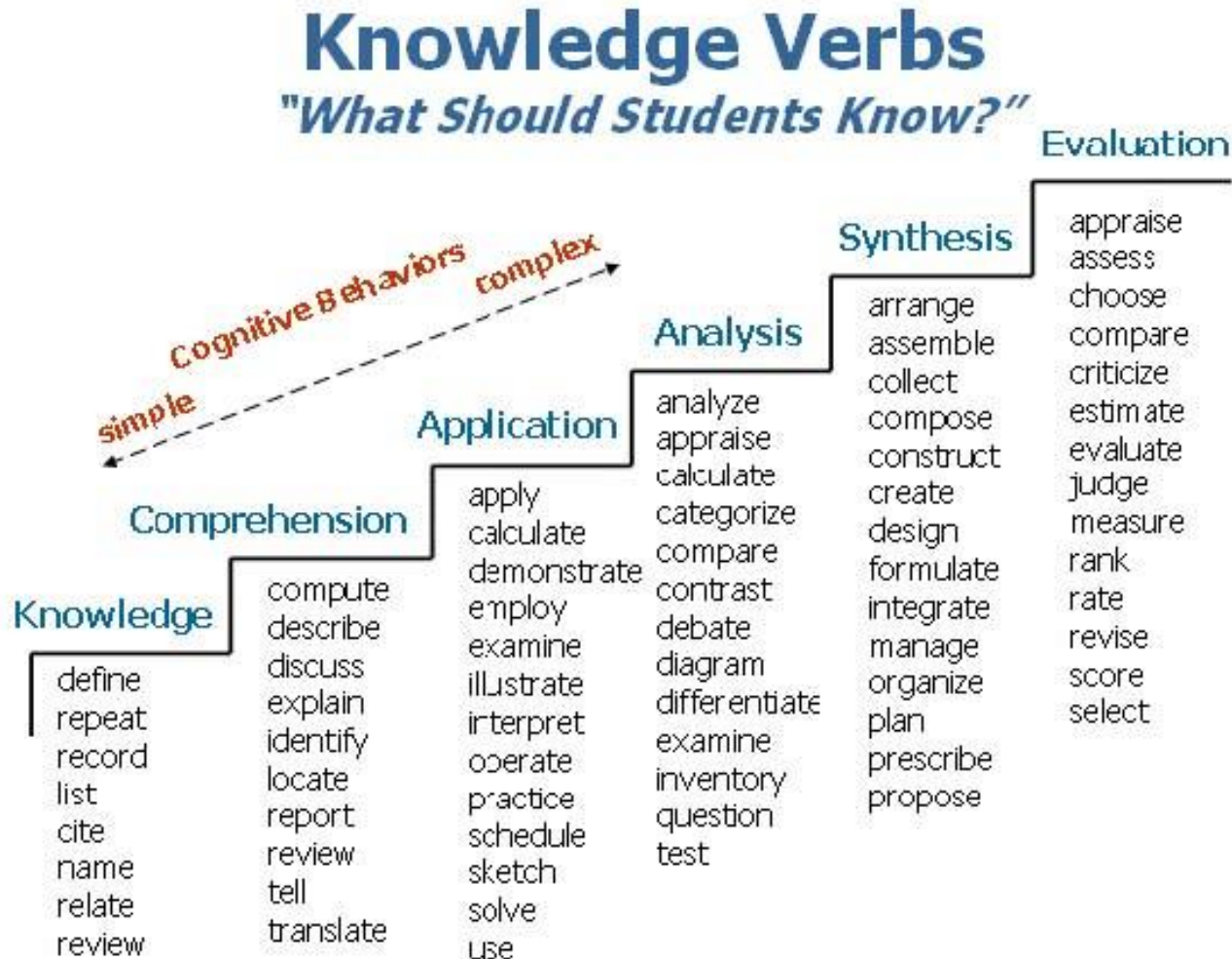
2. Then, for each learning outcome that follows, start with an action verb that reflects the appropriate behaviour students should be able to demonstrate, e.g.,

2. Then, for each learning outcome that follows, start with an action verb that reflects the appropriate behaviour students should be able to demonstrate, e.g.,

