

APRIL 2021

UNLOCK

e-magazine

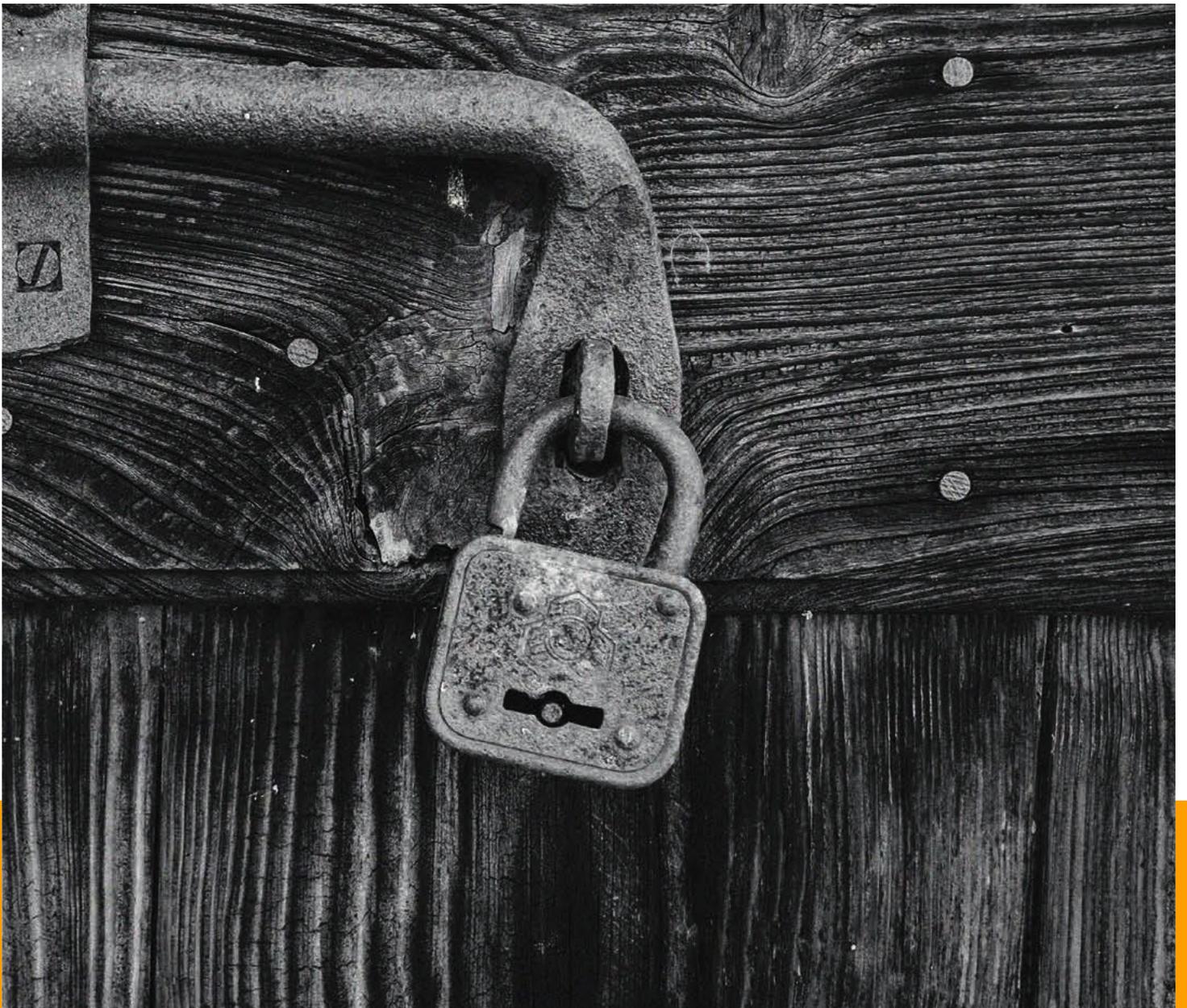


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INDEX

- 1 | [UNLOCK: Creativity through game-based learning in higher education](#)
- 2 | [What's Unlock been up to? News and activities](#)
- 3 | [Educational Escape Rooms: research and practice \(WP4\)](#)
- 4 | [Selected EER case studies](#)
- 5 | [Status quo of the pedagogical framework \(WP5\)](#)
- 6 | [Development of the gamified UNLOCK Learning Platform \(WP6\)](#)
- 7 | [Meet the UNLOCK partners](#)

UNLOCK: CREATIVITY THROUGH GAME-BASED LEARNING IN HIGHER EDUCATION

We welcome you to the world of game-based learning, and specifically to the main goal of this UNLOCK project, which focusses on the development of Educational Escape Rooms. In this first section, we will present you the milestones, deliverables, and activities of the project.



