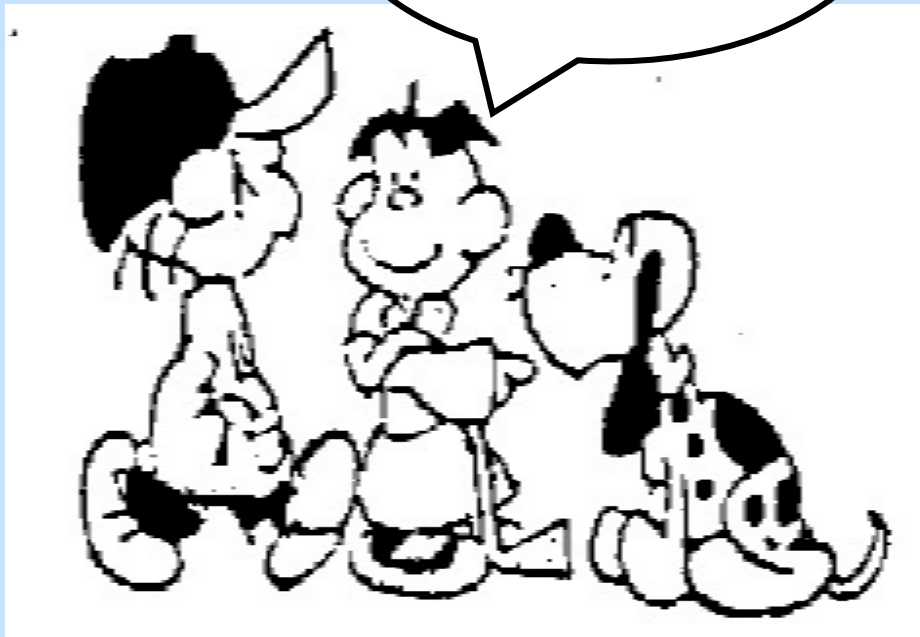


Bologna instruments: From educational objectives to learning outcomes

- 1. Principles and definitions**
- 2. Benefits of LOs**
- 3. Bloom's Taxonomy**
- 4. How to write learning outcomes**
- 5. ASIIN LO statements**
- 6. Additional material**

Learning Outcome?

I TAUGHT
STRIPE HOW
TO WHISTLE



Learning Outcome?

I DON'T HEAR
HIM
WHISTLING



Learning Outcome?

I SAID I TAUGHT
HIM. I DIDN'T
SAY HE LEARNED
IT



What are ...?

Definitions from the EQF

- **Knowledge:** the outcome of the assimilation of information through learning. Knowledge is the body of facts, principles, theories and practices that is related to a field of work or study. In the context of the European Qualifications Framework, knowledge is described as theoretical and/or factual;
- **Skills:** the ability to apply knowledge and use know-how to complete tasks and solve problems. In the context of the European Qualifications Framework, skills are described as cognitive (involving the use of logical, intuitive and creative thinking) or practical (involving manual dexterity and the use of methods, materials, tools and instruments);
- **Competence:** the proven ability to use knowledge, skills and personal, social and/or methodological abilities, in work or study situations and in professional and personal development. In the context of the European Qualifications Framework, competence is described in terms of responsibility and autonomy.

What are ...?

Definitions from the EQF

- **Learning outcomes:** statements of what a learner knows, understands and is able to do on completion of a learning process, which are defined in terms of knowledge, skills and competence;
- Learning outcomes are defined for
 - The degree programme as a whole
 - Each unit of teaching and learning.
- **Qualification** : a formal outcome of an assessment and validation process which is obtained when a competent body determines that an individual has achieved learning outcomes to given standards

