

**ALIGNING TEACHING AND LEARNING
TO COURSE OUTCOMES
ANNA GEVORGYAN**

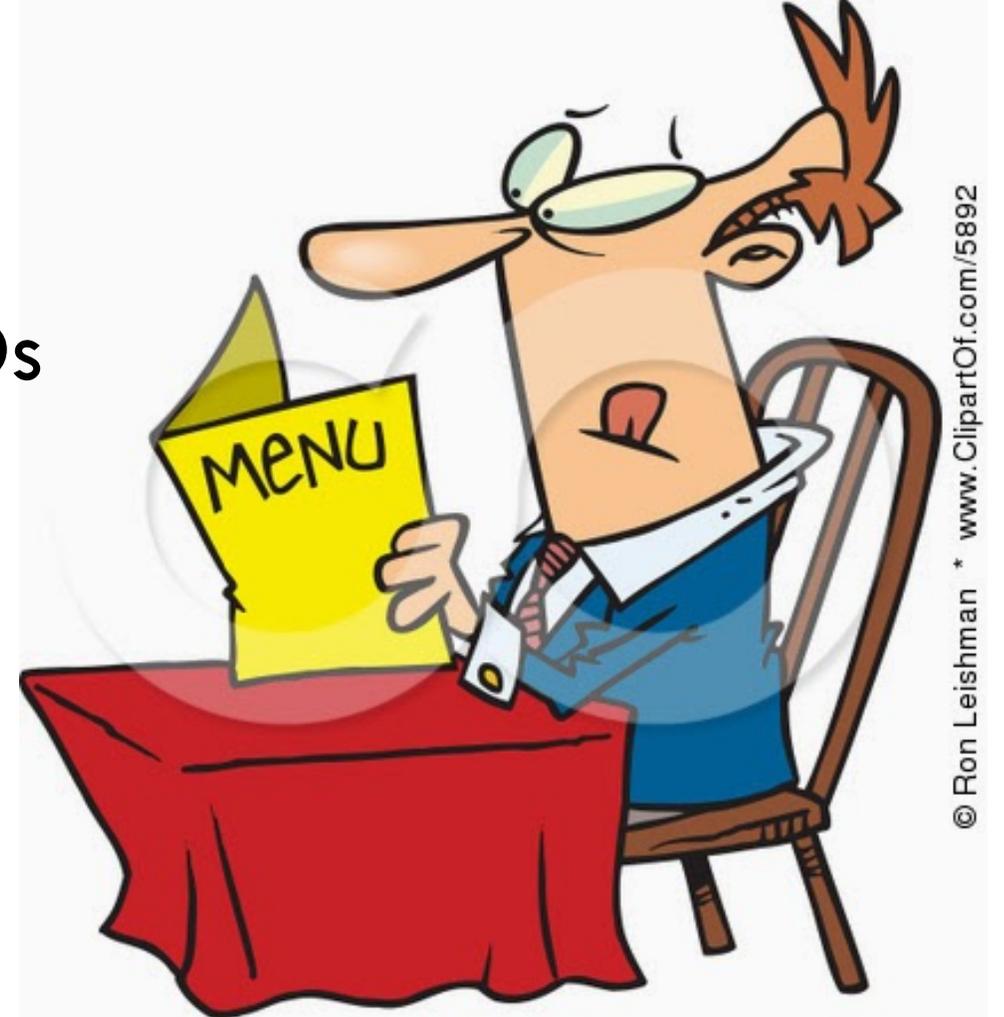
ANNA.GEVORGYAN@AUA.AM

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TODAY'S SPECIAL

Aligning assessment to course SLOs

Aligning teaching and learning activities to course SLOs



WHAT IS (CONSTRUCTIVE) ALIGNMENT

‘A good teaching system aligns teaching method and assessment to the learning activities stated in the objectives, so that all aspects of the system are in accord in supporting appropriate student learning. This system is called constructive alignment, based as it is on the twin principles of constructivism in learning and alignment in teaching’

(Biggs, [1999](#), p. 11).

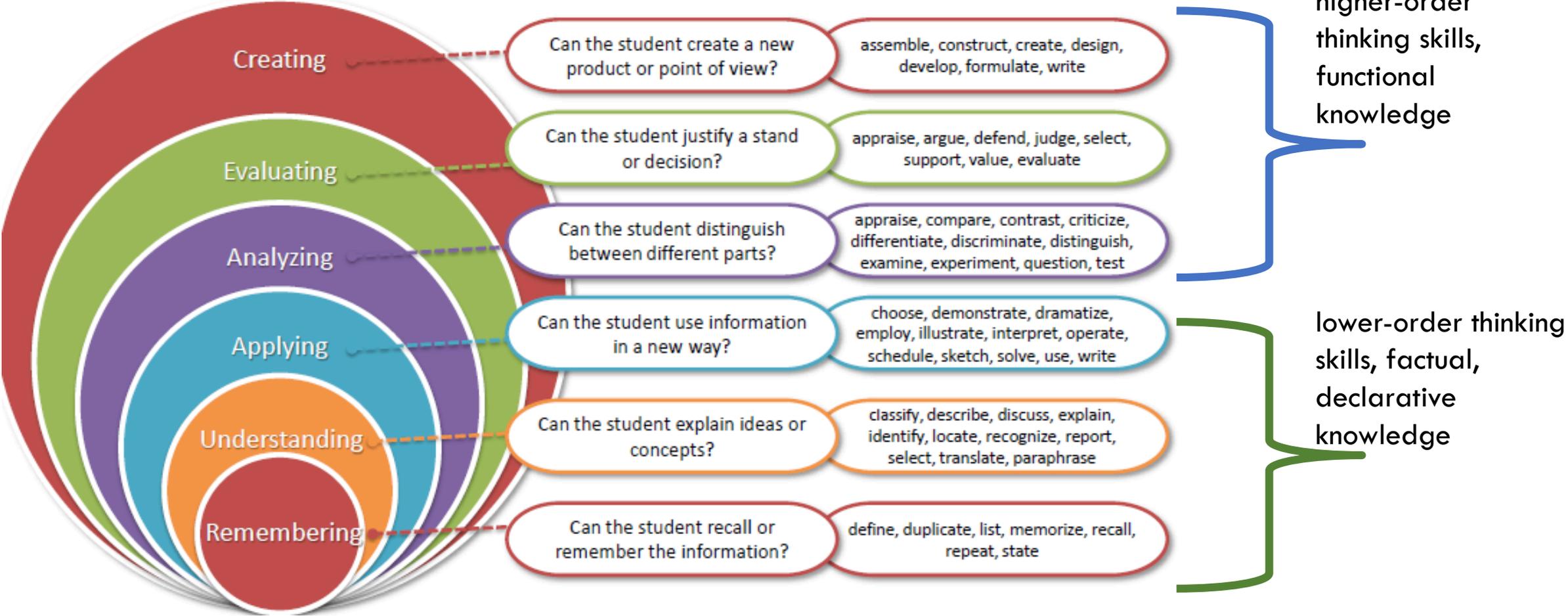
RATIONALE FOR CA

When there is alignment between what we want, how we teach and how we assess, teaching is likely to be much more effective than when it is not (aligned)... Traditional transmission theories of teaching ignore alignment. (Biggs 2003a)



1. Clearly defining the learning outcomes.
2. Selecting teaching and learning methods that are likely to ensure that the learning outcomes are achieved.
3. Assessing the student learning outcomes and checking to see how well they match with what was intended.

Bloom's Taxonomy (Revised)



WHEN DESIGNING COURSE SLOS, CONSIDER...

