

Section 3

Chapter 12 - Assessment in Videogames and Educational Apps Based Learning in Upper Secondary and Post Secondary Non-Tertiary Education

Exemplary case 5

Title: **SimCityEDU application for geography lessons**

Description:

SimCityEDU is a city management simulation game that addresses environmental issues. It includes four missions that explore the effect of pollution, population, power, commercial and industrial centers and other environmental issues on cities. Students have to manage their town and try their ideas about solving realistic problems. Students face increasingly difficult tasks that require them to balance population, employment, industry, and power generation. The interface displays the overall pollution level, population happiness level, electricity coverage, and business traffic, helping players make decisions and plan their cities.

Integration into learning plan

The game includes lessons plans that allow teachers to adjust each mission to the learning plan. The game is most applicable in geography, economics and environment related subjects. Teachers should start the lesson by explaining the environmental challenge that students are going to explore and solve during the class as well as explain how these problems are being solved at the moment and what are the obstacles. Then students proceed to play the game build a solution for the challenge. Students could play in groups of two and collaborate to solve their mission successfully or work individually. Each lesson plan is designed to give 10-15 min for student



interaction with the game so is suitable for a single lesson activities. It is good to have some introductory activities to familiarise students with the game before entering challenges.

Learning assessment

The game comes with built in students assessment mechanism. In every challenge students actions are being monitored, registered and analysed by the game engine. Teacher can access the performance results in teacher dashboards. The game keeps track of around 3000 data points that are mapped into assessment model. The performance analysis allows to indicate what strategies students use and how much of systems thinking they are applying in the game. In addition to the game analytics external assessment activities could be leveraged such as presentations, project work, students' game strategy and argumentation reports etc.

Game access for school

Game is free of charge and accessible online. The teacher and students accounts have to be created in GlassLab educational environment to access the game and teacher dashboards.