

**ALIGNING TEACHING AND LEARNING
TO COURSE OUTCOMES
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TODAY'S SPECIAL

Aligning teaching and learning activities to course outcomes

Aligning assessment to course SLOs



IN DESIGNING COURSE-BASED SLOS

Continue this statement with as many options as you can think of

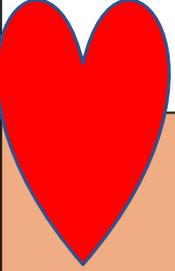
Student learning outcomes are

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.

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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></p> <p>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>	

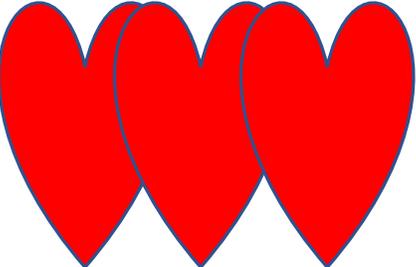
Program goal	Program SLO	Course SLO Teaching Language Skills Course	Activity /Assignment
Goal 3: Equip students with state-of-the-art tools of language pedagogy.	3.1. apply contemporary language teaching methodology to plan activities, lessons, and courses.	Develop lesson plans, appropriate materials,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

Table 4.1 What works best in higher education

<i>Factor</i>	<i>Effect size</i>
Student: Self-report grades	1.44
Teaching: Providing formative evaluation to lecturers	0.90
Teaching: Teacher clarity	0.75
Teaching: Reciprocal teaching	0.74
Teaching: Feedback	0.73
Teaching: Spaced vs. mass practice	0.71
Teaching: Metacognitive strategies	0.69
Curricula: Creativity programmes	0.65
Teaching: Self-verbalization/self-questioning	0.64
Teacher: Professional development	0.62
Teaching: Problem solving teaching	0.61
Teaching: Not labelling students	0.61
Teaching: Cooperative vs. individualistic learning	0.59
Teaching: Study skills	0.59
Teaching: Mastery learning	0.58
Teaching: Worked examples	0.57
Teaching: Goals – difficulty	0.56
Teaching: Peer tutoring	0.55
Teaching: Cooperative vs. competitive learning	0.54
Small group learning	0.49
Student concentration/persistence/ engagement	0.48
Teaching quality	0.44
Teaching: Cooperative learning	0.41
.....	
Teaching: Time on task	0.38
Teaching: Computer-assisted instruction	0.37

Source: Adapted from Hattie (2009a)

Hattie, 2009a, Visible Learning

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)

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

TLAS TO TARGET DECLARATIVE KNOWLEDGE

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

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

Peer teaching

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

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

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	Draft a lesson plan Get peer feedback Discuss with the teacher and get teacher feedback	Mock lesson presentation according to the final lesson plan

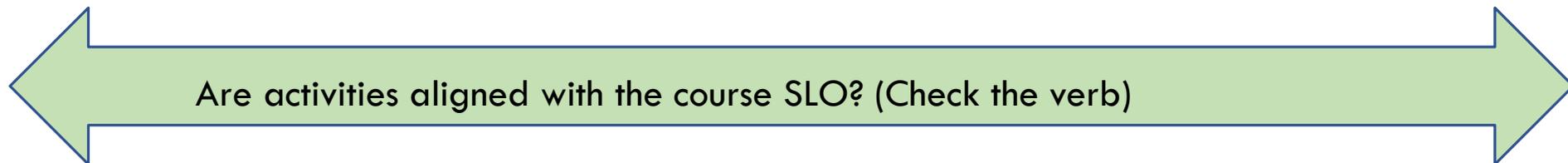


Figure 2: Alignment of learning outcomes, learning activities, and assessment tasks (McIntyre, 2007)

	COURSE LEARNING OUTCOMES				
DISCUSSION POINTS <i>(entire class)</i>	Discuss, critically analyse and place into context a wide range of interactive works	Demonstrate an understanding of the essential nature, ideas and language of interactivity	Use an iterative creative process to develop interactive projects	Work individually and collaboratively with peers to create works of interactive art or design	Propose prototype and produce an engaging and successful interactive experience
TALKING POINT 1 Cognitive aspects of interactivity	X	X			
TALKING POINT 2 Affordances, function vs emotion	X	X			
TALKING POINT 3 Can play be a useful interactive tool?	X	X			

	COURSE LEARNING OUTCOMES				
PROJECTS <i>(Individual and group)</i>	Discuss, critically analyse and place into context a wide range of interactive works	Demonstrate an understanding of the essential nature, ideas and language of interactivity	Use an iterative creative process to develop interactive projects	Work individually and collaboratively with peers to create works of interactive art or design	Propose prototype and produce an engaging and successful interactive experience
PROJECT 1 – PART A Discovering the Principles of Interactivity <i>(Individual)</i>	X	X		X	
PROJECT 1 – PART B Discovering the Principles of Interactivity <i>(Group)</i>		X	X	X	