**UNDERSTAND**



# Knowledge verbs - what students will need to know (cognitive behaviors).

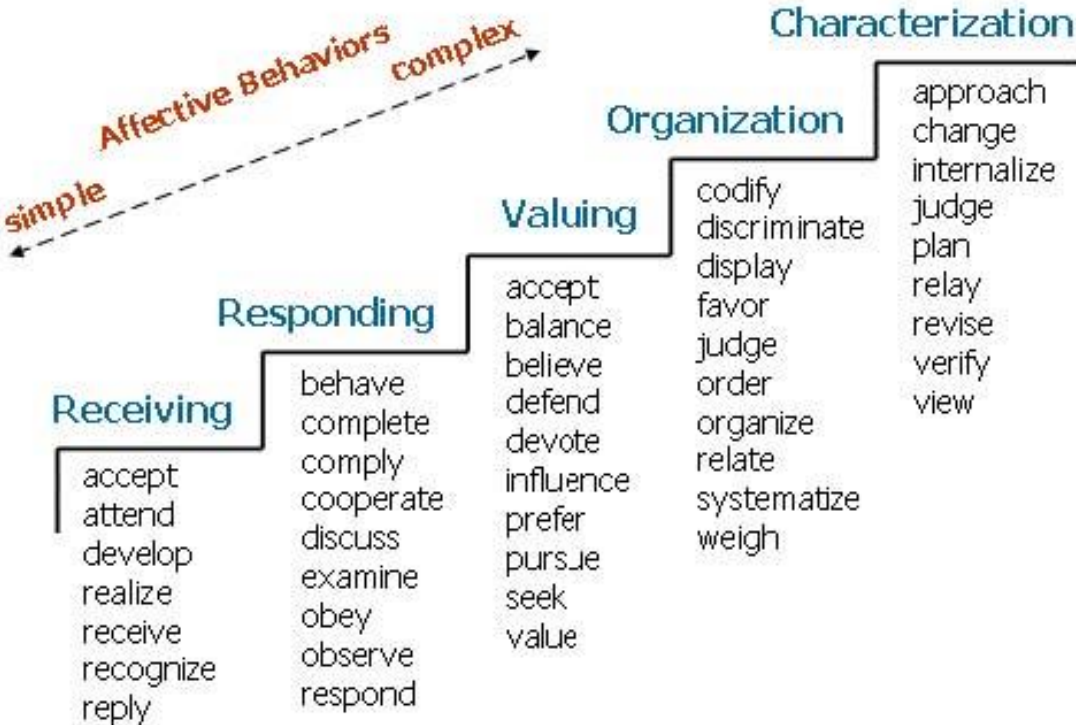




Attitude verbs - describe what students should care about (affective behaviours).