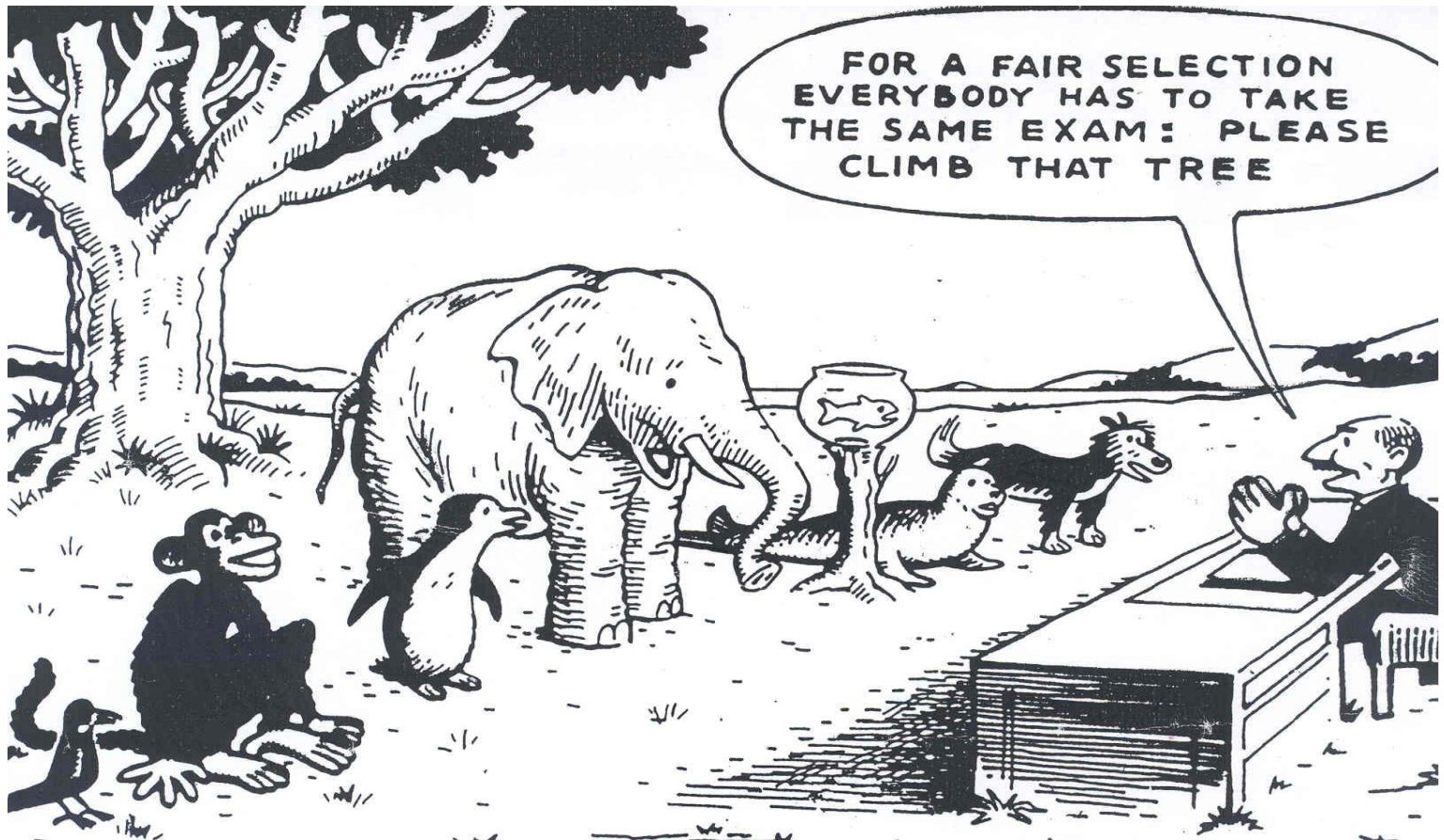
ECTS User's Guide

Each **academic year**, semester or trimester is split into educational components. An educational component is understood to be a self-contained and formally structured learning experience (such as a course unit, module, seminar or work placement).

Each component should have a

- **coherent and explicit set of learning outcomes,**
- **appropriate assessment criteria,**
- defined workload and
- specified number of ECTS credits.

Fair exam



Learning Outcomes Summary

Definition

Learning Outcomes are statements of what learners who have completed a learning process are expected to know, understand and are able to do.

