The ENVISAGE case study: Game analytics and authoring in virtual labs

The ENVISAGE case study sheds light on innovate ways in which educators can make use of state-of-the-art game analytics and game authoring in order to analyse user behaviour data and, based on this, optimise learning experiences in online virtual labs.
This case study acquaints participants with the activities and outcomes of the ENVISAGE project (http://www.envisage-h2020.eu), which produces an innovative solution focused on optimizing learning processes involving the use of online virtual labs. Such virtual spaces have the potential to revolutionize the educational landscape by providing students with distance courses and curricula that otherwise would be difficult if not infeasible to offer.
ENVISAGE makes use of knowledge from the domain of digital games, where capturing and analysis of detailed player behavioral data has reached mature levels in recent years. Game Analytics is used to profile users, predict their behavior, provide insights into the design of games, and adapt games to users. These mature technologies can be readily migrated to learning analytics especially in the situation of virtual labs, as these are delivered online thus enabling detailed tracking of learner behavioral data. Tracking and understanding learner behavioral data can facilitate decision-making when designing an online virtual lab, as well as allowing to adapt the learning content to students' personal needs and characteristics.

The GAIA case study: Playful pursuit of energy efficiency in schools

The GAIA case study examines how game-based learning experiences including monitoring and analysis of data from the school building can be used to promote efficient use of energy in schools.
In this case study, participants will get to know about, and be inspired by, GAIA, a current innovative initiative involving several school communities. GAIA uses playful learning to raise awareness of the need to save energy and of ways in which this can be achieved in everyday life, primarily among the users of school buildings (students, educators, other staff), and through them, indirectly, their wider communities (families, local communities). Based on this, the eventual aim is to encourage the development of behaviours in users' everyday life which can contribute to increased energy efficiency in the school building.
GAIA designs and implements educational activities which go far beyond merely informing the target audiences about energy efficiency. Indeed, the educational activities utilize games and playful learning methodologies to turn students, their teachers, and those acting as the building managers of the schools into active agents collaborating with each other to monitor and shape energy use in the school. Users of the school building experiment with, and eventually adopt, behaviours which they have themselves experienced as proven effective ways to achieve the goal of saving energy without compromising school life quality – and that, following their decision and will rather than being instructed to do so by an external authority.
Students and school staff are playfully motivated and facilitated by appropriate technological tools to: (a) closely monitor and understand various aspects of their own and others' habits and behaviours that affect the use of energy in their school building; (b) based on this, make informed decisions to take action in order to increase energy efficiency, by changing their habits and behaviours, and (c) observe and analyse the impact of their action in terms of saving energy as well as in terms of comfort, functionality, and avoidance of disruption of school life.
The focus lies heavily on students' own deep personal engagement with the goal and process of the efforts for energy efficiency, with rich guidance and help from the teacher, so as to maximize the chances for true long-lasting impact.
The above core educational activities within the school community are complemented by outward-looking initiatives aiming to spread the word for energy efficiency in the local community, involving students' families and local communities in awareness raising activities and encouraging the emergence of local initiatives informed and inspired by the mobilisation of the school community for energy efficiency and its relevant experiences and achievements.
The GAIA case study is based on the activities and outcomes of the GAIA project (http://gaia-project.eu).

Game creation at school

This case study showcases how the creation of games at school can turn students and teachers into creative makers gaining game design and development skills of particular value for tomorrow's needs. Drawing inspiration and using resources and experience from international initiatives such as the Institute of Play (www.instituteofplay.org), Minecraft Education Edition (https://education.minecraft.net) and Unity for Education (https://store.unity.com/education), teachers can become creative practitioners empowering young people by bringing the power of play and design into the classroom.

Summer Academy 2018

July 1st– 6th, 2018 Marathon & Pallini, Attica, Greece

The Play-Create-Learn Summer Academy 2018 is organized in the framework of the Erasmus+ and H2020 Programmes of the European Commission, in collaboration with, and with support from, the ongoing projects eCrisis (Erasmus+), ENVISAGE (H2020), and GAIA (H2020), as well as being grounded on the legacy of the C2Learn project (FP7).

Organized by

ELLINOGERMANIKI AGOGI

PROGRAMME

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday
1 July 2018	2 July 2018	3 July 2018	4 July 2018	5 July 2018	6 July 2018
Inspiration		Incubation		Impact	
Welcome!	Pallini-based activities				
	09:30 – 13:45 Introduction to playful and creative learning Introduction to the case studies	**09:30 – 13:45** Case study workshops: exploring possibilities	**09:30 – 13:45** Case study workshops: designing innovation	**09:30 – 13:45** Case study workshops: making it happen Widening horizons: open community workshop	**09:30 – 13:45** Participants' concluding presentations
	13:45 – 14:30 Lunch				
	14:30 – 15:30 Personal course paths	**14:30 – 15:30** Reflection, exchange, personal practice scenarios	**14:30 – 15:30** Reflection, exchange, personal practice scenarios	**14:30 – 15:30** Widening horizons: open community workshop	**14:30 – 15:30** Course evaluation
Marathon-based activities					
18:00 – 20:30 **Open Schools for Open Societies** Dr. Sofoklis Sotiriou *Ellinogermaniki Agogi, Greece* Patrick Sullivan *Director, Curriculum & Assessment, NCCA, Ireland* **National curriculum standards: never-changing and ever-changing** Dr. Akihito Tomita *Wakayama University, Japan* **The Enquiring Classroom: Values, Identity, Exploration** Prof Aislinn O'Donnell *NUI Maynooth University, Ireland* **iMuSciCA: A web-based interactive lab for STEAM learning** Vassilis Katsouros *Athena Research and Innovation Centre, Greece* **An expedition of a lifetime: Mars** Dr. Gernot Groemer *Austrian Space Forum, Austria*	**18:00** Visit at Cape Sounio, Sanctuary of Poseidon	**21:00** Virtual visit to the Biosphere2, Arizona / USA	**16:00 – 23:00** Visit to the Acropolis and the Acropolis Museum Dinner at Plaka	Farewell Dinner	Goodbye!

