

Course-level teaching design strategies

**Metacognition, peer assessment, progressive
assessment, authentic assessment and the
integration of GAI in continuous assessment**

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METACOGNITION

WHAT IS METACOGNITION?

An assessment strategy geared to **enhancing cognitive skills and abilities** in order to improve self-regulation and **learning effectiveness**.

It includes the ability to reflect on and be aware of how we learn, and how the learning process is planned and managed.



Planning



Follow-up



Assessment

APPLICATION OF METACOGNITION

COLLABORATIVE ACTIVITIES

Presenting ideas and concepts to fellow students (knowledge transfer), developing individual responsibility, learning social skills, etc.

GETTING FEEDBACK FROM STUDENTS

Obtaining information about the content learned, where it is necessary to insert or expand material.

REFLECTIVE ACTIVITIES

Making students reflect on their own learning process; a strategy linked to **self-assessment**.

ENCOURAGING ACTIVE PARTICIPATION

Involving students in the assessment process, turning them into active agents of their own learning, improving their motivation and commitment.

ASSESSMENT OF LEARNING OUTCOMES

Working on learning outcomes such as critical thinking, self-knowledge, organizational skills, teamwork, etc.

PROMOTING ASSESSMENT AWARENESS

Helping students better understand the criteria which will be used to assess their work.

EXAMPLES OF METACOGNITION

- **EXAMPLE 1. Journal for reflective learning and self-assessment of a project**
Students have to learn to manage and reflect on their own learning process while working on a project, applying metacognitive strategies to increase their autonomy and effectiveness.
- **EXAMPLE 2. Writing and metacognitive reflection during the production of an essay**
Students have to write an essay, with planning, writing and revision steps, while reflecting on their own learning process. Throughout the activity, students apply metacognitive strategies to work more effectively as they organize and produce the essay.



[The Metacognition strategy](#)

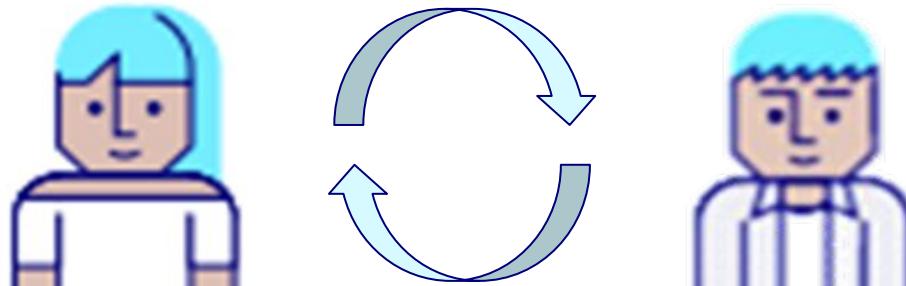
[Link to examples for Metacognition](#)

PEER ASSESSMENT

WHAT IS PEER ASSESSMENT?

A **collaborative assessment process** in which participants assess the work of their fellow students, following criteria or rubrics previously established by the teaching staff. This methodology encourages the active involvement of students in their learning process.

In peer assessment, participants play a critical but constructive role, which allows them to develop skills such as reflection, analysis and the ability to give and receive feedback. It also helps to improve their understanding of the topic and the quality of their own activities.



APPLICATION OF PEER ASSESSMENT

COLLABORATIVE ACTIVITIES AND TEAMWORK

Assessing and giving feedback on work done by the members of the group, and within or between groups.

REFLECTIVE ACTIVITIES

Making students reflect on the teaching-learning process.
Metacognition and self-assessment.

ENCOURAGING ACTIVE PARTICIPATION

Involving students in the assessment process, turning them into active agents of their own learning, improving their motivation and commitment.

PROMOTING ASSESSMENT AWARENESS

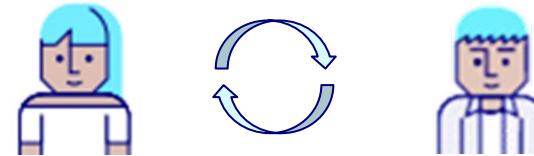
Helping students to better understand the assessment criteria for the activity.

COMPETENCY-BASED ASSESSMENT

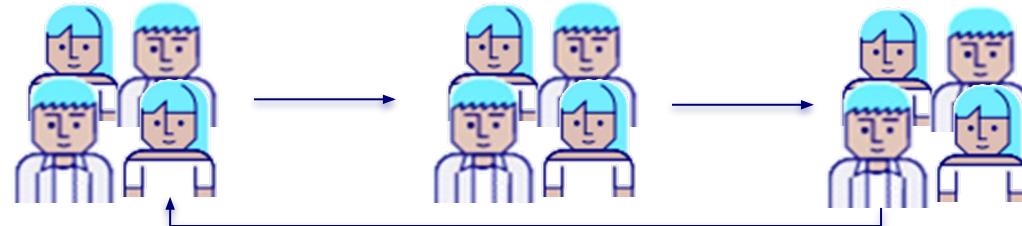
Allowing students to work on learning outcomes such as critical reflection, analysis, formative assessment, empathy, etc.