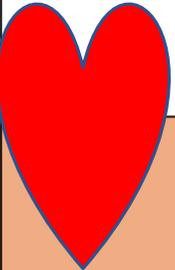
1. What kind of knowledge is to be involved?
2. Is the SLO about declarative knowledge (knowing about theories, concepts, etc) or functional knowledge (applying, using, solving particular problems)?
3. What level of understanding is the SLO for? Introductory or advanced?

Explicitly and clearly linking course outcomes to assignments and activities helps students understand the learning process and the value of their work. It is important to explain how small assignments might help students successfully complete a larger assignment (scaffolding) such as research project, presentation, final paper. What skills does an assignment help develop? What types of assignments will allow students to demonstrate learning? What student learning outcomes does an assignment address?

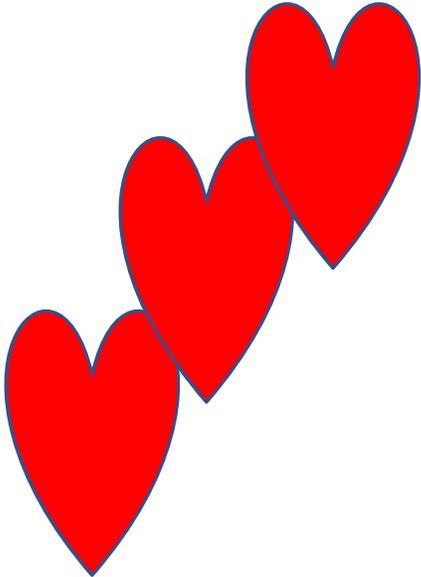
How a course is aligned to the program (program goal and program student learning outcome) is defined on the program curriculum map.

This describes how your course aligns with the program student learning outcomes.



University Mission	Program Goal	Program Student Learning Outcomes <i>Students will be able to:</i>	Course-based Student Learning Outcomes <i>In this course, students will be able to:</i>	Activity/Assignment
<p>[The American University of Armenia aims to have an impact on students and the community as a center of academic excellence, innovation, inquiry, and diversity that contributes to the further development and advancement of Armenia, the region and the world through teaching and scholarship, fostering creativity, integrity and community service]</p>	<p>[For example Program Goal 4: Develop articulate, conscientious leaders and problem solvers who are committed to contributing to their fields and society.]</p>	<p>[For example: 4.1 Produce and deliver written and oral presentations, and communicate with specialists and non-specialists using appropriate media and technology. (Beginner Level)]</p>	<p>[For example: Produce writing including, summaries and short essays (expository and narrative) using the different stages of the writing process, including choosing a topic, brainstorming, outlining, drafting, soliciting feedback, revising, and editing.</p>	<p>[For example: Summary Assignment (graded); Comparison and Contrast essay (graded)]</p> 
	<p>Goal 3: Equip students with state-of-the-art tools of language pedagogy.</p>	<p>3.1. apply contemporary language teaching methodology to plan activities, lessons, and courses.</p>	<p><i>Teaching Language Skills Course</i> Develop lesson plans, appropriate materials, and activities for teaching language skills and sub-skills for different levels of ELLs.</p>	
			<p>Analyze lesson plans and materials used in teaching language skills and sub-skills.</p>	

MA TEFL PROGRAM SLOS AND COURSE SLOS

Program goal	Program SLO	Course SLO Teaching Language Skills Course	Activities /Assessment
Goal 3: Equip students with state-of-the-art tools of language pedagogy.	3.1. apply contemporary language teaching methodology to plan activities, lessons, and courses.	#1 Develop lesson plans, appropriate materials, and activities for teaching language skills and sub-skills for different levels of ELLs.	
		#2 Analyze lesson plans and materials used in teaching language skills and sub-skills.	

Perspective

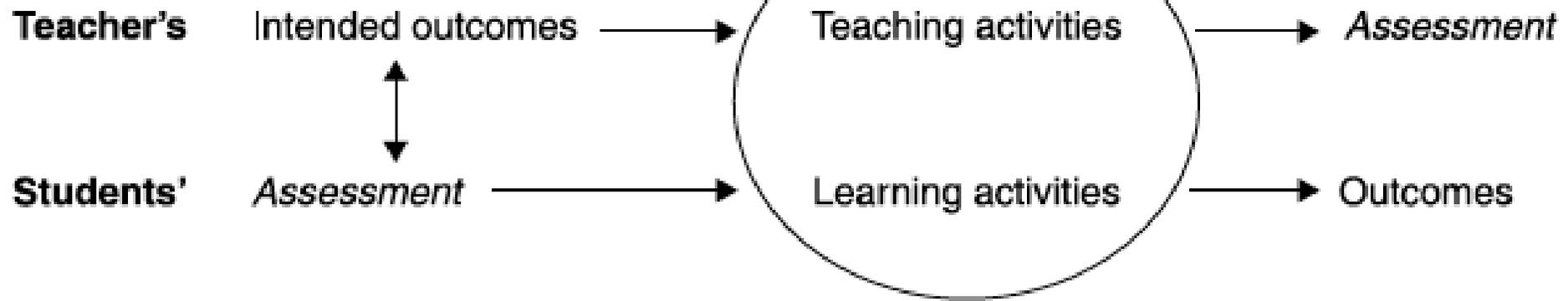
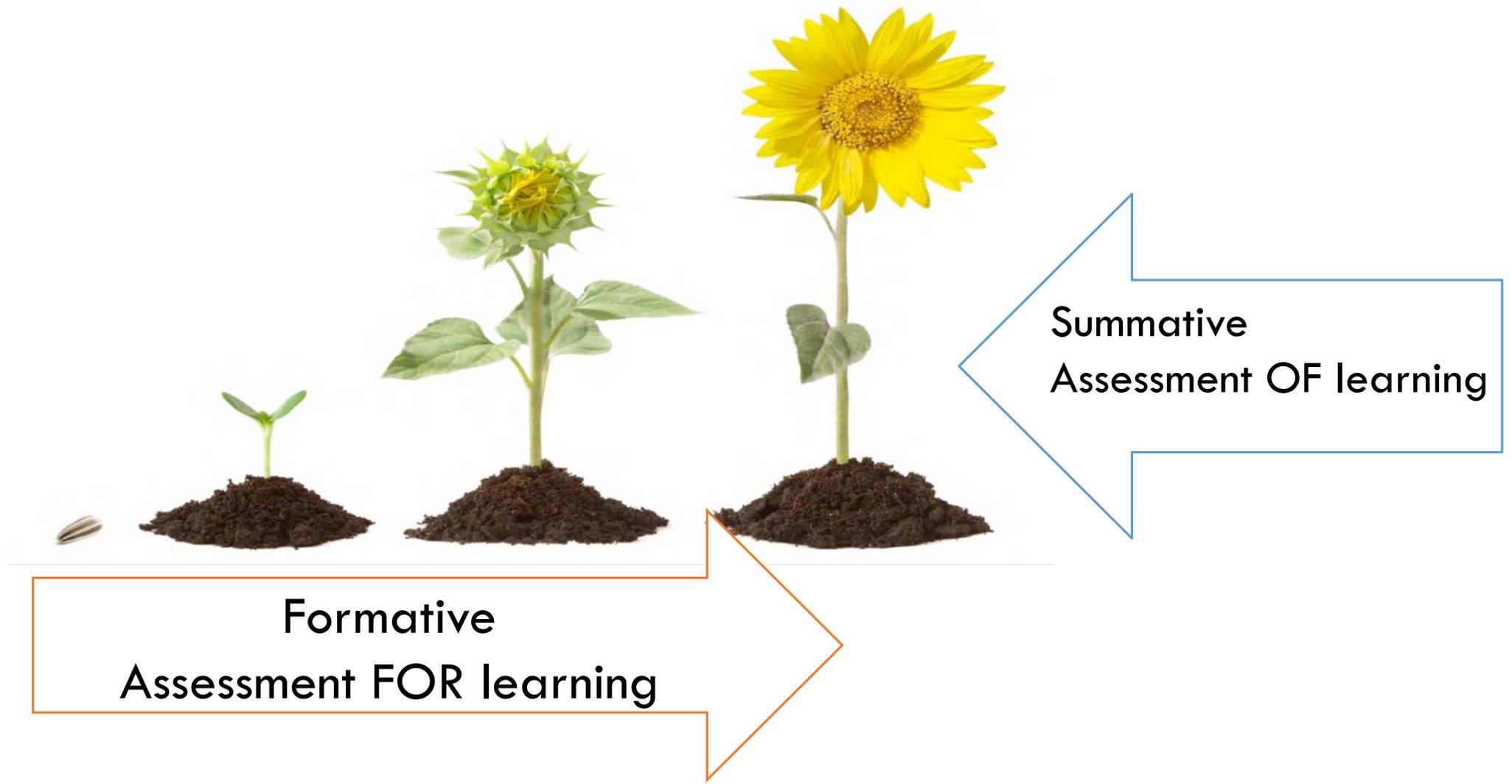


