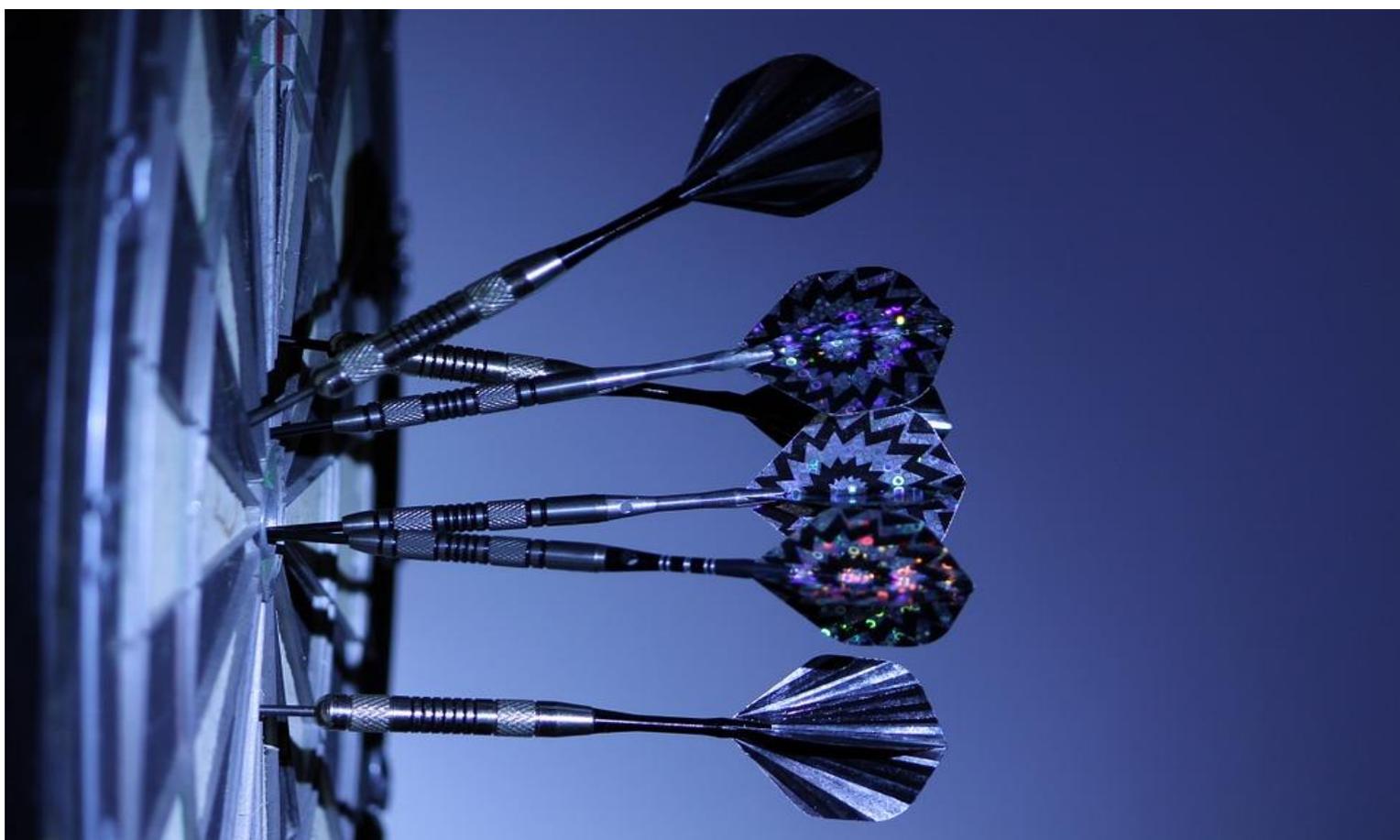


# How to Write Learning Outcomes

## *Rules of Thumb to Define and Write Learning Outcomes*

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# What are Learning Outcomes?

## Definition, Chances and Threats for Education

*“Learning outcomes state what a learner is expected to know, be able to and understand at the end of a learning process or sequence. The way such outcomes are defined and written orients teaching and learning, and influences the quality and relevant of education and training. The way learning outcomes are defined and written matters to individual learners, the labor market and society in general.” (CEDEFOP 2017, p. 23)*

Learning outcomes as stated in qualification frameworks, qualification standards and curricula are statements of intentions, not actual learning outcomes. Achieved learning outcomes can only be identified through assessment or demonstration, following a learning process. The application of learning outcomes requires a constant dialogue between intended and achieved learning outcomes, informing each other (CEDEFOP 2017, p. 29f.) Learning outcomes are an important tool for competence-oriented teaching and learning and provides to possibility to make competences visible (CEDEFOP 2017, p. 30f).



Figure 1: The relation between intended and achieved learning outcomes (CEDEFOP 2017)

### Chances

- Transparency for learners, teachers, educational institutions and the labor market
- Supports learning process, formative and summative assessment
- Reference point for quality assurance
- Shift to a learner-focused learning culture
- Makes knowledge, skills and competences visible to others
- Higher autonomy of learning
- Support of lifelong learning and individual learning pathways
- The recognition of prior non-formal and informal learning through using learning outcomes in qualification standards, qualification frameworks and assessment

### Threats

- The learning process is context bound and harmed by using too detailed learning outcomes.
- Too widely defined learning outcomes risk reduced measurability
- Tacit knowledge is difficult to communicate.
- If learning outcomes are only used in a closed loop, without reflection of intended and achieved learning outcomes, “teaching to the test” might occur and dumb down education.
- Assessment must to open also for unintended learning outcomes.

