Teaching methodologies

Teaching methodologies are the application of a series of **teaching and learning strategies and methods that guide the process of teaching** to enable students to achieve comprehensive learning outcomes, and which allow activities, resources, tools, environment and assessment to be consistent with a didactic approach.

A teaching methodology is what **makes all the learning activities carried out in a course coherent**; it gives them structure and ensures that they all have the same guiding principles. Teaching methodologies **are not mutually exclusive**. Several methodologies can be used in the same course.

Before choosing one methodology over another, you can consider the following questions:

✓ What is the best way for your students to acquire the knowledge, skills and competencies that you have to work on during your course?

✓ Are the learning activities, assessment and feedback that you want to design consistent with this methodology?

✓ Do you want to create groups of students?

✓ Does this methodology enhance the motivation of the group in the classroom?

✓ Would you like to innovate with a different methodology on your course?

TYPES OF TEACHING METHODOLOGIES

Project-based learning (PBL)

Project-based learning or project-based work is an active learning methodology in which **students carry out a project focusing on a problem or challenge based on a real or professional context. This is usually done collaboratively**, and places students in an authentic learning environment. The work is usually divided into phases, and the project provides structure for the course as a whole.

Problem-based learning (PrBL)

Problem-based learning **presents a situation or problem to which students must find possible solutions**.

It is based on the need for discovery, experimentation and reasoning, and uses resources and content provided by teaching staff or sought by students which enable them to address the situation that is presented to them. It is undertaken by students in small groups, and the problems are open-ended, meaning the students are free to solve them how best they see fit.

Simulation / Role play

Simulation-based learning is a technique used to stimulate students' participation by means of hypothetical situations which seek to enhance knowledge and skills similar to those encountered in the real world, and to apply them in everyday situations.

It consists of **the representation or simulation of situations that help with experimentation and in-depth understanding**. Students can approach it on their own or in groups with role play.

Role-playing aims to gain different points of view regarding the same situation. Students have to represent different characters, and put themselves in their shoes to defend a particular position. The situation must involve conflict, be motivating and allow for different possible points of view.

Research-and design-based methodologies

These methodologies can be understood from a dual perspective: **including students in a design-based research process**, or including them in a product-oriented design process.

Two methodologies that fall within this approach are as follows:

- **Participatory action research:** this involves collaborative research aimed at promoting social transformation, with the same participants involved in the study and action programme.

- **Design thinking:** this methodology promotes actions and thoughts aimed at innovation, and the development of new ideas to resolve situations, problems or needs. It is a design process that begins by defining the problem, and concludes with the delivery of the solution as the end product. The user or recipient's assessment is also part of an iterative process that improves the end result.

Collaborative learning

Collaborative learning is based on a **group of students engaging in a process of activity, interaction and cooperation**, which aids the joint achievement of a common goal based on individual work. It is a shared, coordinated and interdependent process, in which students use collaborative tools to work to achieve a common goal.

Case study

This methodology uses a case (or several cases) based on **problematic situations in real life that need to be analysed and require a proposal for intervention or resolution**. The case itself does not provide solutions, but does offer data for reflection, analysis and discussion.

Cases may have a single solution or many. They can be addressed individually or in teams.

Gamification / Game-based learning

Gamification-based learning **applies game dynamics to learning processes**. It incorporates principles related to motivation and satisfaction by means of challenges, passing levels, and rewards, among other aspects. Participants can be individuals or groups, and competition or cooperation may be emphasized.

The UOC employs two approaches: using games as a means for learning or using game dynamics to gamify a course.
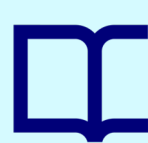
Digital storytelling

This methodology is based on storytelling using digital creation tools. **Digital stories usually tell a story in order to solve a problem or conflict, or to present life stories or autobiographies**. It can be used by both teachers (to explain content or concepts to students in a more stimulating way) and by students (as a format which they have to use for an activity).

Challenge-based learning

Challenge-based learning is a practical approach in which **students work on a challenge in a team with their peers, teaching staff and experts**. Generic conflict situations familiar to students are presented to make them motivating, and to stimulate new ideas and the use of tools to solve them.*

E-portfolios

Portfolio-based learning is used as a **strategy to present a selection of evidence about the knowledge, skills and competencies gained over a period of time**.

The evidence is accompanied by reasoning and reflection, and the format can aid understanding, visualization, feedback and assessment – depending on the strategy designed.

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*It's important to make a distinction between this methodology and the Niu-challenge design, which presents a challenging situation that does not always involve collaborative work.

Each course should contain **no more than two teaching methodologies**. If you're working on the verification, reverification or modification of a programme, you can take this criterion into account in the Teaching activities and methodologies section of the **programme report**.