Figure 10.2 Teacher's and student's perspectives on assessment

TYPES OF ASSESSMENT



Formative
Assessment FOR learning

Summative
Assessment OF learning

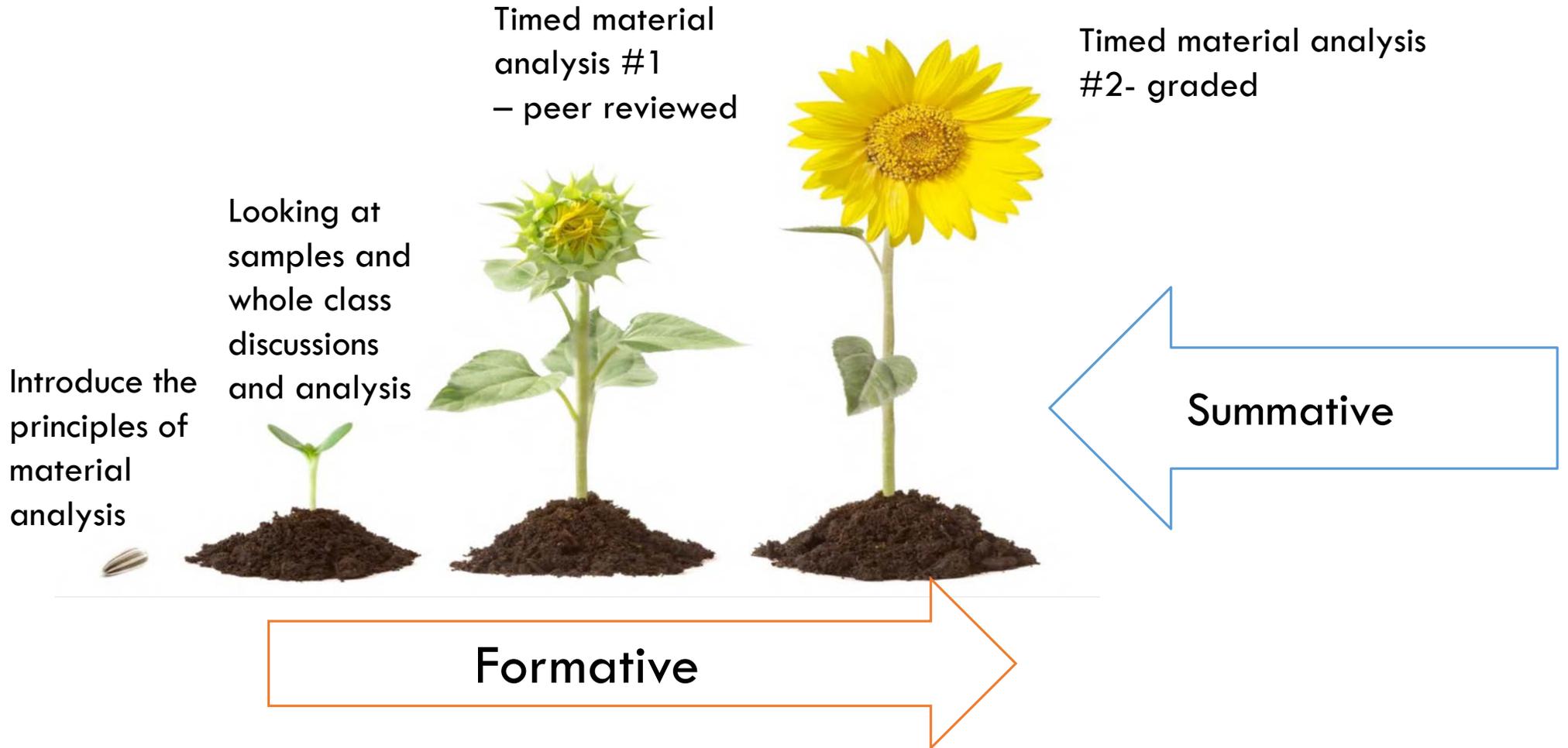
DYLAN WILIAM ON ASSESSMENT

“One of the ways I like to talk about it is: just imagine what would happen if a pilot flew like many teachers assess. I flew back from Seattle a few weeks ago - just imagine what the pilot would have done - he would have flown east for 9 hours and then after 9 hours he says 'Time to land'. He will put the plane down and then he will ask 'Is this London?' and of course even if it's not London, he says 'Well everybody has got to get off because I've got to get on to the next journey'. And that's exactly the way we have assessed in the past - we teach students material and at the end of that teaching we find out if they have learned it or not. And if they haven't, we say 'Too bad, because we are on to the next unit'.”

