

# TOOL 5 - PROBLEM-BASED LEARNING

The suggested method for utilising the PBL approach are workshops and/or group assignments as a learning unit or a part of a course, where learners are enabled a collaborative and hands-on experience. The PBL approach is recommended to be integrated with Tools 2 and 3 to increase and enhance the learners' skills related to teamwork and communication, which are two of the main principles of using the approach. Tool 2, including workshops of main directions of fashion-tech, enables the facilitation of problem identification by students, and structures for design, technology and entrepreneurship workshops where the approach can be easily implemented. Furthermore, through integration with Tool 9 is expected to develop skills related to self-management. The identified problems are recommended to be used as workshops or as group assignments.

The steps of integrating the PBL in a learning unit/course are the following:

- Identify unit/course goals and learning outcomes
- Involve a stakeholder from industry or society for authenticity and exposure to the community
- Identify an applicable real-life problem
- Determine the overarching purpose of the activity
- Determine a plan and time schedule for the unit/course
- Set goals and expectations for your students
- Monitor the student and progress of their activities
- Have students present ideas and findings
- Assess the outcome
- Evaluate the experience through self- and student-evaluation

In order to ensure that all principles of PBL are integrated, use the checklist on the following page (adapted from Buck Institution for Education ([bie.org](http://bie.org))).

## ASSESSMENT REQUIREMENTS

The results of the suggested approach and method should be assessed in line with the learning outcomes and expected competences of the course, although group presentations are recommended to initiate open discussion and peer feedback. Furthermore, written reports are suggested to allow for assessment of the development process and writing skills.

## AUDIENCE

The audience for the PBL approach should be bachelor students in their last year or master's students in order to ensure previously acquired knowledge and skills in the field. Students should be encouraged to work in cross-disciplinary groups to enable peer-learning and development of teamwork and communication skills.

Does the learning unit/course meet these criteria for implementing the PBL approach?	Yes	No	Needs development
<b>Key knowledge, understanding and skills</b> The unit/course is focused on teaching students the key knowledge and understanding derived from the topics/ concepts, and skills including critical thinking/problem solving, collaboration, communication, and self-management.			
<b>Challenging problem or question</b> The unit/course is based on a meaningful problem to solve or a question to answer based on a core theme or concept, at the appropriate level for the learners, and is open-ended, engaging and encourages deep learning.			
<b>Sustained inquiry</b> The unit/course involves an active and in-depth process with a pre-planned schedule, in which students generate questions, find and use relevant resources, ask further questions, and develop their own answers and solutions.			
<b>Authenticity</b> The unit/course involves real-world context, utilises real-world processes, tools and quality standards, makes a real impact on the community, and/or is connected to the learners' own concerns, interests and identities.			
<b>Student leadership</b> The unit/course allows students to make choices about the problem-solving process, including group and time management, guided by the facilitator.			
<b>Reflection</b> The unit/course provides opportunities for students to reflect on their learning process, and on the design and implementation process of the unit/course, through for example reflective journals and seminars.			
<b>Critique and revision</b> The unit/course allows students to give and receive feedback on their work, through teacher- and peer-feedback, to allow for reiteration of ideas and concepts.			
<b>Communication</b> The unit/course requires learners to demonstrate their solution and learning process to the community beyond the classroom, to include industry and society in the process.			