# Attitude Verbs

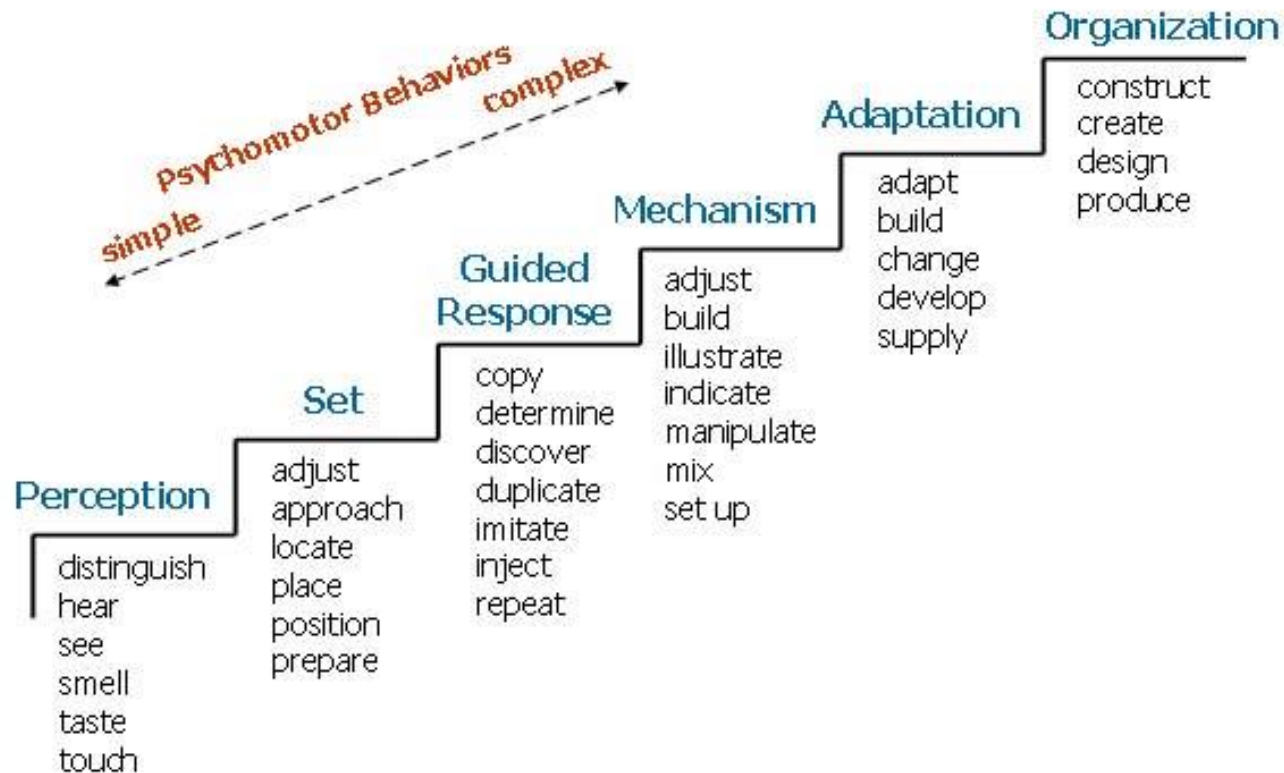
*"What Should Students Care About?"*



Skill verbs - describe what students should be able to do (psychomotor behaviours).

## Skill Verbs

*"What Should Students Be Able to Do?"*



3. After each action verb, include a qualifier to restrict the conditions and terms under which the objectives are met.

How often? How well? How many? How much? How will we know it has reached the required standard? What is given/not given? What are the variables? for example,

- to address unpredictable and complex problems
- with reference to the professional codes of conduct
- in diverse contexts
- with responsibility and accountability for own learning.

# Learning Outcomes Checklist

***Read each learning objective - Yes/No***

- Does it speak directly to the learner? (refer to what student might achieve, not what teacher will do)
- Is it measurable?
- Does it target one specific aspect of expected performance?
- Does it use an effective action verb?
- Does it match instructional activities and assessments?
- Is it written in terms of observable behavioural outcomes?

# What does a graduate look like?

## **The Six Thinking Hats (de Bastardised Bono)**

### **The White Hat**

What do you think a graduate should look like.

### **The Red Hat**

What do students want to achieve.

### **The Black Hat**

What does industry/the profession want from graduates.

### **The Yellow Hat**

What do regulatory bodies want your course to achieve.

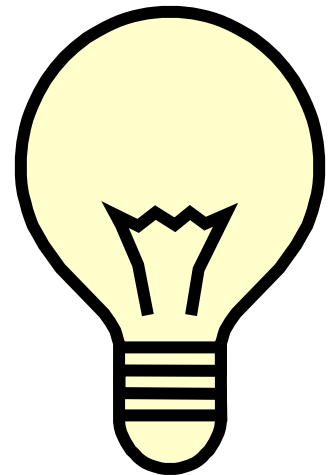
### **The Green Hat**

Who are you marketing the course at.

### **The Blue Hat**

What does your institution want a graduate to look like?

**Does the course achieve all this?**



# Measuring PILOs - Rubrics

- In order to ensure **standardisation of assessing PILOs** across courses a series of assessment rubrics have been developed to measure the PILOs.
- A rubric identifies the **criteria** that are to be used to evaluate competence in each PILO (along the left hand side) with a description of the **expected level** to achieve each standard (across the top).

