Workshop 2 – Problem Based Learning (PBL), Online Quizzes and Logical Tasks

Session 2: Problem-solving in logical games

**Expected Learning Outcomes**

* Understand the process of problem-solving
* Being able to develop the methodology for using problem-solving in role-playing by mutual collaboration

**Teaching Methods/Approaches**

* Teacher presentation and demonstration
* Discussion
* Individual activity
* Group activity - collaboration

**Sources of training materials**

* Digital competence, Europass: <https://europass.cedefop.europa.eu/resources/digital-competences> (14.6.2019.)
* Production of Creative Game Based Learning Scenarios – A handbook for teachers, ProActiveEU Life-Long Learning project: <http://www.ub.edu/euelearning/proactive/documents/handbook_creative_gbl.pdf> (21.8.2018.)

**Duration:** 3 hours (135 minutes)

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| **Topic/Sub-topics** | **Learning Objectives** | **Evaluation** |
| **1. DIGITAL TOOLS WITHIN THE PROCESS OF PROBLEM-SOLVING** | *Participants will recognise the process of problem-solving.* | Learners explore and analyse examples of problem-solving techniques in order to point out typical characteristics of logical reasoning. |
| 1.1 Introduction to problem-solving | Identify the concepts of: Analytical ability, Creative Thinking, Initiative, Logical Reasoning |
| 1.2 Developing problem-solving skills | Understand the role of analytical and creative skills in the process of problem-solving |
| 1.3 Problem-solving within games and puzzles | Explore the logical features in serious games |
| 1. **ROLE-PLAYING METHODOLOGY** | *Participants will recognise the methodology of role-playing in serious games.* | Learners explore and analyse examples of role-playing and knowledge gathering to understand the practice of solving tasks by the active participation of the students in the class and online (work in groups). |
| 2.1 Developing the skills for mutual collaboration accepting different responsibilities (roles) participating in games that support algorithmic thinking | Introducing the power of simulation of playing various complementary roles focused on problem- solving and their implementation  Implementing various in-class role-playing scenarios |