Play-Create-Learn Summer Academy 2018 in a nutshell

The Play-Create-Learn Summer Academy 2018 aims to help educators to experiment with, and reflect on, aspects and uses of innovative playful and creative learning activities in classrooms and beyond, with an eye to addressing the needs of today's students as tomorrow's citizens in the 'brave new world' of the 21st century.
The Summer Academy is a flexible modular professional development course consisting of (a) a core element on the basic concepts, methods and options for playful, game-based learning and creativity in education; and (b) a selection of practical case studies for participants to choose from in order to build their own path from the theory to teaching practice and adapt their training to their own interests and teaching realities. Each case study offers insights into the research and innovative teaching activities taking place in the context of successful European projects and international initiatives.

The C2Learn case study: Games for co-creativity in education

Based on the outcomes of the C2Learn project (http://www.c2learn.eu), this case study offers insights into innovative ways in which games can be used in education to foster co-creativity, whereby students play and collaborate to generate valuable, disruptive new ideas to address problems they define.
How can we foster creativity in education? How can we use student-engaging games in this effort? How can we, as educators, design learning activities to this end? How can we involve our students as creative agents in this design?
This case study explores synergies of creativity and digital games in today's schools, aiming to familiarize educators from various subject areas with concepts and examples of practice related to game-based learning as a vehicle promoting creativity, including creative thinking, in and around schools, in the intersection of formal and informal learning activities (curricular, cross-curricular, extra-curricular).
Participants learn about the original concept of co-creativity in learning, according to which learners, individually as well as mainly collaboratively and also communally, come up with novelty, new ideas. These new ideas: (a) have emerged through asking 'what if' and 'as if' questions and through the use of disruptive techniques resulting in re-framing; (b) have emerged from shared ideas and actions in an immersed dialogic rather than hierarchical pedagogical environment; (c) are captured or selected because they matter to the community and have a valuable impact on it; and, in all this, (d) learners take into account the impact of that novelty on the individual, collaborative and communal dimensions of their community.
To foster co-creativity, the C2Learn case study proposes games and methods with which teachers can design playful learning experiences consisting of Creative Quests, Missions, and Challenges. In a Quest, learners set out on a journey towards specified goals. Within a Quest, in a number of Missions learners engage themselves in actions with specific objectives contributing towards achieving the goals of the Quest. In the heart of each Mission lies a Problem; one with no obvious 'correct' answers, e.g. a dilemma. To address the Problem, learners choose one or more Challenges to pursue. The Challenges are small games and playful activities that get learners to play with words, images, and emotions in order to generate their own valuable, inspiring, disruptive new ideas addressing the Problem at hand.

The eCrisis case study: Game-based student empowerment in times of crisis

The eCrisis case study looks into game-based inclusive education practices which can empower students and school communities in times of crisis by fostering the development of skills in conflict resolution, creative thinking, and reflective debate.
In the last decade, Europe has witnessed serious societal challenges and conflicts which occur as emergent by-products of economic recession, social structure instabilities, and most recently, the refugee crisis. An increasing number of citizens in Europe are still nowadays culturally, socially, and educationally excluded.
The eCrisis case study gets participants to explore an innovative game-based solution for the teaching and learning of crucial 21st century skills in conflict resolution, creative thinking and reflective debate, which aspires to help children and teenagers develop into responsible citizens and creative solvers of the unprecedented everyday real-life problems arising in the context of the multiple crises that Europe and its school communities are faced with.
The content of the case study aims to inspire participants to become creative practitioners in their professional settings, by designing playful inclusive learning activities built around the use of the eCrisis games, Village Voices and Iconoscope.
Village Voices is a multiplayer open world game taking place in an imaginary village, which is designed to be played in a classroom under teacher supervision. On the surface, the game is about survival and prosperity in the village. On closer inspection, however, the game is about friendship and reputation management in the village, and mastery of conflict resolution.
Iconoscope gets students to play with visual creativity and ambiguity, inviting them to represent a given concept through an image that they will create using simple shapes and colour. The challenge is that it should not be too obvious what their creation represents, inviting the others to guess. Players show their visual creations to each other, vote stating which of three initial concepts they 'see' in each creation, and get their scores.
The eCrisis case study is based on the activities and outcomes of the eCrisis project (http://ecrisis.eu).