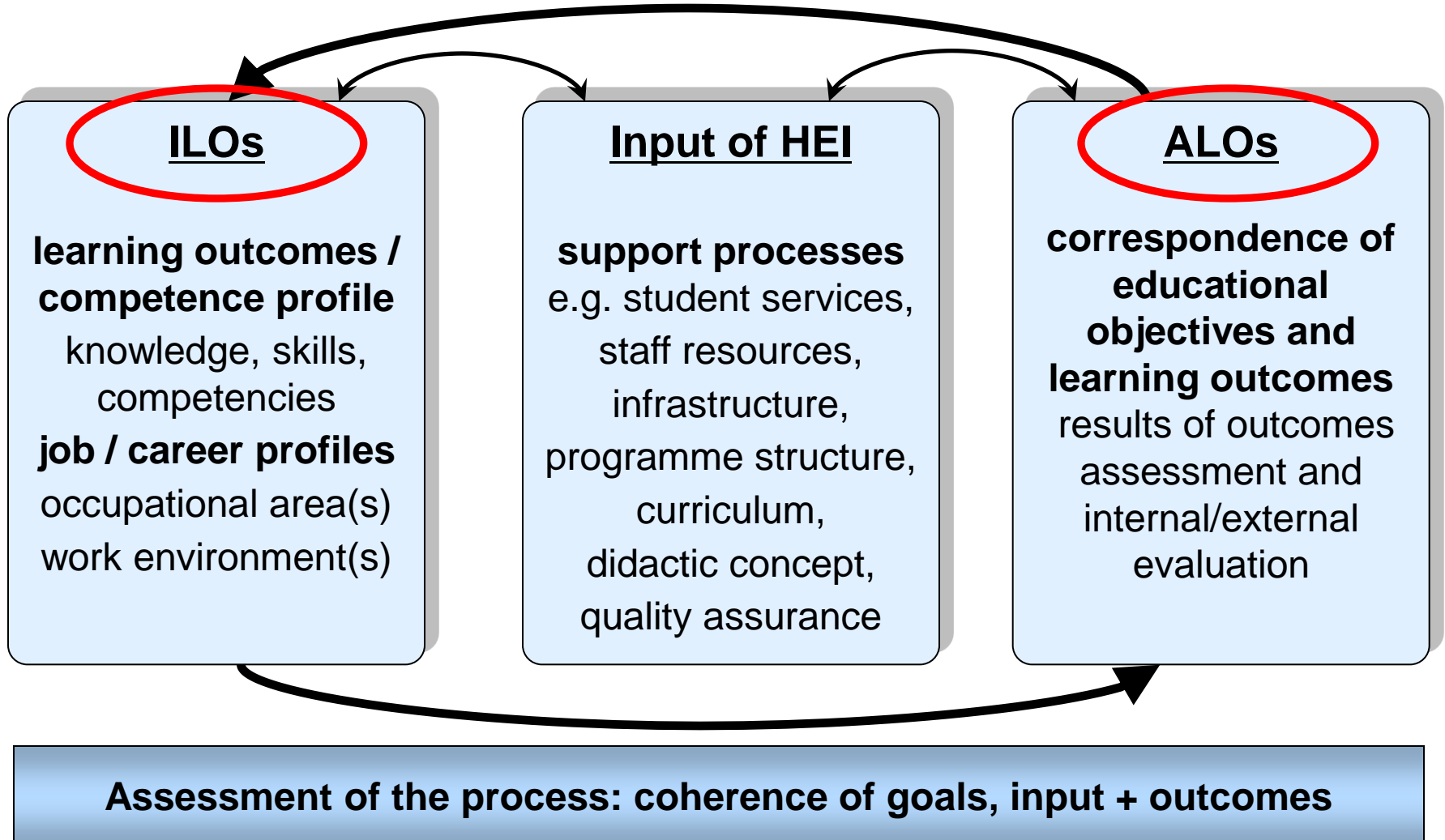
- The learning process can contain a single lecture, a series of lectures, a practical or a whole degree programme
- Learning outcomes must be carefully written
- Learning outcomes must be **simple** and **clear**
- Learning outcomes must be **measurable**

Learning outcomes intended <> achieved

There is a distinction between

- **intended learning outcomes** (ILOs), i.e. written statements in a course/programe syllabus, and
- **achieved learning outcomes** (ALOs), i.e. those results that students actually have (and can be demonstrated to have) achieved.