HOW CAN PEER ASSESSMENT BE APPLIED?

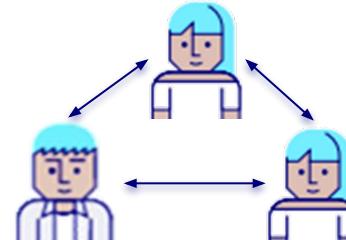
Individually



Inter-group



Intra-group



HOW CAN PEER ASSESSMENT BE APPLIED IN CANVAS?

- ★ Canvas allows this type of assessment to be **set up**, manually or automatically distributing the activities among students.
- ★ Students see the **feedback** provided by their peer and by the course instructor.
- ★ The **peer assessors** will have the same Canvas tools as teaching staff to carry out the peer assessment (rubrics, comments, file attachments, etc.).
- ★ Teaching staff will be able to **view** both the final submission and the feedback provided by the peer assessor.
- ★ Important: the **timing** must be set very clearly.



EXAMPLES OF PEER ASSESSMENT

- **EXAMPLE 1. Peer assessment in a group project or activity (intra-group)**

Students work in small groups on a project or activity dealing with a specific topic. During and after the project, each student participates in the peer assessment of their fellow students to improve their work and give formative feedback.

- **EXAMPLE 2. Peer assessment of an individual essay (individual)**

Students write an individual essay on a specific topic. Before the final version is submitted, it is assessed by peers, who will offer mutual feedback to improve the quality of the essays.



[Peer assessment](#)

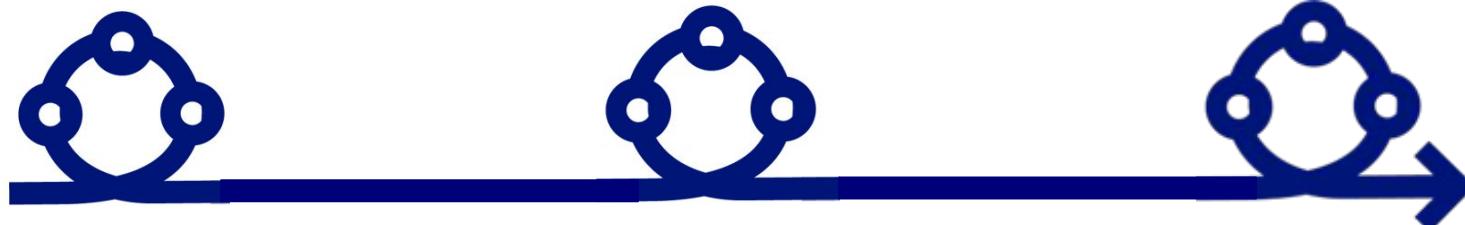
[Link to examples of peer assessment](#)

PROGRESSIVE ASSESSMENT

WHAT IS PROGRESSIVE ASSESSMENT?

A type of assessment that is carried out **throughout a learning process**. It focuses on measuring the student's progress and development at various stages of an activity. Activities must follow a **sequential design** to reflect the progression in the learning of content, skills and/or attitudes.

Unlike final assessment, which only analyses the final outcome of a task, progressive assessment considers the entire learning process, including progress, reflection, adjustments, and improvements that have been made during the activity.



APPLICATION OF PROGRESSIVE ASSESSMENT

Sequential design of activities

Allowing students to achieve a certain progression in a particular process of learning content, skills and/or attitudes. The design of the course is important.

Focus on the process

Assessing how the student tackles the task, how they solve problems and how they manage their own learning over time.

Continuous feedback

Providing feedback at different times in the process, allowing learners to correct errors, improve their work and adjust strategies before the final submission.

Self-assessment and reflection

Reflecting on the errors detected in a previously assessed activity and the actions and proposals to be applied for improvement.

Opportunities for improvement

Offering students the chance to improve their work, based on the feedback received and on their own self-assessment.

EXAMPLES OF PROGRESSIVE ASSESSMENT

- **EXAMPLE 1. Progressive assessment in the creation of a digital portfolio**

Students have to create a digital portfolio that brings together different pieces of work and reflections during a semester. Assessment is carried out in different phases, with feedback from teaching staff in each of them, with the aim of improving the final content.

