Writing effective learning objectives

A practical guide for AO faculty

A learning objective describes what a learner should be able to do after an educational activity. Clear objectives help faculty select the right content and learning activities and decide how learning will be assessed.

Learning objectives and human competence

In AO education, we often describe human competence in terms of knowledge, skills, and attitudes. A learning objective may focus mainly on one area, although in practice these areas often work together.

Knowledge	Skills	Attitudes
What the learner needs to know and think about. Examples: recognize a complication; analyze imaging; evaluate treatment options.	What the learner needs to be able to do. Examples: perform a procedure; use an instrument; demonstrate a technique.	How the learner approaches practice and interacts with others. Examples: respect patient preferences; value team input; support shared decision-making.

Writing a learning objective: the process

1. Start with the intended change

What should learners be able to do differently by the end of this activity? Base the objective on the relevant learning need, performance gap, or competency.

2. Identify the main area of competence

Is the objective mainly about knowledge and thinking, a practical skill, or an attitude? This helps you choose suitable wording, learning activities, and assessment.

3. Choose the level of performance

Bloom's taxonomy can help you think about the level of learning required. It is particularly useful for knowledge and thinking, but some of its action verbs can also be useful when writing objectives for skills and attitudes.

4. Choose an observable action

Use a verb that describes what the learner will do. Avoid vague terms such as know, learn, be familiar with, or understand when used alone as the objective.

5. Be specific about the context

Include relevant details, such as the clinical situation or patient characteristics, when they are needed to make the learning objective clear.

6. Keep one main action in each objective

If two verbs describe different performances, consider writing two objectives.

7. Make sure the objective can be assessed

Will you realistically be able to assess whether learners have achieved the objective? If you cannot assess it, reconsider the objective.

8. Review and refine

Check that the objective is learner-centered, specific, achievable in the available time and format, supported by the content, and assessable.

