



Toolboxes for SuperFastLearning digital contents in STEM

EXAMPLE PRESENTATION COURSE DESIGNING REPORT

HOW DID YOU CREATE YOUR COMPLEX PROBLEM?

The field we taught fits perfectly with PBL. The purpose is to control some industrial pieces and apply processes to identify any problems. Students have to combine several analysing methods in order to find the solution. There might be several ways to find it, and several solutions. It's a course with a lot of use cases. Then it was easy to adapt our course with our teaching.

We only had to imagine the context, how to tell the story. We input some current event in papers, and added humour in the statement. We made references to teachers they know, and used derision. We included students in the complex problem: they were still students, but had a mission.

First, we started by a brainstorming. Working in pairs is very interesting, it enriched the reflexion. We could go further with our imagination. At the same time, work on a complex problem with few people help to be effective.

We created an article to illustrate the context and “immerse” students.





CHECKING YOUR COMPLEX PROBLEM

How to check?		Assessment
G Good	F Fair	TBI to be improved
Problem Interest and motivation (PIM)		
New problem	Will the students need to analyse and explore the situation before starting the problem-solving process?	G : they need to remember existing knowledge
Problem relevant to Curriculum-	Will the students consider that the PBL problem is linked to their curriculum and to their training programme ILOs?	G
Context-induced motivation	Will the context be a source of motivation and interest?	G : students seemed to be captivated by the problem
Contextualisation details	Is the context correctly described? How can I improve it?	G
Learning process (LP)		
Relevant to ILOs	Has the problem been defined to achieve the ILOs?	G
Relevant to pre-existing knowledge	Will students need to use their existing knowledge as input in their method?	G
Teamwork	Does the problem need group work to be solved?	F: they could be alone to solve the problem but group discussions helped to explore the problem
Feasibility conditions (FC)		
Difficulty	Is the problem difficult enough for learning? Is the problem too difficult to solve?	G
Scheduling	Is the sessions scheduling suitable to deal with the PBL problem?	G
PBL training results (PTR)		
Intended learning outcomes (ILO)	Have the intended learning outcomes (ILO) been precisely defined?	G
Learning outcomes assessment	Has the assessment been included in the PBL process?	The assessment was not in the PBL sequence, because we chose to assess the ILOs with other sequences.



DOCUMENTS UPLOADED IN SFLM?

- Cofrend files : https://www.cofrend.com/jcms/prd_384609/fr/english?cid=prd_384609
- Some course pdf
- Course exercices





DOCUMENTS SELECTED IN YOUR PBL AND WHY?

Students had a moodle course as resources (course pdf and course exercises). None of the uploaded documents were chosen, because the timing wouldn't be enough for students to read it. It was too specific.

SFLM OUTPUTS AND HOW DID YOU USE IT

Analysis was made with a previous version of the SFL machine, with different features.

Questions you want to think about, when reading SFLM outputs	
Relating outputs with complex problem	If complex problem already written Are the keywords in my complex problem? NO Did I forget a main keyword in my complex problem? NO because too specific
Selecting resources	How much resources do I want to give to students? Several but not defined Do I want one resource per keywords, or the more keywords in a resource, the better? N/A

By reading the keywords, we found them coherent but not the most relevant. The complex problem has to synthesize methods, but here the keywords were very specifics. Maybe it would have been more relevant if our topic was only on one method.

WHAT CHOICES WERE MADE IN FUNCTION OF YOUR CONTEXT

- How much tutors were there? How much group per tutor?

There were 2 tutors. Each tutor had 2 groups.

- Did you make specific adjustments because of time constraints?

No

- Did you organise a debriefing time, after PBL sequence? How was it organised?

We organise a debriefing time. Each group had to present a part of their reflexion, based on a question we gave. There was one different question by group.



FEEDBACK:

Students tried to solve the problem before analysing it, during the first phase.

HOW DID YOU ASSESS?

A final exam included the ILOs assessment.

CHECKING YOUR PBL ASSESSMENT

		How to check?	Assessment
G Good	F Fair	TBI to be improved	
Monitoring Student Progress			
Target		Has assessment been defined to evaluate the ILO?	F : we are not totally sure about all the acquired learning outcomes
Misconception		Is it possible that likely misconceptions may occur?	G
Feedback		Is a feedback possible?	G : we used a tool to check the ILOs and gave feedbacks
Additional help		Is it possible propose additional help to achieve assessment ?	There was no need to propose additional help
Self and peer review			
Resources		Were the resources enough for learning	G: we could propose other analysing methods to go further
Ability		Is it possible to observe ability, achievement, learning and needs?	G : students felt comfortable to work in group
Type		Is an effect of the assessment format on the results?	F