LABORATÓRIOS INTEGRADOS - DIMENSÃO PEDAGÓGICA I

Code: 27215

Main Scientific Area: Computer Graphics and Multimedia

Lecturer: Sara Maria Alves da Cruz

Language of Instruction: Portuguese

Regime: T1

Contact Hours: 8h Total Workload: 19h

ECTS: 1,0

Objectives

Participants learn the theoretical framework of Problem-based Learning (PBL) (Adderley et al., 1975; Blumenfeld et al., 1991) that is a student-centered pedagogy involving a dynamic learning approach in which it is believed that students acquire a deeper knowledge through active exploration of real-world challenges and problems.

Learning Outcomes

Participant is able to implement PBL method in an authentic learning case. They can create a learning design according to PBL that is completed in various learning environments such as in classroom, online and utilizing new technologies even when these all learning environments are used in the same teaching and learning process. The participants are able to set a project with clear objectives, timetable and resources. They are able to design a learning process where their students solve real world problems.

Course Contents

1. Teaching Paradigm versus Learning Paradigm;

2. Introducing the problem-based learning framework;

3. The teacher's role in PBL-based learning;

4. Cases: how PBL works in practice (Upola, 2019); 5. Canvas tools (online) to support the creation of a learning design.

Recommended Bibliography

- Adderley, K., Askurin, C., Bradbury, P., Freeman J., Goodlad, S., Greene, J. ym. (1975). Project Methods in Higher Education. SRHE working party on teaching methods. Techniques group. Guilford, Surrey: society for research into higher education.

- Blumenfeld, P. C., Soloway, E., Marx, R. W., Krajcik, J. S., Guzdial, M. Palincsar, A. (1991). Motivating project-based learning: sustaining the doing, supporting the learning. Educational Psychologist 26, 369–398.

- Ruhalahti, S. (2019). Redesigning a Pedagogical Model for Scaffolding Dialogical, Digital and Deep Learning in Vocational Teacher Education, Acta electronica Universitatis Lapponiensis 257.

- Upola, S. (2019). Työelämäorientoitunut projektioppiminen ammatillisen koulutuksen kontekstissa. Acta electronica Universitatis Lapponiensis. - Wheeler, S. (2015). Learning with 'e's Educational theory and practice in the digital age. Llandysul: Gomer Press.

Learning and Teaching Methods

Participants will demonstrate their competence to utilize the Problem-based Learning framework in their authentic teachers' work:

- They create a learning design for their real-life teaching practices where they take into account their students' learning process in authentic learning situations (follow the PBL)

- They create clear objectives, timetable, and resources for the project itself - They search and set a real-world development/production/research project as the context of PBL.

Assessment Methods

Student assessment will be continuous and operationalized through the following assessment elements:

- Attendance and participation: 20%.

- Practical work (planning of a learning activity): 70%. - Presentation: 10%.

If the final grade is less than 9.5 points, the student is not approved in the curricular unit.

At the time of appeal, there will be a single final exam with a weight of 100%.