Correspondence of ILOs and ALOs



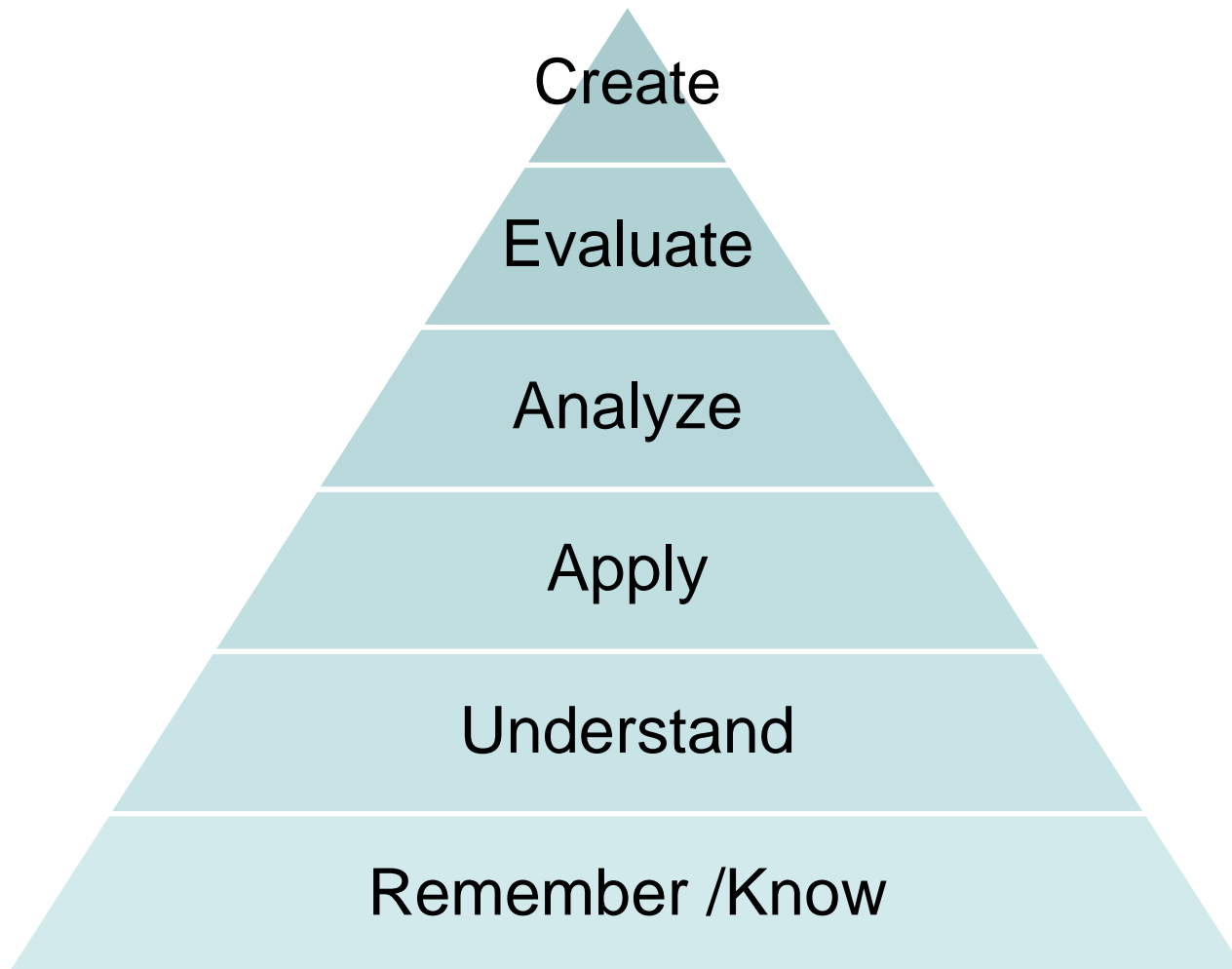
- 1. Principles and definitions**
- 2. Benefits of LOs**
- 3. Bloom's Taxonomy**
- 4. How to write learning outcomes**
- 5. ASIIN LO statements**
- 6. Additional material**

Benefits of learning outcomes

- ✓ Help to explain more clearly to students what is expected of them and thus help to guide them in their studies.
- ✓ Help teachers to focus more clearly on what exactly they want students to achieve in terms of knowledge and skills.
- ✓ Help teachers to define the assessment criteria more effectively.
- ✓ Help to provide guidance to employers about the knowledge and understanding possessed by graduates of programmes.
- ✓ Important instruments in achieving comparability and transparency of qualifications and facilitating mobility (of students and graduates/professionals).