<https://www.dylanwiliamcenter.com/>

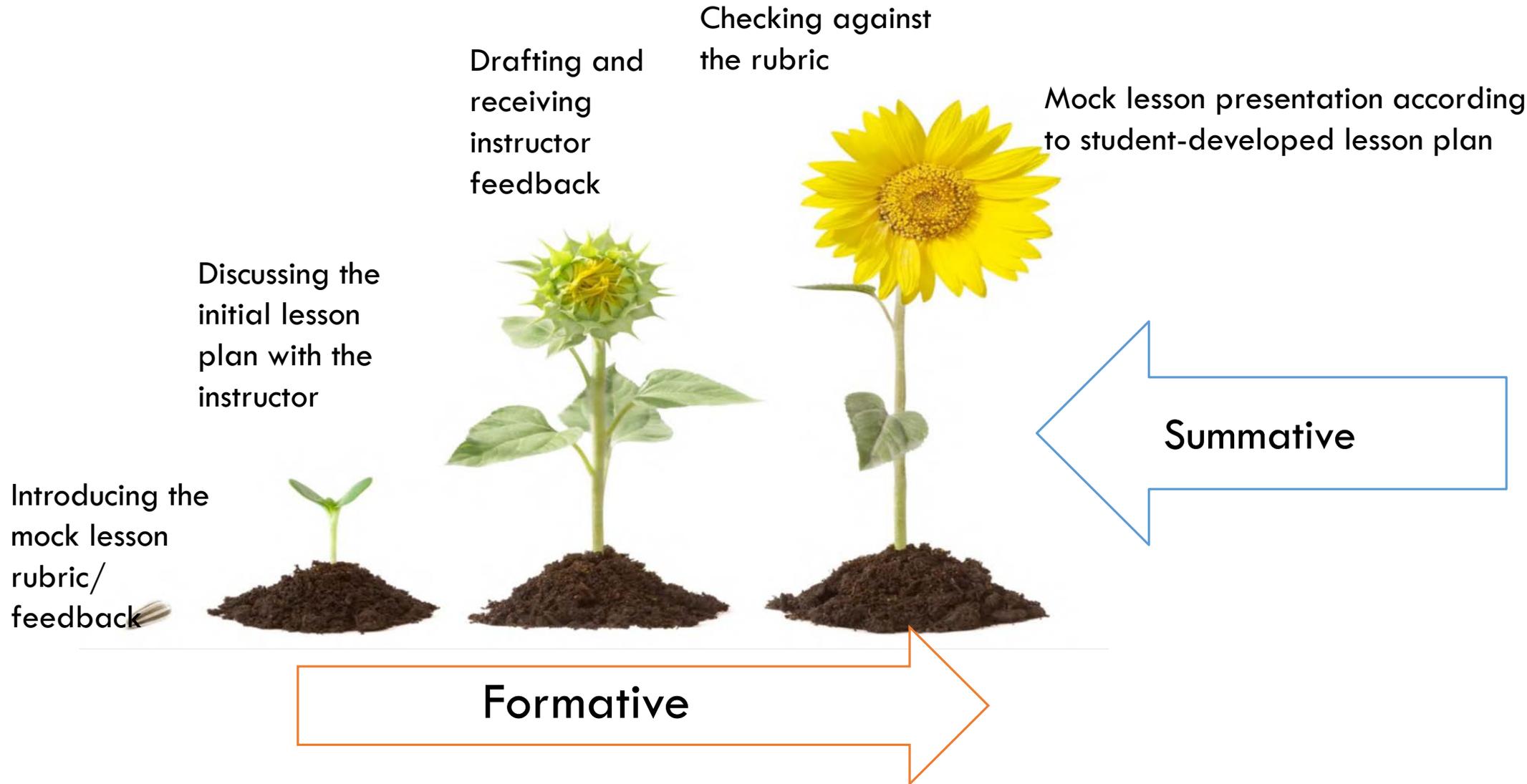
TYPES OF ASSESSMENT

SLO #1 Analyze language materials used in teaching language skills and sub-skills.

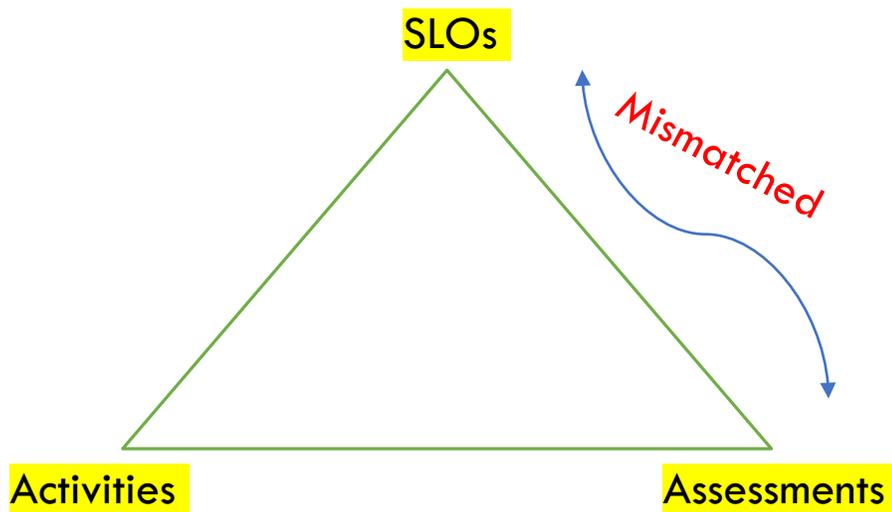


TYPES OF ASSESSMENT

SLO #2
Develop lesson plans, appropriate materials, and activities for teaching language skills and sub-skills for different levels of ELLs.

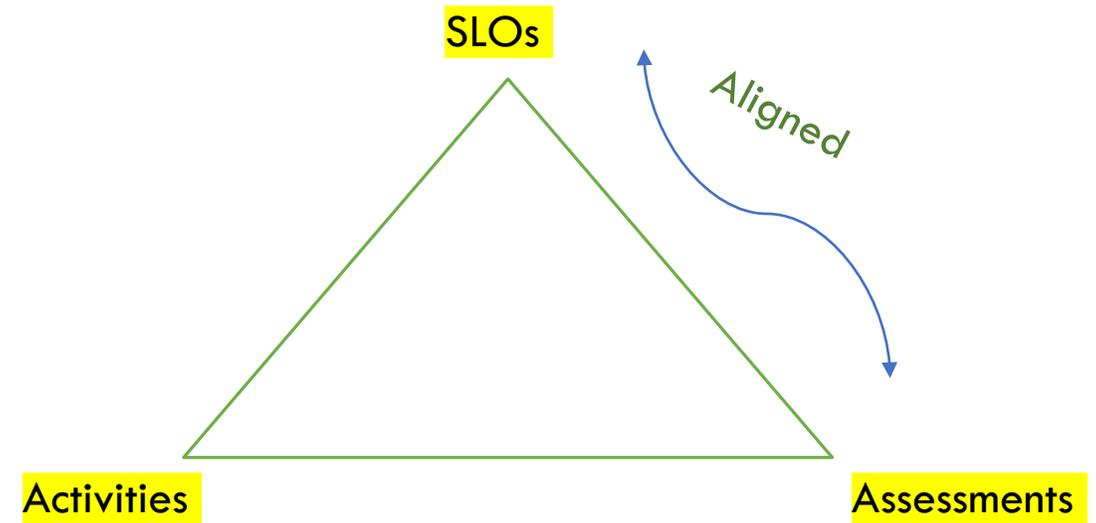


Ss need to be able to argue the merits of the theory of constructive learning.



Exam asking Ss to recognise different theories

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Multiple choice quiz asking Ss to recognise different theories

Essay asking Ss to argue for or against the theory of constructive learning

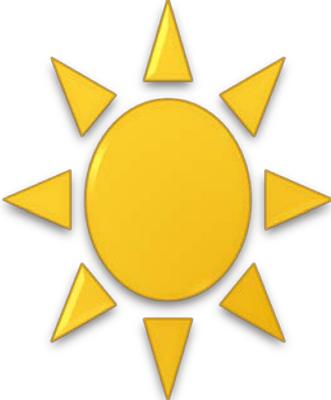
Course SLO Teaching Language Skills Course	Activities	Assessment
#1 Analyze language materials used in teaching language skills and sub-skills.		<p>Timed material analysis #1 – peer reviewed</p> <p>Timed material analysis #2 – graded</p>
#2 Develop lesson plans, appropriate materials, and activities for teaching language skills and sub-skills for different levels of ELLs.		Mock lesson presentation according to student-developed lesson plan

IT MAY BE HELPFUL TO DO THIS...