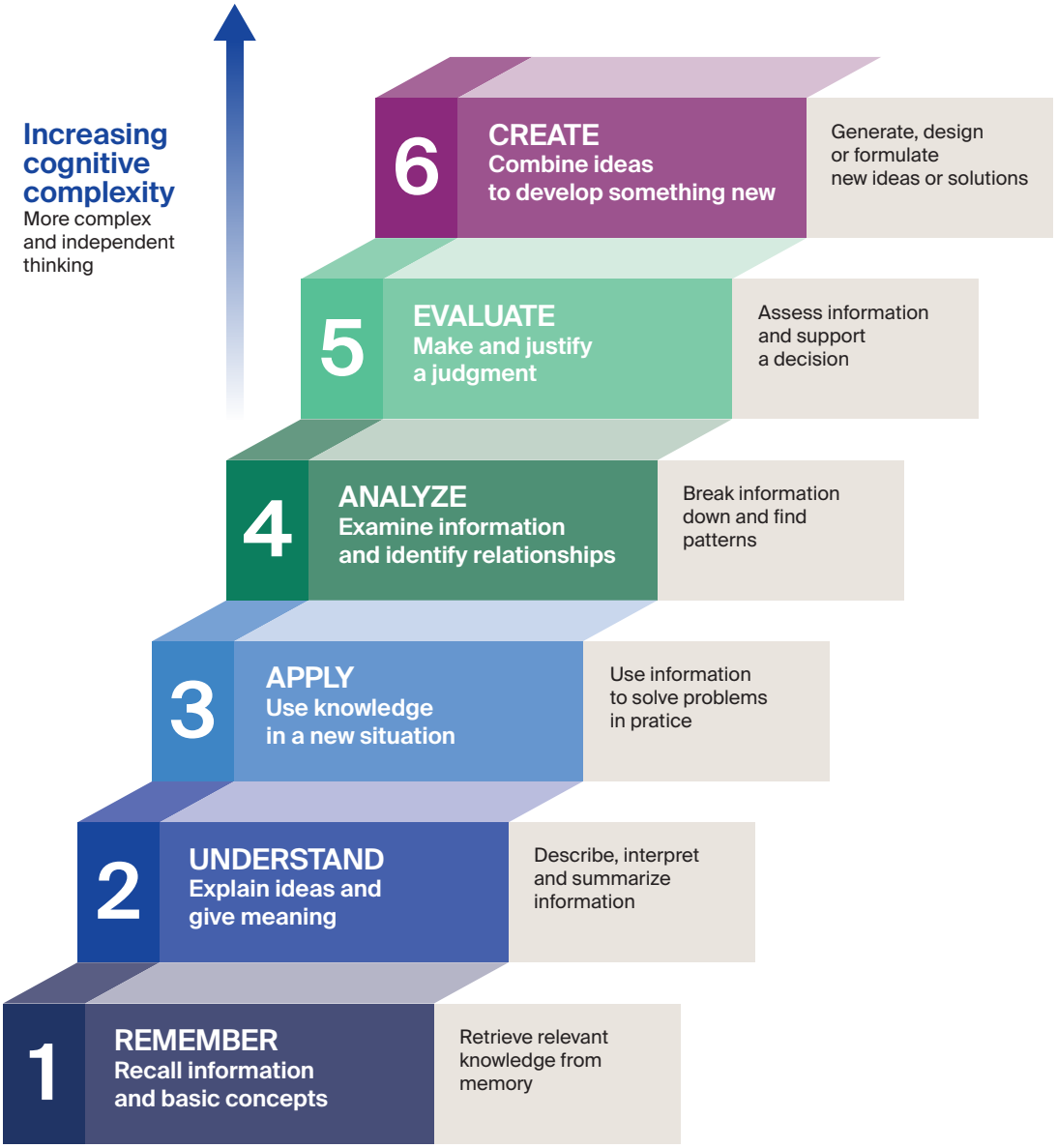
A simple structure

Stem	Action	Content/context
After the session, the learner will be able to...	analyze	postoperative imaging to identify features requiring a change in management.

Where does Bloom's taxonomy fit?

Bloom's taxonomy describes different levels of cognitive activity, from remembering information to applying, analyzing, evaluating, and creating. It is particularly useful for objectives related to knowledge and thinking. The action verbs can also help when writing some skills and attitude objectives, but the level should always reflect what the learner is actually expected to do.

The six levels describe increasing cognitive complexity. Higher is not always better. Choose the level that matches what learners need to do in practice.



Bloom's revised taxonomy: verb guide

Use these verbs as a guide rather than a fixed list. The level depends on what the learner must actually do in the task and context.

1 | REMEMBER

Retrieve relevant knowledge
Useful verbs: define, identify, label, list, match, name, recall, recognize, select, state
AO example: Recognize treatment options for ankle arthritis

2 | UNDERSTAND

Explain the meaning of information
Useful verbs: classify, describe, discuss, explain, illustrate, interpret, summarize
AO example: Explain current management principles for patients with ankle fractures.

3 | APPLY

Use knowledge or a procedure in a situation
Useful verbs: apply, calculate, demonstrate, determine, execute, implement, perform, solve, use
AO example: Apply reduction techniques in fracture management with attention to the importance of the soft tissue.

4 | ANALYZE

Examine information and identify relationships or patterns
Useful verbs: analyze, categorize, compare, contrast, differentiate, distinguish, examine, organize, prioritize
AO example: Differentiate between minimally invasive vs open procedures.

5 | EVALUATE

Make and justify a judgement using criteria or evidence
Useful verbs: appraise, assess, critique, decide, evaluate, justify, judge, recommend, validate
AO example: Decide if the prosthetic stem is stable or loose using the algorithm.

6 | CREATE

Combine information to develop something new
Useful verbs: construct, create, design, develop, formulate, generate, plan, produce, synthesize
AO example: Plan a treatment based on assessment, imaging, classification, and decision-making.

From draft to effective objective

Draft	Improved	Why it is stronger
Understand complications after fracture fixation.	Analyze postoperative findings to distinguish expected recovery from findings that indicate a potential complication.	Replaces an unobservable mental state with an assessable action and clarifies what evidence the learner will analyze.
Know how to select an implant.	Select an appropriate implant for a given fracture and justify the choice based on mechanical and biological factors.	Makes the clinical decision explicit. If selection and justification will be assessed separately, use two objectives.
Learn about shared decision-making.	Apply shared decision-making principles when discussing treatment options with a patient.	Moves from exposure to an observable use of the principles in practice.

Alignment check

Before finalizing the objective, ask three linked questions:

1. Objective: What must the learner be able to do?
2. Learning activity: What will allow the learner to practice that action?
3. Assessment/evidence: What will let the learner demonstrate the same action at the intended level?

Key points to remember

Knowledge, skills, and attitudes all contribute to competence. Bloom's taxonomy can help you think about the level of learning required, particularly for knowledge and thinking. Whatever the objective, choose an observable action that matches what the learner needs to do, then align the learning activity and assessment with it.

References and further reading

- **AO Education Institute.** 10 tips on writing learning objectives. 2026.
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