



## PROJECT BASED LEARNING

Project-based learning is a methodology in which students learn by completing a (group) project. Typically, a project starts with a challenging question which is linked to working life.

In project based learning the teacher makes sure that the students have the necessary skills, tools and materials to complete the project. Unlike problem-based learning, where the emphasis is on finding solutions, project-based learning puts the focus on obtaining a product, that is, on the project itself.

### How to implement it

The aspects to consider implementing this methodology are the following:

- ▶ The objective of this methodology is for the student to present a **final product** (project)
- ▶ The project must **cover a need or solve one or more problems of real life** of interest to the student and whose resolution implies a certain degree of complexity.
- ▶ Learning is pursued through **group research**, over a **significant period of time**.
- ▶ Learning occurs when **the learner is faced with the process necessary to solve a real problem**.
- ▶ Knowledge corresponds to the **accumulation of knowledge** that occurs every time a problem is solved, or progress is made in a phase of the project.
- ▶ The creation of **heterogeneous groups** is recommended, with students with **differentiated profiles**, favouring **multidisciplinary** and **collaborative work among** the members.
- ▶ On the part of the **teacher**, the clear **definition of instructions** and assume the role of **guide and facilitator** of the process are required.
- ▶ **Students must commit themselves to the follow-up of the phases necessary** to address the resolution of the problem, to the **autonomous search for resources** and to **define the way in which the group will work** (distribution of roles and responsibilities)

At a general level, this methodology allows:

- ▶ **Promote reflection** and assess the **effectiveness of the research** and the **overcoming of the problems** and obstacles that may arise throughout the project.
- ▶ Prepare the student to work in **diverse environments** and collaboratively.
- ▶ Boost the **motivation and creativity** of the students, as well as their autonomy in decision making.
- ▶ **Put into practice** the knowledge, skills and abilities acquired during the evolution of the project.
- ▶ Improve **communication skills**, associated with the defence of the solution obtained.

The way in which this methodology can be applied in the online or hybrid modality requires:

- ▶ A session in which the teacher explains the characteristics of the project to be carried out (problem or situation to be solved) as well as the instructions to be followed regarding:
  - **Delivery date and format**, as well as the establishment of milestones or partial deliveries to be met throughout the project.
  - **Tutoring calendar**
  - **Roles and responsibilities** to be established within each team.
- ▶ Possibility of online work rooms that offer students a meeting place for teamwork.
- ▶ Possibility of collaborative work, through systems such as google drive or one drive for the creation of documents.

Perhaps one of the aspects to highlight in this methodology is the possibility that the teacher has to relate the contents that he is addressing throughout the course, with the phases of the project carried out by the students, being able to involve teachers or students of other subjects and making the work much richer.

## How to assess and evaluate it

In this methodology, several types of evaluation can be proposed:

- ▶ **Self-evaluation**, depending on both the process carried out and the performance obtained.
- ▶ **Co-evaluation** among team members (with rubrics or teacher involvement)
- ▶ **Evaluation** of each phase of the process, as well as the final product (preferably with rubrics), which also include both feedback and feed forward.

## Best practice

- ▶ [Problem based learning online: perceptions of health sciences students](#) (Valaitis, Sword, Jones & Hodges, 2005)

# Tools

## In Moodle

- ▶ Moodle label tool for the project logo
- ▶ Moodle book tool to explain the project
- ▶ URL to link to a Blackboard or other teaching environment for collaboration
- ▶ Moodle activities to collect the draft projects-in-progress.

## Outside Moodle

- ▶ Virtual rooms for teamwork: Zoom, Teams, Blackboard collaborate, BigBlueButton
- ▶ Collaborative work: Google drive, One Drive
- ▶ Presentation Creation Resources: Genially, Canva