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 “APPLY”

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

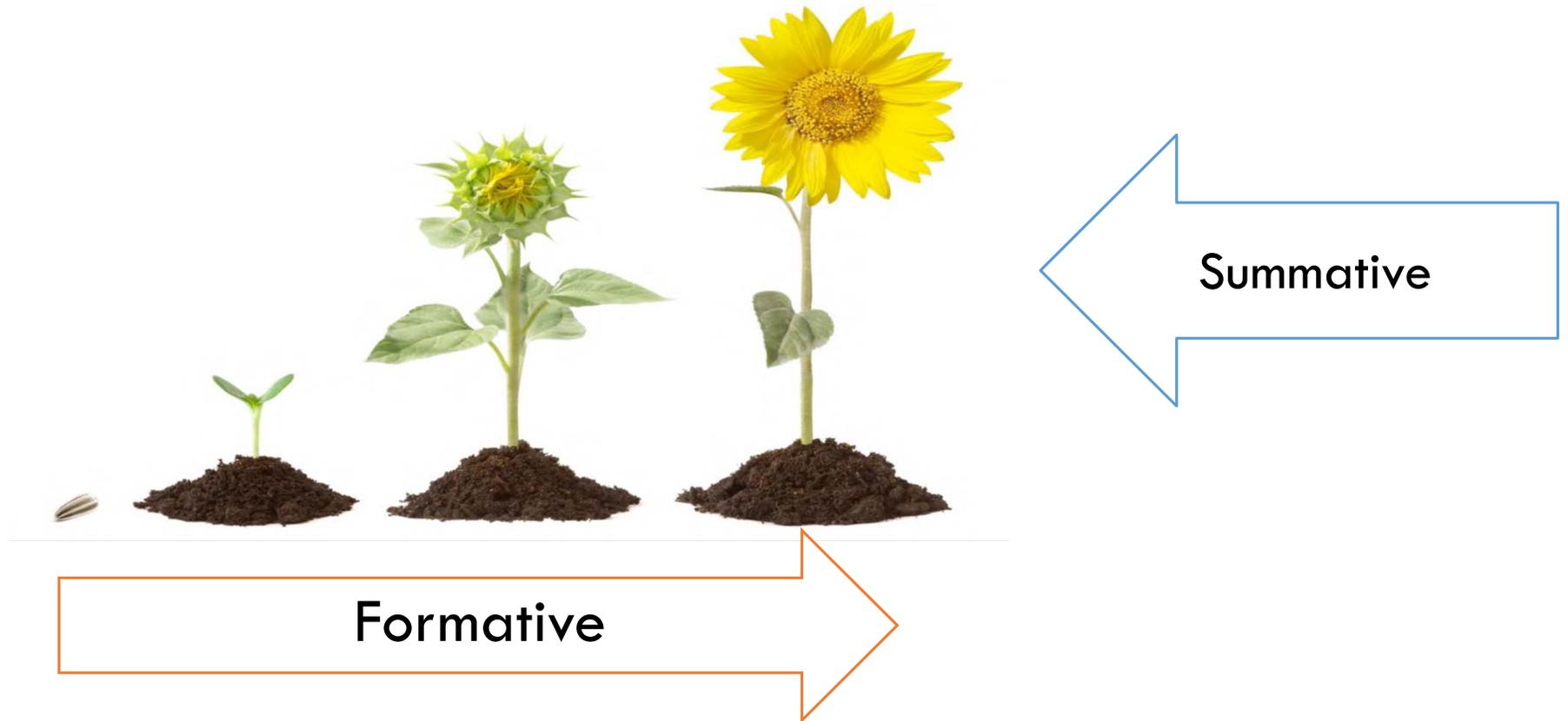
MINUTE PAPERS

MUDDIEST POINT

ONE SENTENCE SUMMARIES

STUDENT SUMMARY OF ANOTHER STUDENT'S ANSWER

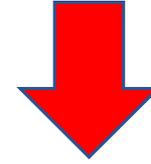
A COUPLE OF WORDS ON ASSESSMENT



DYLAN WILLIAM 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'.”

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

This session was like a

- ❖ bird
- ❖ wind
- ❖ dark chocolate
- ❖ river
- ❖ burning sun
- ❖ sunrise
- ❖ Foggy morning

- ❖ ... Your option



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 some 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.dylanwilliamcenter.com/>