Course SLOs	SS will be able to	SLO#1 Critically reflect on their teaching practice	SLO#2 Analyze language materials used in teaching language skills and sub-skills.	#3
Assignments	Material Analysis			
	Group Presentation			
	Final Reflective Essay			

ALIGNING ASSESSMENT WITH SLOS



Course SLO Teaching Language Skills Course By the end of the course, SS will be able to...	Teaching and Learning Activities	Assessment
#1 Analyze language materials used in teaching language skills and sub-skills.		Timed material analysis #1 – peer reviewed Timed material analysis #2 – graded
#2 Develop lesson plans, appropriate materials, and activities for teaching language skills and sub-skills for different levels of ELLs.		Mock lesson presentation according to student-developed lesson plan

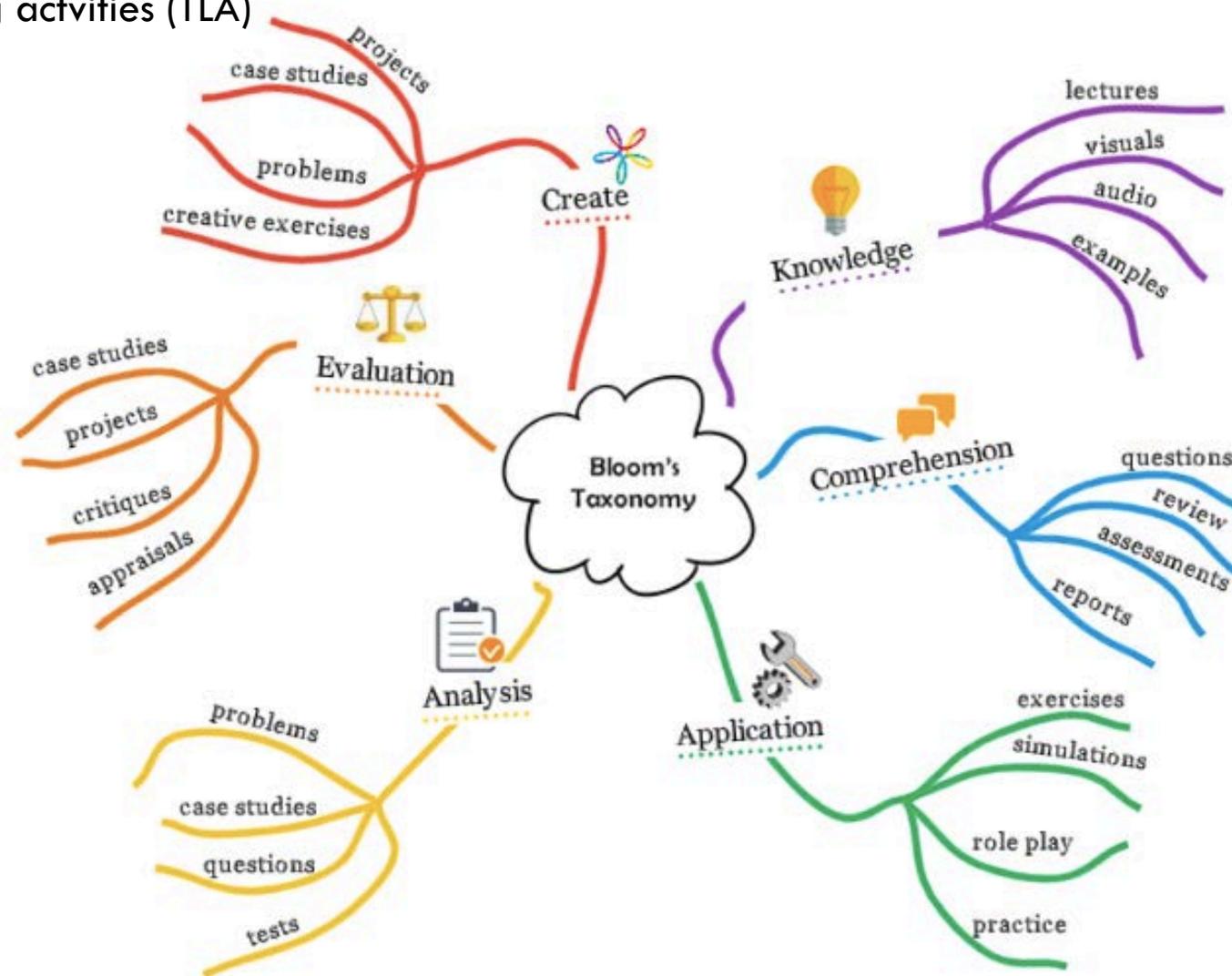
TEACHING AND LEARNING ACTIVITIES (TLA)

TLAs can be ...

- ❖ teacher managed with little student participation: lecturing, tutorials;
- ❖ teacher managed with some student participation: setting assigned readings or textbooks, laboratories, concept mapping, minute papers
- ❖ teacher managed with active student participation: peer teaching, interactive work in class, various group work;
- ❖ student managed: collaborative learning groups, chat rooms;
- ❖ individually managed : reading, searching the web, soliciting advice, listening to a lecture, and strategic management of these activities using metacognitive and study skills.

Biggs and Tang, 2011; Laurillard, 2012

Teaching and learning activities (TLA)



TLAS TO TARGET DECLARATIVE KNOWLEDGE: LECTURES

Bligh (1972) reviewed nearly 100 studies comparing lecturing with other methods, mostly group discussions or reading.

- “Lectures are relatively effective for presenting information, but unsupervised reading is more effective.
- Lectures are quite ineffective for stimulating higher order thinking.
- Lectures cannot be relied on to inspire or to change students’ attitudes, although many lecturers believe their own lectures do.
- The attention of students is typically maintained for about 10 to 15 minutes, after which learning drops off rapidly
- Students like really good lectures; otherwise they prefer well-conducted group work”.

DOES LECTURING WORK? WHEN?

“The best defense of the lecture...lies not in doing what other media do as well – and usually better – but in exposing students to the most recent developments in the field, and to the ongoing workings of a scholarly mind”.

“And where does this discussion leave lecturers who aren’t frontline researchers? Looking for alternatives to just lecturing”

Biggs and Tang, 2011

TLA EXAMPLES: ALTERNATIVES

Concept maps = useful for SLOs towards preparing SS to see the whole, make connections, integrations, organisation of ideas, etc

Learning partners= peer scaffold

Minute paper =

- At the start of the lecture : What do I most want to find out in this class?
- Towards the end: What is the main point I learned today? What was the main point left unanswered in today's session?

Note taking = include skills of note-taking into general study skills

Social reading with Hypothesis

Peer teaching

<https://omerad.msu.edu/teaching/teaching-strategies/active-learning-strategies>

TEACHING AND LEARNING ACTIVITIES (TLA) FOR DECLARATIVE KNOWLEDGE

Sample learning outcome

At the end of this module, the student will be able to explain the main features of effective academic essay.

The assessment method is to write an essay and an assessment criterion that is developed might be:

The essay will be word-processed and between 1500 and 2000 words on a given topic. The essay will relate to its title, will be clearly written and structured, will demonstrate the contribution of further reading, and thinking. The student will be able to explain how the essay demonstrates these features and how they contribute to its overall effectiveness.

How will the students get to writing this essay?