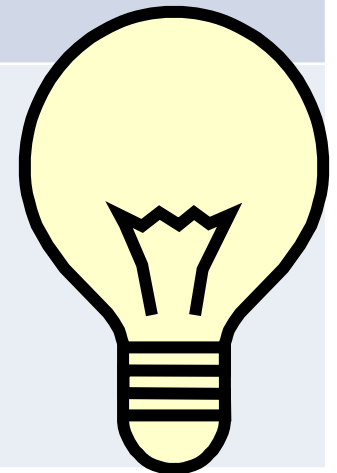
# Assessment Task

STANDARD	BELOW EXPECTATIONS	MEETS EXPECTATIONS	EXCEEDS EXPECTATIONS
<b>GRADE</b>	<b>Z</b> →	<b>P</b> → <b>C</b>	<b>D</b> → <b>HD</b>
<b>CRITERIA</b>			
<b>Demonstration of inter-relationships between differing business related disciplines</b>	<p><b>Limited demonstration of integration between disciplines.</b></p> <p>e.g. identification or description only.</p>	<p><b>Sound demonstration of integration between disciplines.</b></p> <p>e.g. examination, explanation, interpretation, application or analysis of interrelationships.</p>	<p><b>Comprehensive demonstration of integration between disciplines.</b></p> <p>e.g. detailed examination, insightful analysis or interpretation, synthesis, extrapolation, evaluation and/or recommendations.</p>
<b>Application of critical understandings of theoretical concepts underpinning perspectives in industry based scenarios.</b>	<p><b>No / little application of critical understandings demonstrated.</b></p> <p>e.g. Only one perspective drawn on to demonstrate concepts.</p>	<p><b>Application of critical understandings demonstrated.</b></p> <p>e.g. 2-3 perspectives drawn on to demonstrate concepts.</p>	<p><b>Convincing application of critical understandings demonstrated.</b></p> <p>e.g. Relevant and innovative application drawn from multiple / global perspectives.</p>

# Whole of Course

## K1 Demonstrate essential knowledge necessary for a career in business related professions

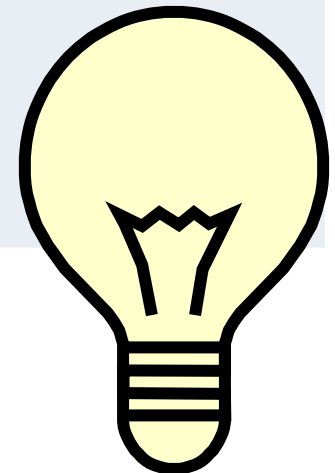
	Year 1: Foundation	Year 2: Intermediate	Year 3: Competent	Proficient
<b>A</b> Appreciation of essential concepts necessary for a career in business and related professions.	Describes essential concepts of business.	Explains essential concepts of business, demonstrating application of concepts.	Interprets essential concepts of business hypothesising, and assessing aspects of the concepts.	
<b>B</b> Critical analysis and evaluation of essential concepts.	Demonstrates some critical analysis/evaluation of essential concepts. e.g. Reference to concepts through definition or description only.	Demonstrates sound critical analysis / evaluation of essential concepts. e.g. analysis demonstrated through explanation, discussion, investigation, application, interpretation of concepts.	Demonstrates thoughtful critical analysis and evaluation of essential concepts. e.g. involvement of reflection, judgment, problem-solving, synthesis, assessment, prediction.	
<b>C</b> Consideration of the economic, social and cultural environments within which international businesses operate.	Demonstrates some consideration of the economic, social and cultural aspects of international business context.	Demonstrates sound consideration of international economic, social and cultural differences between cultures and how these differences impact ways that business operates.	Demonstrates high level understanding of international economic, social and cultural environmental issues in an international business situation. e.g. accurate explanation of relevant actions and prediction of responses.	