**Exercise 1:** Exchange with a colleague, whether you have ever used learning outcomes before and in which context (e.g. curriculum design, lesson planning, assessment, etc.)

# Rules of Thumb

## *Defining and Writing Learning Outcomes*

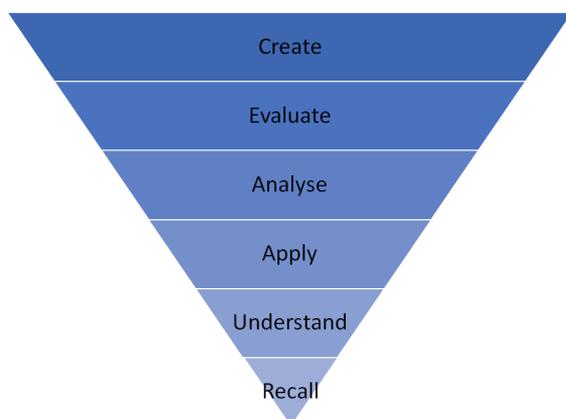


Figure 2: Blooms revised taxonomy of cognitive competence, here in a reversed pyramid (Anderson 1999).

The verb plays a crucial role when defining and writing a learning outcome. It shows, which cognitive process is addressed and what the learners are expected to know, be able and understand at the end of a learning process. Bloom's revised taxonomy can help when defining the cognitive process and choosing the right verb accordingly. Next to the taxonomy for the cognitive domain, Bloom also defined taxonomies for the psychomotor and affective domain, which could be used when defining and writing learning outcomes. (CEDEFOP 2017, p. 32f.)

## *The Learning Outcome Structure*



Figure 3: Basic structure of learning outcome statements (CEDEFOP 2017, p. 47)



Figure 4: An example how to use the basic structure of learning outcomes statements from figure 3 above.

**Exercise 2:** Take 5 Minutes and define and write down up to 3 learning outcomes for a learning unit at your school or higher education institution.

# The Active Verb

## Taking a Closer Look on Choosing the Verb

Avoid ambiguous or input-oriented verbs like...

- Know
- Understand
- Enjoy
- Determine
- Appreciate
- Grasp the significance of
- Become familiar with
- Believe
- Be aware of
- Comprehend (CEDEFOP 2017, p.49)

### Examples for Verbs to Use:

#### Key Verbs for the Cognitive Domain (Anderson et al. 2000)

Recall	Understand	Apply	Analyse	Evaluate	Create
Reproduce	Generalize	Apply	Separate	Evaluate Argue	Design
Deduce Recall	Prove Describe	Conduct	Analyse	Choose Assess	Diagnose
List	Report Classify	Determine	Determine	Rate Discuss	Compose
Enumerate	Explain	Operate	Illustrate	Estimate	Develop
Identify	Exemplify	Execute	Differentiate	Survey	Invent
Rephrase	Extrapolate	Implement	Divide Identify	Interpret	Establish
Name	Conclude	Transfer	Integrate	Criticise	Induce
Recognize	Arrange	Demonstrate	Relate	Prioritize	Generate
Repeat Define	Illustrate	Employ	Organize	Examine Test	Create
	Categorize		Structure	Judge	Hypothesize
	Clarify Contrast		Distinguish		Construct
	Rephrase Match		Connect		Plan Produce
	Predict				
	Represent				
	Translate Sub-divide				
	Summarize				

*Note that some verbs may be applicable within more than one category.*

Table 1: Keywords for learning outcomes. (Baumgartner, P., Grundschober, I. 2015)

**Exercise 3:** Review your learning outcomes written in exercise 2. Which verbs have you used? Did you use ambiguous verbs? Try to avoid ambiguous verbs!

## Locating in the Taxonomy

### *Where to Locate a Learning Outcome in the Taxonomy?*

To further detail on the context of the learning outcomes, Anderson and Krathwohl added the knowledge dimension to the revised taxonomy of cognitive processes, distinguishing between facts, concepts, procedures and meta-cognitive knowledge (Anderson et al. 2000).

**Exercise 4:** Where would you put the following learning outcome in the taxonomy-table below? Locate LO1-LO4 in table 2! Check your results with a colleague, do you find differences in location? Why?

- LO1: Students are able to judge learning outcomes of single lessons in the context of the curriculum.
- LO2: Students are able to list different teaching method.
- LO3: Students are able to generate a hypothesis within a field of research.
- LO4: Students are able to apply the concept of learning outcomes to their curricula.

Knowledge	Cognitive Processes					
	Remember	Understand	Apply	Analyse	Evaluate	Create
Facts						
Concepts						
Procedures						
Meta-Cognitive						

Table 2: Bloom's revised taxonomy of cognitive processes including the knowledge dimension (Anderson et al. 2000)

# Literature

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