TEACHING AND LEARNING ACTIVITIES (TLA) FOR DECLARATIVE KNOWLEDGE

Declarative: explain

E.g. “By the end of the course, given Biggs’ conceptual framework, SS will be able to explain the principles of course alignment to a peer”

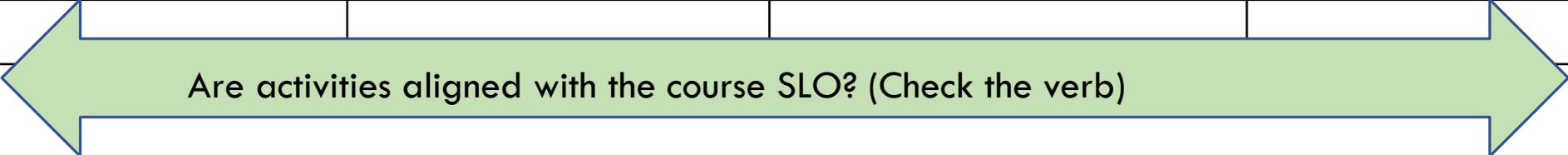
Lecture

What the Teacher does	What the students do
Introduce the framework and the principles (show ppt)	Did prior reading Listen Take notes Watch
Explain and elaborate with examples	Understand (What exactly? How?)
Ask questions	Respond

Designing TLAs for course SLOs

Select the course SLOs from the course that you teach. Design the TLAs that would lead the SS to the SLOs

Course SLOs	Instructional activities By the teacher	Instructional activities By the students	Assessment
Develop lesson plans, appropriate materials, and activities for teaching language skills and sub-skills for different levels of ELLs	Present lesson planning principles Provide samples/videos Discuss	<ul style="list-style-type: none">○ Identify lesson components○ Review multiple lesson plans○ Draft a lesson plan○ Get peer feedback○ Discuss with the teacher and get teacher feedback	Mock lesson presentation according to the final lesson plan



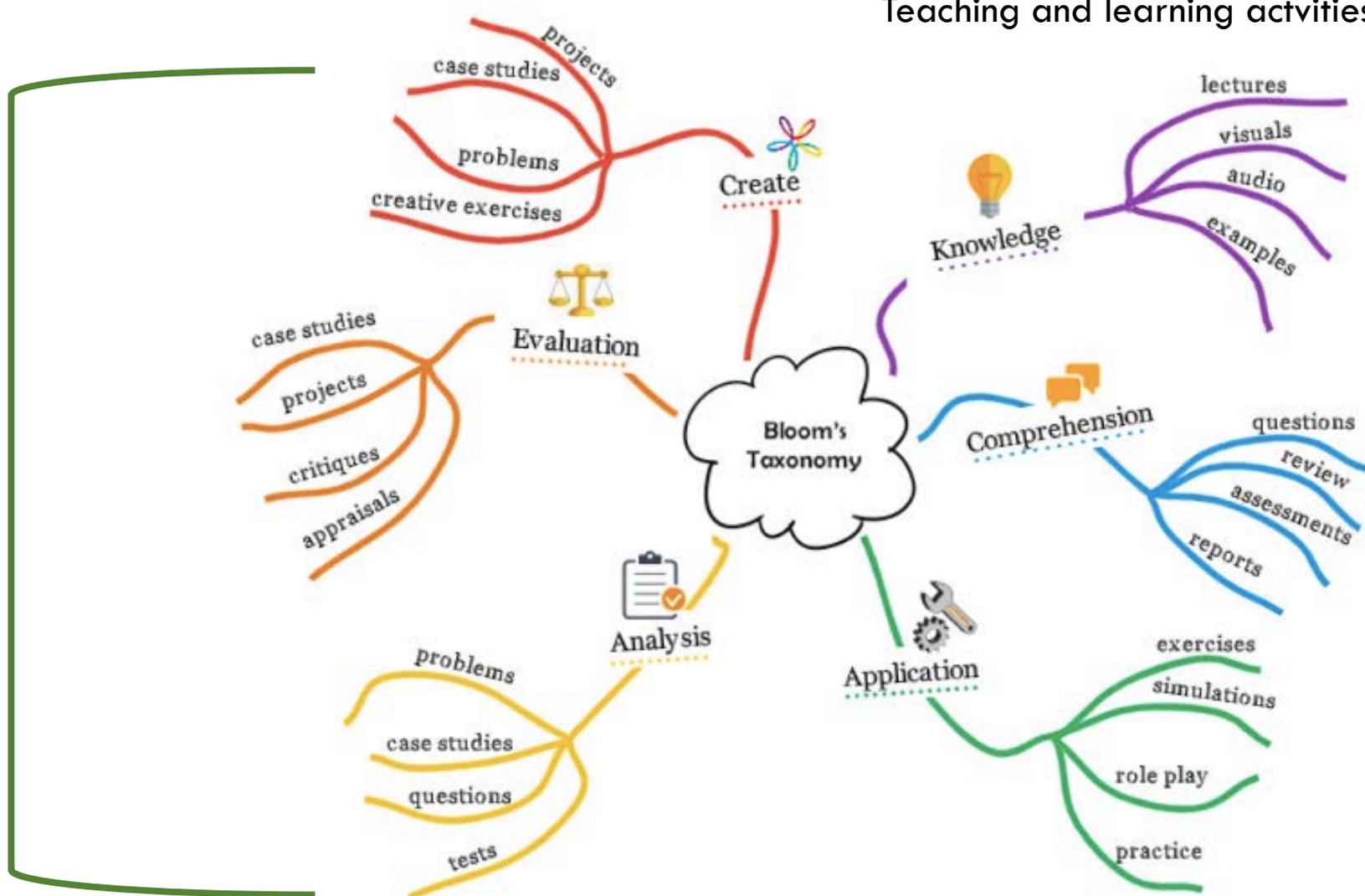
Are activities aligned with the course SLO? (Check the verb)

Reflect on your classes. Think of a class you taught recently. What was the SLO of a class/session you have thought of? What course SLO(s) did it feed into?

How was the class/session structured?

Activities	Teacher	Students as a whole class	Students in groups/pairs	Students individually

Teaching and learning activities (TLA) for functional knowledge



TLAS TO TARGET FUNCTIONAL KNOWLEDGE

Functional: apply

E.g. “By the end of the course, given Biggs’ conceptual framework, SS will be able to apply the principles of course alignment in their own course design”

What the Teacher does	What the students do
Introduce the framework and the principles (show ppt)	Listen Take notes Watch
Explain and elaborate with examples Discuss/demonstrate the application and usage	Understand (What exactly? How?)
Ask questions	Respond

TLAS FOR FUNCTIONAL KNOWLEDGE

Case-based learning

Group work

- Buzz groups
- Jigsaw groups
- Problem-solving groups

Workplace learning

Problem-based learning

More examples here

<https://omerad.msu.edu/teaching/teaching-strategies/active-learning-strategies>

And here

<https://documents.uow.edu.au/content/groups/public/@web/@dvce/documents/doc/uow222256.pdf>

ACTIVE LEARNING STRATEGIES

Active Learning is an approach with various methods/strategies for implementation. Listed below are active learning strategies that could work in medical education. For more description and example from the SDC Curriculum, click the name of the strategy.

GROUP ACTIVITIES

CASE-BASED LEARNING

GROUP DISCUSSION

GROUP TEACHING (JIGSAW)

WORK AT THE WHITEBOARD

INDIVIDUAL ACTIVITIES

APPLICATION CARDS

DIRECT PARAPHRASING

MINUTE PAPERS

MUDDIEST POINT

ONE SENTENCE SUMMARIES

STUDENT SUMMARY OF ANOTHER STUDENT'S ANSWER

Figure 5: Examples of Alignment from Different Modules

Learning Outcomes: <i>On completion of this module students should be able:</i>	Assessment Methods	Teaching/Learning Activities
To identify the main signs and symptoms of multiple sclerosis.	Multiple Choice Questions	Lecture on various signs/symptoms, In class exercises/quizzes on terminology.
To formulate end products using selected ingredients	Poster Display 15% Presentation of end product 85%	Lecture presenting case studies of the design history of some market leaders. Students plan own project and present as poster. Student projects on food formulation.
To develop and identify an area for research in the discipline	1,000 word research proposal	Presentation of examples of research questions, Student discussion groups on research areas.
To demonstrate effective presentational skills	In-class graded presentation	Practices sessions in the class, Peer-assessment, using set criteria, of others in class.