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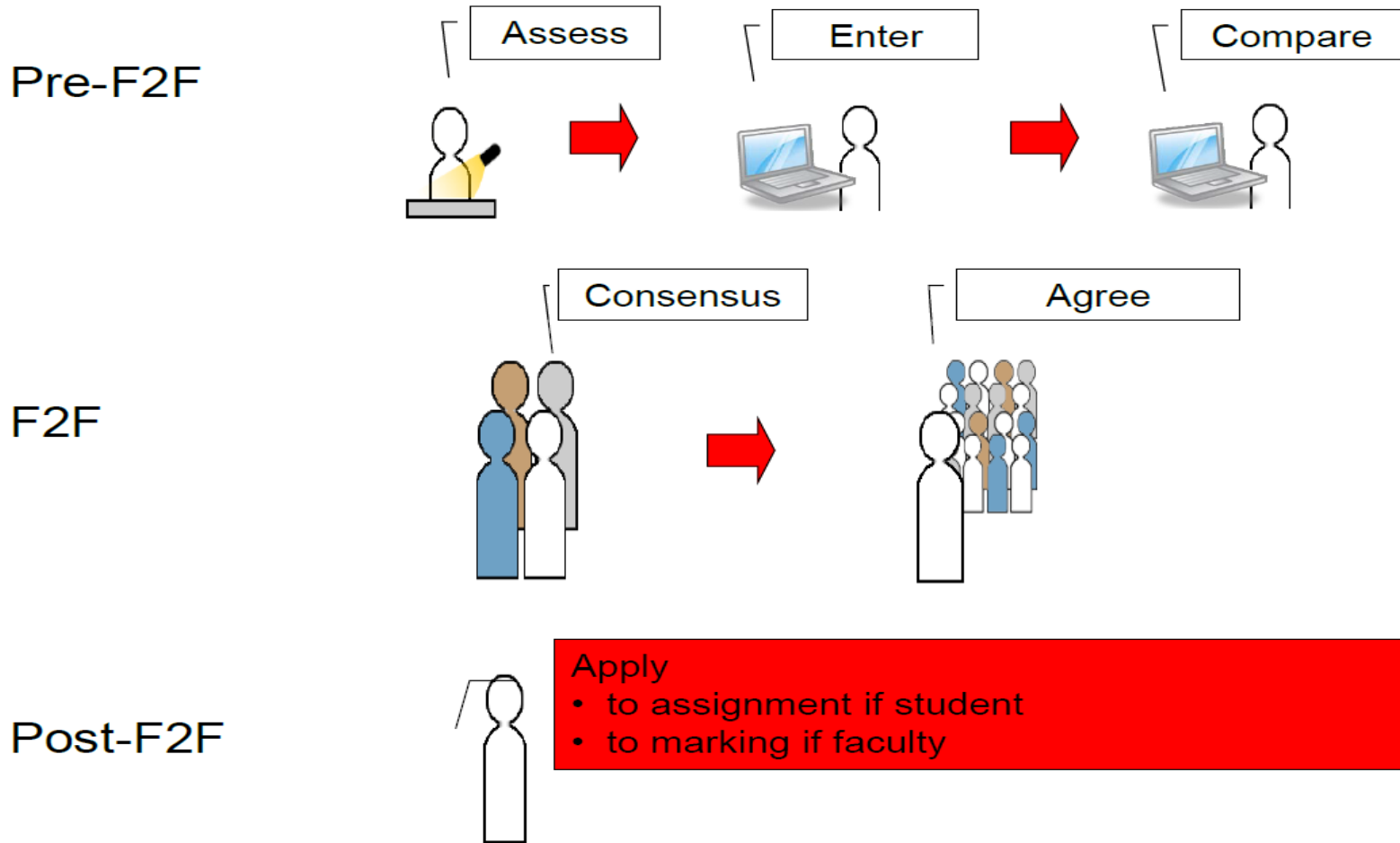
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	Below F	Meets P C	Exceeds D HD
SLO			
SLO			
SLO			
K1	Describes essential concepts of business	Explains essential concepts of business, demonstrating application of concepts.	Interprets essential concepts of business hypothesising, and assessing aspects of the concepts.
K1	Demonstrates some consideration of the economic, social and cultural aspects of international business context.	Demonstrates sound consideration of international economic, social and cultural differences between cultures and how these differences impact ways that business operates	Demonstrates high level understanding of international economic, social and cultural environmental issues in an international business situation. e.g. accurate explanation of relevant actions and prediction of responses.

