Workshop 3 – Games and Tools for Programming

Session 7: Designing learning scenarios

*Instructions for the participants*

**Expected Learning Outcomes**

* Create learning scenarios that will include, along with educational games, concepts of programming and computational thinking for different school subjects in primary education
* Apply the created learning scenarios in different school subjects in primary education with the students from 1st to 4th grades

**Individual Assignment:**

Your task is to prepare the learning scenario based on IBL and Scratch/micro:bit educational game in written form and in graphical form using LePlanner. You could choose any school subject and any lesson within the subject for students from your class, considering that the activity should be completed in three months.

This is the **first version of the 3rd learning scenario** which you will continue to design with the online help of your mentor.

In this scenario the use of at least one story or game example developed in Scratch or micro:bit is required. It is not necessary to develop the game by yourself. Your task is to fill in detailed **Game/story template** with the help of your students as a follow-up activity.

Completed version of the game description and learning scenario will be **reviewed** by the mentor. According to the descriptions in the Game/story template, mentor will organize the development of the game (e.g. help will be provided by the teachers or students of Informatics). The final refined versions you will **implement** in the classrooms with your students. Last step is to play the final version of the game together with your students.

You are also supposed to write the **reflection** on conducted activities.

**Duration:** up to 3 months for the whole assignment (including the development of story/game in Scratch)

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| **ASSIGNMENT STEPS** | |
|  | Choose a school subject – plan the activities that will be carried out in your class next month. |
|  | Use the **Learning Scenario Template** form (Annex 1) for textual version and [LePlanner](https://beta.leplanner.net/) for graphical version of your scenario. |
|  | Specify the **Learning outcomes**:   * state ***general learning outcomes*** related to the coursethat will include problem teaching and logical tasks * state ***learning outcomes*** ***oriented on algorithmic thinking*** |
|  | Describe **Aim and tasks** of teaching and give a **Short description of activities**.  Plan the activities that will encourage your students for seeking the information, critical and logical thinking as well as collaborating while solving the problem according to the principles of inquiry based learning (IBL).  The activities should include a game on computer/tablet/smartphone (not only unplugged activities). |
|  | Specify the **Keywords**, **Correlation and Interdisciplinarity** withother courses or topics, and **Duration of activities**. |
|  | Point out **Learning and teaching strategies and methods**.  Specify the **Teaching forms**: use the principles of IBL and team work of students. Problem solving elements (logic games, quizzes, ...) can also be included. |
|  | Choose **Tools** and games that will be used on computer/tablet/smartphone for at least one example. Mandatory is to use of at least one story or game example developed in Scratch or micro:bit.  Point out all **Resources/materials** which will be required for the teacher as well as for students. |
|  | Use **Game/story template** (Annex 2)to prepare the description of the story or game. For now, prepare just a draft (fill in elements: Title of the game, Type (Scratch or micro:bit), Course/ Grade, Learning outcomes, Goal of the game).  Pay attention to the copyright for images, videos, and other materials collected from the web. Photographing your students requires written parents’ consent. |
|  | Elaborate the **Teaching summary** as **Motivation (Introduction)**, **Implementation** and **Evaluation (Reflection)**. This part describes in detail previously mentioned short description of activities. It should be based on IBL and activities with students for designing a story/game. |
|  | In **Annexes** box provide a link to the graphical version of the learning scenario in LePlanner. You will add link to the developed online story later. |
|  | **Examples and game references** box should contain a link to the Scratch story and to the other sources you will use for the activities. |
| **FOLLOW-UP ACTIVITIES** | |
|  | Upload your completed first versions of learning scenario and draft of the game/story description to the Moodle e-course. Mentor will review and correct your scenario and story description. |
|  | Upload your final version of learning scenario with story description considering mentor’s suggestions and corrections. |
|  | After mentor’s approval, implement the part of learning scenario about the story development in the class and design game with your students. Complete the game/story description and upload it in the Moodle e-course. Mentor will provide you with the finished story/game for your learning scenario. |
|  | Implement the last part (**Reflection and evaluation**) of your learning scenario in the class with your students and play the final version of the game together with them. |
|  | Post a **reflection** on conducted activities in the forum:   * Write a more extensive description on the implementation of the activity in your class. * Describe how your students have accepted learning activities, point out the parts about designing the game and playing the game. * Describe the achievement of all planed learning outcomes, both general and oriented on algorithmic thinking. * Define what you would like to change before the next implementation of the scenario. |