- **EXAMPLE 2. Progressive assessment of a research project (final project)**

Students carry out an individual or group research project on a topic related to the course. Assessment is carried out progressively at different stages in the project, with feedback from teaching staff in each of them.



[Progressive assessment strategy](#)

[Link to examples of progressive assessment](#)

AUTHENTIC ASSESSMENT

WHAT IS AUTHENTIC ASSESSMENT?

The aim of **authentic learning** is for students to apply knowledge, skills and/or competencies worked on in the course to real problems or challenges in their social or professional setting.

Instead of focusing on theoretical tests or memorization, authentic assessment requires students to demonstrate their understanding and skills by solving practical problems, carrying out real projects or participating in meaningful activities (practical activities, solving real cases, simulations, service learning, etc.).



APPLICATION OF AUTHENTIC ASSESSMENT

Real or simulated context

Designing activities that reflect situations that students might encounter in their future professional or personal lives.

Creativity and decision-making

Designing tasks that require students to make decisions, generate new ideas, or propose creative solutions to problem situations.

Application of KSC

Using the KSC acquired to solve specific problems (situated learning), with an emphasis on critical reasoning and the ability to adapt.

Reflective process

Assessing the process that students follow to reach the solution. This involves moments of reflection in which students analyse their own performance and decision-making.

Significant final submissions

Providing value beyond the classroom. There can be deliverables with a direct application to real life, such as marketing plans, research projects or solutions to practical cases.

EXAMPLE OF AUTHENTIC ASSESSMENT

- **EXAMPLE 1. Simulation of a practical case in a virtual professional environment.**

Students work on a practical case related to a real problem or situation within a simulated professional setting. The activity is designed to allow students to apply the knowledge and skills from the course in an authentic context, similar to what they might encounter in their professional lives.

- **EXAMPLE 2. Development of a marketing plan for a simulated company.**

Students have to develop a marketing plan for a fictional company, applying the knowledge acquired during the course in a realistic professional context. The activity is designed to simulate the experience of working as a marketing consultant, creating strategies based on market analysis, the target audience and the company's commercial objectives.

[Authentic assessment strategy](#)



[Link to examples of authentic assessment](#)

INTEGRATION OF GAI IN CONTINUOUS ASSESSMENT

HOW CAN WE INTEGRATE AI IN CA?

This strategy aims to integrate the use of AI in course design and students' work on activities.

It consists of asking the student, as part of a task, to use AI to complete activities using methods that promote more active and participatory learning processes.

This resource has [10 methods and activities for learning and assessment with generative AI](#).

The use of generative AI in students' activities can help them develop soft skills through engaging with the tool and reviewing the results. See [Use of generative AI in student activities and development of soft skills](#).



Amb la IA generativa la mobilització de les diferents habilitats de pensament implica portar a terme noves accions. Així, moltes, com ara la creativitat, el pensament crític o la gestió de la informació, lluny de ser substituïdes per la IA, poden ser potenciades amb el seu ús responsable dirigit per la intel·ligència humana.

INTEGRATION OF AI IN CONTINUOUS ASSESSMENT

Different ways students can use Generative AI

Socratic opponent

Students can converse or discuss a topic with ChatGPT. Teaching staff can ask students to use ChatGPT, and then make improvements and do their own creative work.

Collaboration coach

Students can work in groups and use ChatGPT to search for information that allows them to complete tasks and assignments.

Fellow student

Students can describe their current level of understanding to ChatGPT and ask for support to study the material. ChatGPT can also be used to help students prepare for other tasks (e.g. exams).

Possibility engine

Students can prompt ChatGPT and use the regenerate response feature to examine alternative responses.

Dynamic assessor

Students can interact with ChatGPT in a tutorial-style dialogue and then ask ChatGPT to produce a summary of their current state of knowledge to share with their teacher for assessment.

* See also: [Applications of ChatGPT in higher education for teaching and learning](#).

Sabzalieva, E., and Valentini, A. (2023). *ChatGPT and artificial intelligence in higher education: quick start guide*.

EXAMPLE OF INTEGRATION OF GAI IN ACTIVITIES (CA)

- **EXAMPLE 1. Integration and use of GAI in professional practice**

Students can use generative artificial intelligence (GAI) tools to simulate the use that professionals in their discipline can make of them in their work. The aim is for students to learn to make proper, ethical use of GAI, developing their critical capacity, efficiency and autonomy in the professional practice of their speciality.

- **EXAMPLE 2. Socratic chat**

Students can use a GAI-based text tool to engage in a Socratic chat. In this case, the tool doesn't provide the answers directly. Instead, it generates strategic questions to guide the student in their reasoning, helping them to reach the solution on their own and to reflect more deeply on the content of the course.



[How to incorporate GAI in learning activities](#)

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