**Table 1: An example of an aligned curriculum
(Courtesy of Dr Dolores O’Riordan, UCD)**

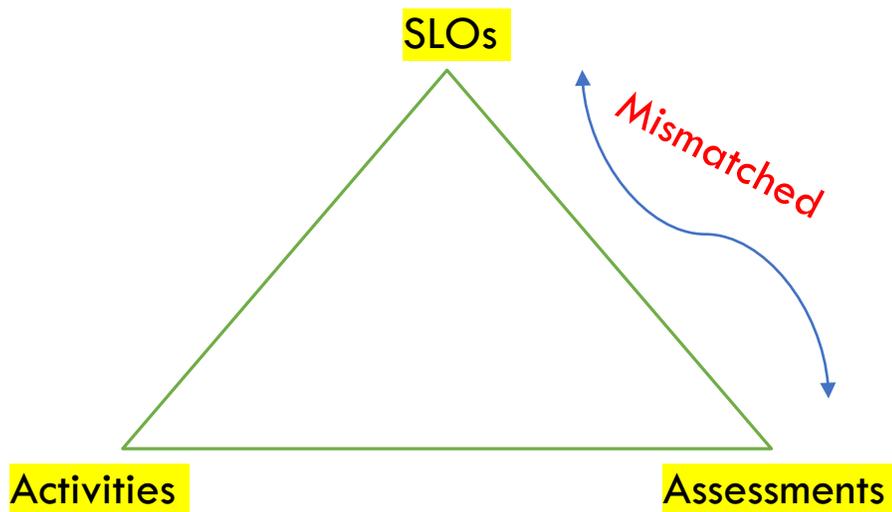
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Outcomes	Assessment	Teaching Method
<p>At the end of this course students should be able to:</p> <p>Explain the functions of selected ingredients in food products</p> <p>Evaluate the impact of processing and end-product environment on the functionality of selected ingredients</p> <p>Formulate end products using selected ingredients</p>	<p>Short question exams — examined throughout the semester — 10%</p> <p>Written exam with compulsory problem solving exercises and essay-style questions — examined at end of semester — 60%</p> <p>Laboratory based project — interim oral reports and a written report to be submitted at the end of the semester — 30%.</p>	<p>Lectures and discussion groups — 36 hours</p> <p>Laboratory based problem-solving project — 24 hours</p>

Table-6. An example of alignment of TLAs and ATs with course LOs

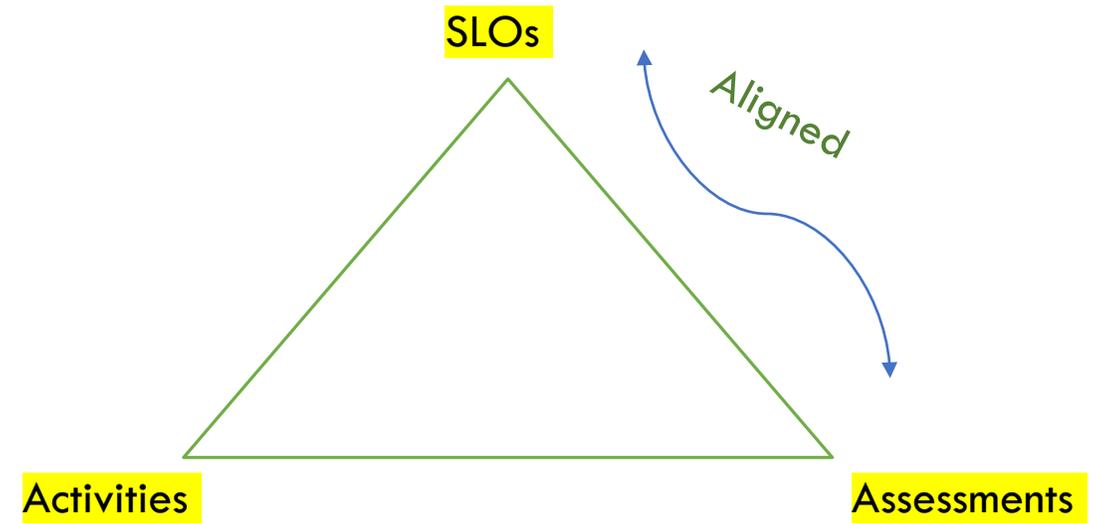
LOs Upon completion of this course, students should be able to:	Examples of TLAs Actively engaging students in:	Examples of ATs Performance demonstration tasks:
<p>LO1: summarize the main principles of the 'traditional' and modern theories of translation.</p> <p>LO2: define the key concepts in the various theories of translation.</p>	<p>Lectures on and surveys of the theories of translation. Formative summarizing: oral and written practice (in and outside class).</p> <p>Resource-based concept defining activity/peer readings to list key concepts and define them.</p>	<p>Sum up the main principles of the 'traditional theories' of translation and state their common points.</p> <p>Define the concept of 'dynamic equivalence' in the context of translation reception.</p>
<p>LO3: analyse the effects of 'traditional' and modern theories of translation on methods of translation.</p>	<p>In-class formative analysis-practice. Supervised analytical mini- research projects.</p>	<p>By reference to the socio-linguistic theory of translation, analyze the effect of semantic and formal adjustments on TL texts.</p>
<p>LO4: apply theories of translation to translating.</p>	<p>Applications of given theories to translate specific types of texts.</p>	<p>Translate this paragraph from Arabic into English. Apply the socio-linguistic theory of translation and mark in red the formal adjustments you performed.</p>
<p>LO5: justify the use of a given theory in translating specific texts.</p>	<p>Engage students in discussions which aim at justifying the use of specific theories in samples of translated texts. Formative practice to justify the rationale behind the choice of a given theory in translations by students</p>	<p>Justify the use of the structural linguistic theory of translation in machine translating.</p>
<p>LO6: demonstrate the ability to participate actively in 'translation studies' group projects.</p>	<p>Engage students in collaborative projects and ask them to demonstrate interpersonal skills and leadership abilities.</p>	<p>Project presentation: demonstrate collaborative work organization, the ability to lead a group discussion and oral fluency.</p>

Ss need to be able to argue the merits of the theory of constructive learning.



Exam asking Ss to recognise different theories

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Essay asking Ss to argue for or against the theory of constructive learning

Levels of learning (Bloom)	Assessment method			
	Selected response	Extended Written Response	Performance Assessment	Personal Communication
Remembering and Understanding	Good match for assessing mastery of elements of knowledge	Good match for tapping understanding of relationships among elements of knowledge	Not a good match – too time consuming to cover everything	Can ask questions, evaluate answers and infer mastery – but a time- consuming option
Applying	There can be a match when they have to apply a theory on a 'case'.	Good match for assessing the application of theories.	Good match when skills have to be assessed.	Can ask questions, evaluate answers and infer mastery about the application of theories – but a time- consuming option
Analyzing	Not preferable. Analyzing is about drawing connections among ideas. It can be difficult to test this skill with a selected response.	Written descriptions of complex problem solutions can provide a window into reasoning proficiency.	Can watch students solve some problems and infer reasoning proficiency.	Can ask students to think "aloud" or can ask follow up questions to probe reasoning.
Evaluating	Not a good match- students can't bring in their own thoughts. Answers are all preselected.	Possibly a good match. Students can write down their own ideas.	Can watch students solve some problems and infer reasoning proficiency.	Can ask students to think "aloud" or can ask follow up questions to probe reasoning
Creating	Not a good match. Can assess mastery of knowledge prerequisite to the ability to create quality products, but cannot be used to assess the quality of products themselves.	Strong match when the product is written. Not a good match when the product is not written.	Good match. Can assess the attributes of the product itself.	Not a good match when a product needs to be made'.