# Calibration

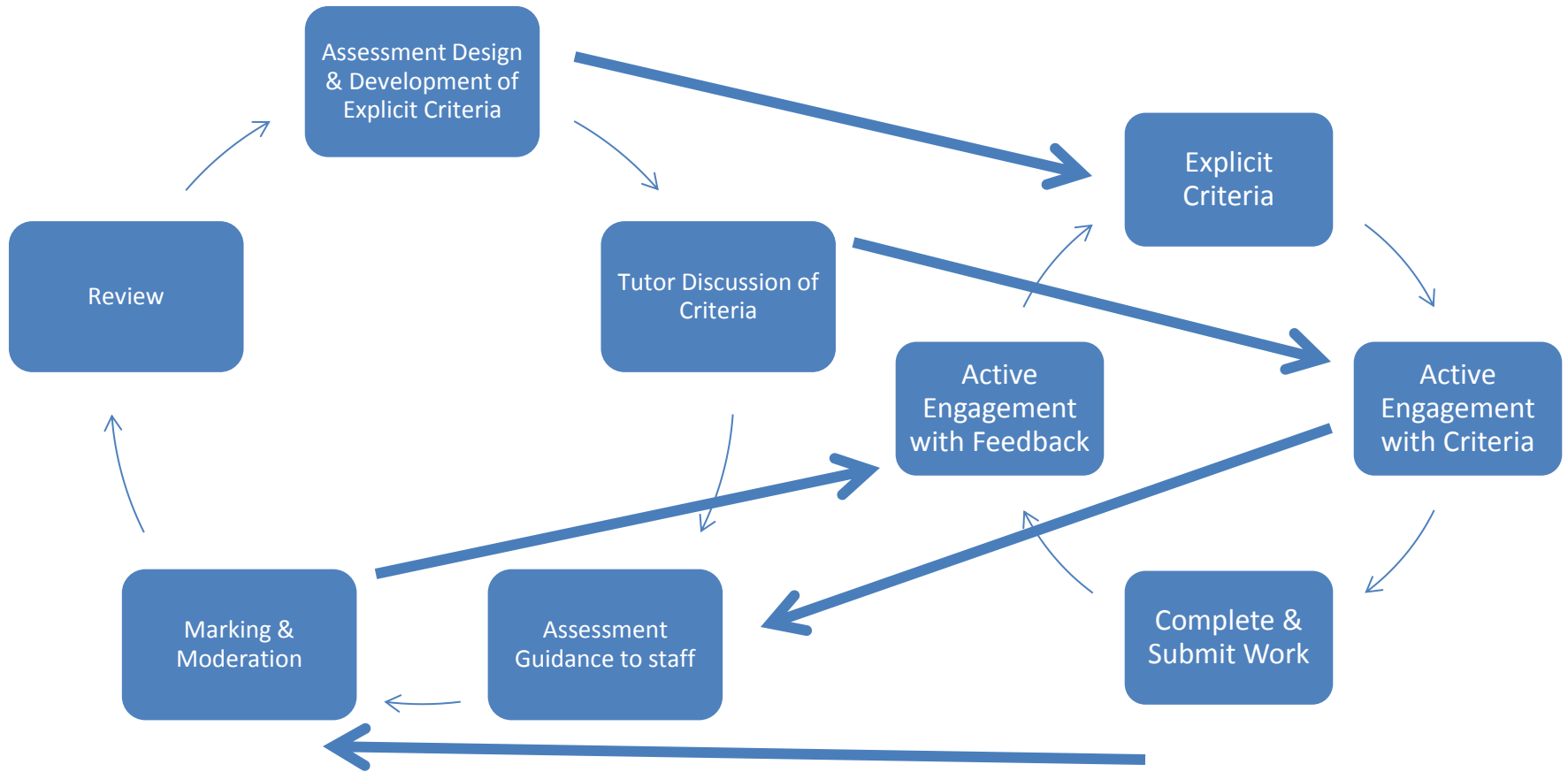
## Calibrating and grading to the standard



# Engagement through Social Constructivism

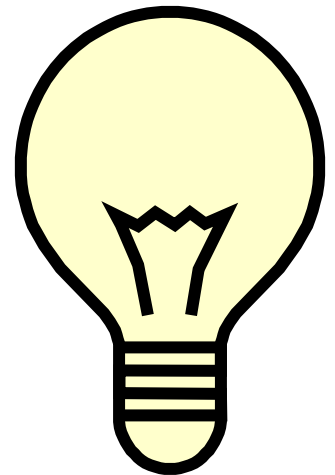
- Students often do not understand what a higher standard piece of work looks like and do not understand what is being asked of them (O'Donovan et al., 2008).
- An indispensable condition for improvement in student learning is that 'the student comes to hold a concept of quality roughly similar to that held by the teacher' (Sadler, 1989, p. 121).
- Therefore it is vital that students are **engaged** in order to achieve a **shared understanding** of performance statements with teachers.