- 1. Principles and definitions**
- 2. Benefits of LOs**
- 3. Bloom's Taxonomy**
- 4. How to write learning outcomes**
- 5. ASIIN LO statements**
- 6. Additional material**

Bloom's Taxonomy cognitive



Typical Verbs

- 1. **Remembering** - the ability to remember things in the form they have been presented: *list, identify, organise, describe, relate, define, find...*
- 2. **Understanding** - the ability to understand and interpret what one has learned: *categorise, explain, interpret, modify, separate, evaluate, summarise...*
- 3. **Applying** - the ability to use information in new situations and problem solving: *apply, use, calculate, construct, solve...*
- 4. **Analysing** - the ability to divide the problem into smaller parts and understand their connections: *analyse, choose, evaluate, compare, criticise, derive...*
- 5. **Evaluating** - the ability to connect elements: *plan, design, develop, generalise, formulate, reorganise...*
- 6. **Creating** - the ability to create something unique and new, the ability to evaluate the value of ideas and solutions: *conclude, give grounds for, recommend, interpret, prove, choose and justify...*

- 1. Principles and definitions**
- 2. Benefits and risks of LOs**
- 3. Bloom's Taxonomy**
- 4. How to write learning outcomes**
- 5. ASIIN LO statements**
- 6. Additional material**

Writing Learning Outcomes

- Learning outcomes must be written in a manner to be understood by students, colleagues and auditors
- Usually, learning outcomes commence with a standard sentence: „After having completed the course, students should be able to,
 1. do
 2. this
 3. and that
- Avoid complicated sentences
- Between 5 and 8 learning outcomes per learning unit
- Avoid certain words . . .

Tips for writing learning outcomes

- The key word is **DO** – use the verbs in the active (Jenkins and Unwin, Fry et al.)
- Learning outcomes must be assessable and thus must be **active**. Words such as „understand“ and „know“ do not help students as they can be easily misinterpreted. It is better to formulate expectations. (Morss and Murray)
- **Avoid** verbs such as „know“, „understand“, „be familiar with“, „be exposed to“ (Osters and Tiu)
- Avoid words with a **double meaning** such as „understand“, „know“, „be aware“, „appreciate“ (Scheffield Hallam Guide)
- Do not use words such as „understand“ and „know“ unless you are sure that students understand their meaning in the given context (University of New South Wales)
- Certain verbs are unclear and subject to different interpretations in terms of what action they are specifying..... These types of verbs should be **avoided**: know, become aware of, appreciate, learn, understand, become familiar with. (American Association of Law Libraries).
- Are the learning outcomes **observable** and **measurable**?

Check: can you identify good and bad LOs?

Students will be able to understand the function, structure and components of the musculoskeletal system.

→ Too ambiguous →

Students will be able to explain the function, structure and components of the musculoskeletal system.

Students will have an increased proficiency in presentation skills.

→ Too difficult to measure (progression) →

Students will be able to demonstrate a proficiency in presentation skills.

From Educational Objectives to Learning Outcomes

Correspondence of educational objectives, programme learning outcomes and module learning outcomes.

Educational Objectives of the degree programme	Programme Learning Outcomes <ul style="list-style-type: none">- Knowledge- Skills- Competences	Corresponding Modules/Courses and Learning Outcomes <ul style="list-style-type: none">- Knowledge- Skills- Competences
What is characteristic for graduates, what will they do in which environment?	How do the objectives translate into a detailed competency profile of the graduates?	How does the curriculum support learning outcomes and programme objectives?

Competence Matrix

Learning Unit/ Learning Outcome	Competence				
	A	B	C	D	E
Learning Unit 1	x		x	x	
Learning Unit 2	x	x			x
Learning Unit 3		x	x	x	
Learning Unit N	x				x

x = This competence is achieved through (an exam in) this learning unit.