Example of Weak Alignment

Learning Outcomes	Acceptable Evidence	Instructional Materials	Learning Activities
Students will be able to apply one or more literary theories or concepts to analyze at least one of the required texts for this course.	Book summary of at least one of the required texts.	Required texts. Lectures.	Reading quizzes.

Example of Strong Alignment

Learning Outcomes	Acceptable Evidence	Instructional Materials	Learning Activities
Students will be able to apply one or more literary theories or concepts to analyze at least one of the required texts for this course.	Textual analysis of at least one of the required texts that includes a cogent application of an appropriate theoretical lens.	Relevant chapter(s) from Theory of Literature (Fry 2012); PDF of how-to guide for writing textual analyses; Relevant mini-lecture & handout on literary theory; Examples of previous students' successful textual analyses	Quizzes on assigned literary theory readings; Student discussion leaders for in-class discussions; Student proposals for analyses submitted to professor for early feedback; Peer review of first draft of analysis; Option to revise & resubmit final paper

Sample Learning Outcome:

By the end of this course, you will be able to plant a tree

Assessment criteria:

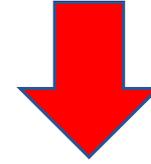
Practical exam where students demonstrate that they can plant a tree.

TLAs:

Watch a demonstration of a landscaper planting a tree.

Visit a field with peers to practice planting a tree

CONSTRUCTIVE ALIGNMENT IS GOOD, BUT IT WORKS IF THE FOLLOWING HAPPENS



Discover what students' prior knowledge and current capabilities are: What knowledge or knowledge of what do the students bring to their study?

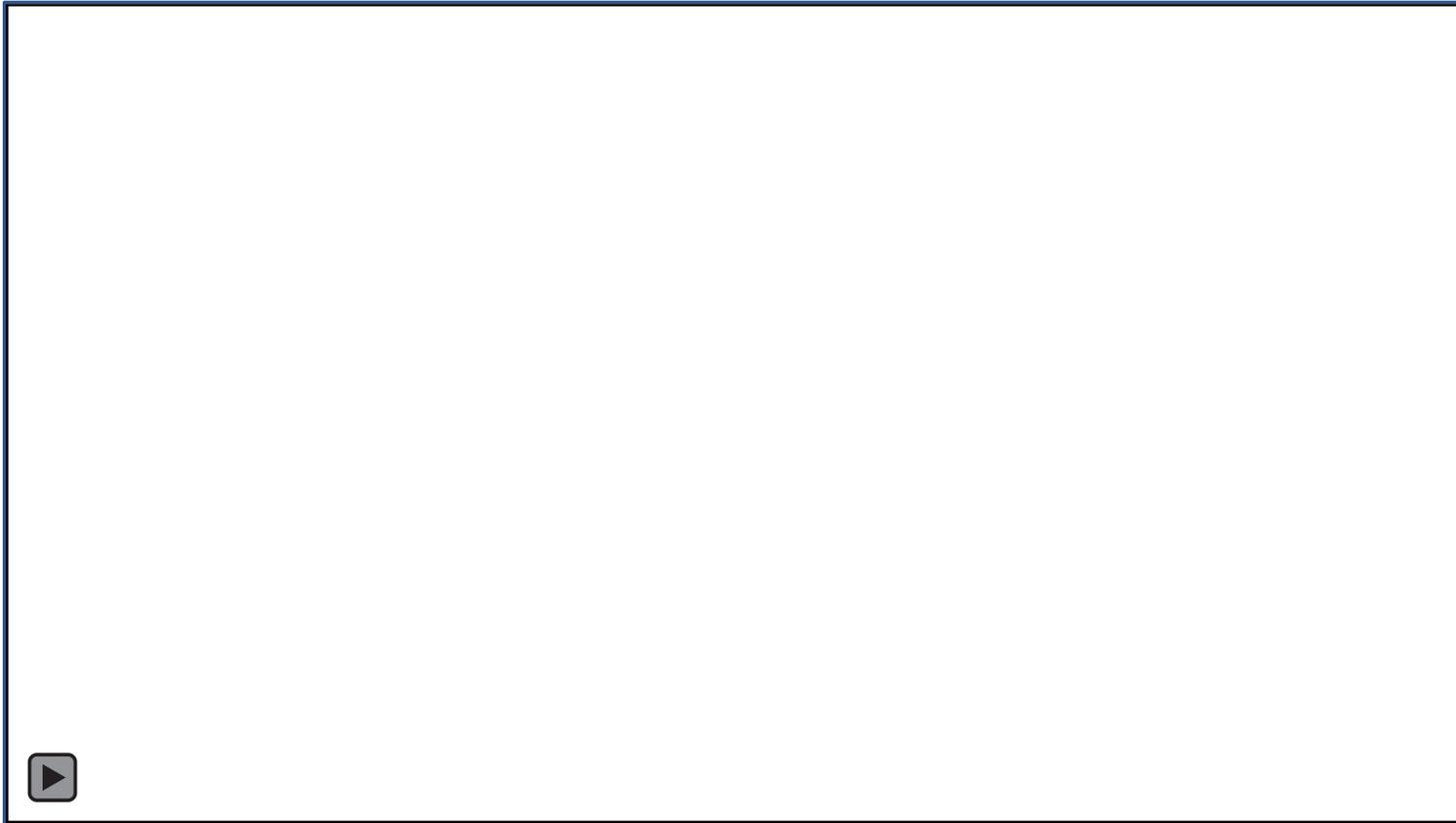
Scaffold the students, i.e., provide support along the way by providing models, demos, sample papers, breaking tasks into chunks

Create tasks and conditions under which student thinking and learning can be revealed

Use formative assessment to make students' learning visible to themselves and to their instructor

Provide constructive feedback

CONSTRUCTIVE ALIGNMENT- TO SUM UP...



HELPFUL RESOURCES

Active learning strategies:

- <https://cetl.uconn.edu/active-learning-strategies/>
- <https://documents.uow.edu.au/content/groups/public/@web/@dvce/documents/doc/uow222256.pdf>
- <https://omerad.msu.edu/teaching/teaching-strategies/active-learning-strategies>

UNSW Teaching Center Resource on Constructive Alignment (check the matrix under Strategies section)
<https://teaching.unsw.edu.au/aligning-assessment-learning-outcomes>

Collection of Web 2.0 Tools for Classroom Activities
<http://www.livebinders.com/play/play?id=333286>

Laurillard, D. (2012) Teaching as a Design Science: Building Pedagogical Patterns for Learning and Technology

Biggs, J. & Tang, C. (2011) Teaching for Quality Higher Education

Hattie, J. Check the books and some resources on Visible Learning here <https://visible-learning.org/>

Dylan William Center and Resources for Formative Assessment <https://www.dylanwiliamcenter.com/>

Teaching Teaching and Understanding Understanding a short film based on CA <https://ttuu.itu.dk/>