# The Social Constructivist Process Model



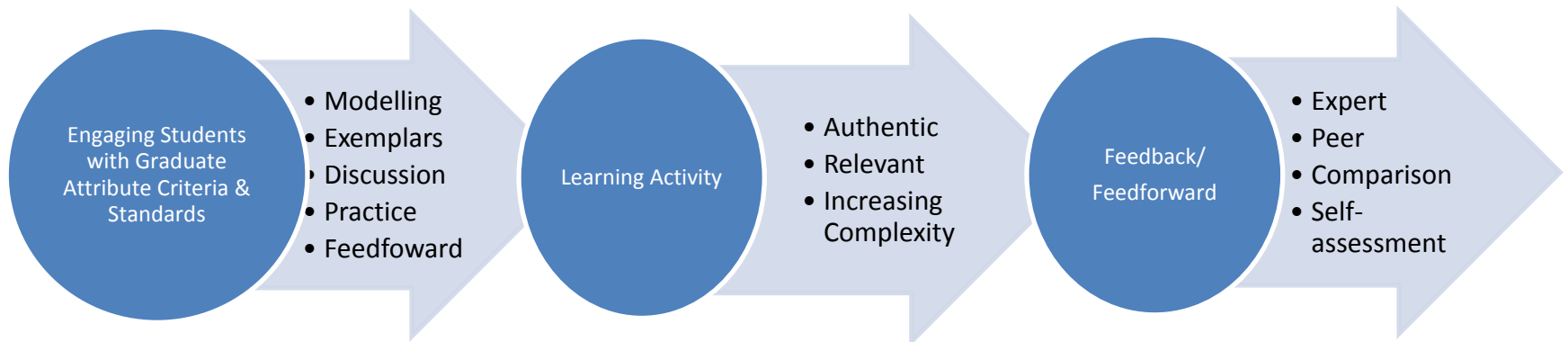
# ePortfolios

- Creating ePortfolios is said to enable students to enhance their learning by giving them a better understanding of their skills and attributes, as well as where and how they need to improve to meet academic and career goals (Yancey, 1999).



# Whole of Course Approach

- The proposed whole of course approach model three parts to it:
  - Engaging students
  - Facilitating learning activities
  - Providing feedback/forward which then feeds into the engaging students for the next progressive task.



# Designing Authentic Learning Tasks

- Allow **practice of skills in authentic tasks** that replicate how these skills are used in the real world.
- Real tasks can motivate and stimulate students more than the same material in abstract form, and can reflect what occurs in settings beyond the educational environment (Boud et al., 2010).
- Rather than having all of the aspects of a full professional problem, tasks may need to be **simplified** so they do not lead to students being overloaded with material and issues they are not ready to handle yet.
- Tasks need to be designed in a **scaffolded** way so that learners can work through in a progressive manner, receiving feedback on performance and self-reflecting on achievements throughout.
- These activities need to **advance in complexity** over time with higher expectation of performance as they progress.

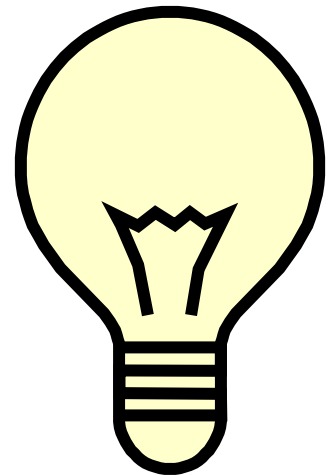


# Teaching - Facilitation

- Allow practice (formative/with reflection)
- Provide a risk free environment (low weighting)
- Make PILOs explicit, linking to industry, assessments, outcomes, professional body requirements
- Emphasise the value of PILOs to students making the connection to practice

# Embedding conflict management

- Curriculum delivery
  - Group work conflict
  - Discussion board conflict
  - Disagreement with content
  - Debates
  - Compare/contrast
  - Counter arguments
  - Differing papers
  - Class engagement
  - Assessment



# Modelling Graduate Attributes & Providing Exemplars

- To engage students in a socially constructive manner **modelling and exemplars** can be used.
- These can be achieved in a number of ways:
  - requiring teachers to model the attributes at the standard expected at graduation in their teaching methods;
  - inviting guests into the learning situations to demonstrate how graduate attributes are performed in professional/industry settings;
  - encouraging work integrated learning and field trips so that students can experience the graduate attribute standards in the workplace;
  - providing examples of work that exhibit the standard expected on completion.

# Providing Relevant Feedforward & Feedback

- In order for feedback to be the most feedback there are certain criteria that should be adhered to:
  - it should be timely, intimate, empowering,
  - it should open doors for further learning, and manageable (Race, 1999).
- Also explicitly relate to the graduate attributes that are being developed.
- Assignments should link to each other so feedback can be used in the students' next piece of work (Brown, Gibbs & Glover, 2003) - feedforward.
- Sadler (1983) for feedback to benefit learning it must allow the student to: know what good performance is (goals/ criteria), know how their current performance relates to good performance, **know how to act to close the gap**.

# Developing Self Judgement

- Feedback is not just offered by the “experts” but can be gained from peers and importantly from **self-assessment**.
- Taking Boud et al’s. (2010) assessment manifesto, self-judgement is an important factor in becoming an effective learner.
- Opportunities for students to self-assess against criteria in the normal learning environment are difficult to organise and sustain.

# So . . .

- To support students to take a more **holistic appreciation of performance** that students should be encouraged to not only engage with the criteria and standards for their current stage of learning but also **develop a shared understandings of the expectations specified for the end of their degree** or program of study.

# Whole of Program Marking



## Hi achiever in 1<sup>st</sup> yr subject

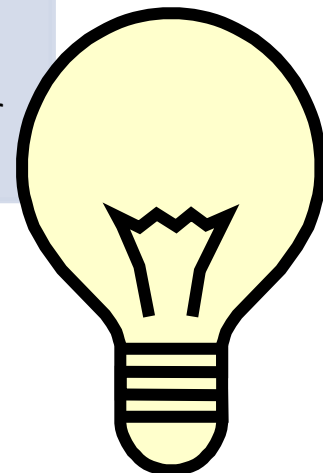
- 1st year student achieved at 2nd year level. This version allows markers to grade using a 100% scale but still reveal to the student that their work is really at a 2nd year level. Obviously their mark on this criteria would be constrained to 100% for this actual task.

## Hi achiever in 2<sup>nd</sup> yr subject

- 2nd year student achieved at 3rd year level. This version allows markers to grade using a 100% scale but still reveal to the student that their work is really at a 3rd year level. Obviously their mark on this criteria would be constrained to 100% for this actual task.

## Poor achiever in 3<sup>rd</sup> yr subject

- 3rd year student achieved at 1st year level. This version allows markers to grade using a 100% scale but still reveal to the student that their work is really at a 1st year level. Obviously their mark on this criteria would be constrained to 0% for this actual task.



# Ongoing process . . .





# Principles for Design

- **Holistic:**
  - whole of course approach;
  - setting expectations;
  - creating rubrics;
  - calibrating understanding;
  - engaging students (whole of course)
- **Embedded:**
  - authentic, scaffolded assessment;
  - teaching activities;
    - embedded;
    - modeling & exemplars;
  - feedforward
- **Inclusive/collaborative:**
  - vision
  - executive support
  - guiding team
  - training
  - reward and recognise
  - empowerment
  - communicate for buy-in

# Shared Understanding – What?

- A prime aspect of leading the change is the creation of a shared understanding, which is a precursor to a **shared commitment**.
- Shared understanding is defined as the stakeholders understanding each other's positions well enough to have an intelligent dialogue about their different interpretations, and to **exercise collective intelligence for necessary actions** (Conklin, 2006).

# Cultural Change

- Made up of **the values, beliefs, underlying assumptions, attitudes, and behaviours shared by a group of people** (Heathfield, 2009).
- When an organisational culture is already established, people must unlearn the old values, assumptions, and behaviours before they can learn the new ones (Heathfield, 2009).
- Cultural change requires the input of others in decision-making (**participative leadership**). Participation and contributions helps group members feel more relevant and committed to the decision-making process, and to the changes that result (Tannenbaum & Schmitt, 1958).

# Cultural Change

- Kotter (2002) suggests the following key strategies to manage cultural change in the workplace:
  - Get the vision right
  - Executive support
  - Build a guiding team
  - Training
  - Reward and Recognise
  - Empowerment
  - Communicate for buy-in

# Resources

- Website:
  - [assuringlearning.com](http://assuringlearning.com)

# References

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