UNLOCK: CREATIVITY THROUGH GAME-BASED LEARNING IN HIGHER EDUCATION

Have you heard about Educational Escape Rooms (EER)? If not, be very welcome to the theme!

A group of Higher Education Institutions and businesses from 6 European countries – Portugal, Spain, Netherlands, Germany, Denmark, and Lithuania – challenged themselves to develop a learning tool capable of equipping Higher Education Institutions (HEIs) in the design and implementation of learning solutions based in this game approach.

And they named it UNLOCK – a project devoted to equipping HEIs to design, set and facilitate escape room games in their learning experiences, to foster creativity and other entrepreneurial skills of HEI's students.

Globally, the aim is to provide the context, process and tools based on a new and innovative learning approach that stimulates entrepreneurial skills in both students and educators, seeking at strengthening employability, creativity, and new professional paths.

Watch our expected [deliverables and activities](#), as initially proposed – but keep in mind that our team will probably develop many other useful materials as



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WHAT'S UNLOCK BEEN UP TO? NEWS AND ACTIVITIES

We want you to know how UNLOCK is unfolding: this section is devoted to present a summary of all the activities and results the team has worked on, as well as planning of the next steps.



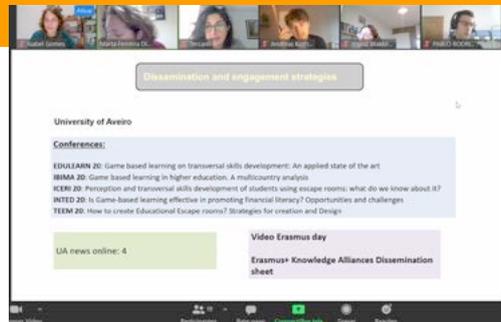
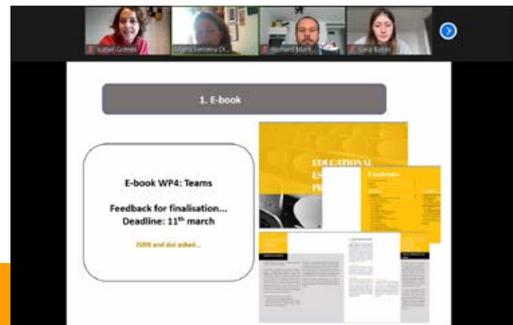
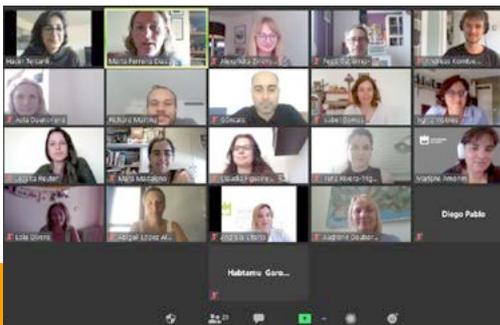
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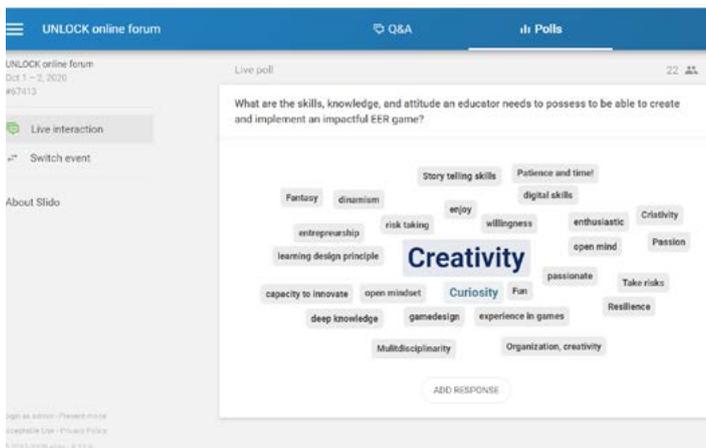
Since our kick-off meeting in February 2020...

...we have been meeting regularly online...



...to make decisions and keep the project on track!

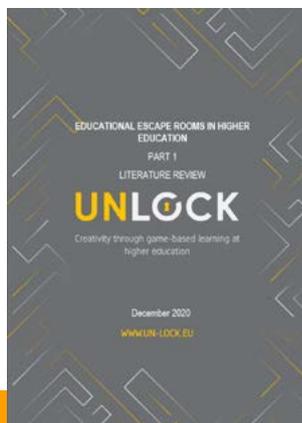




Our first **online event** was held in **October 2020**, to share our results of the research phase and dialogue about the findings with experts and practitioners...

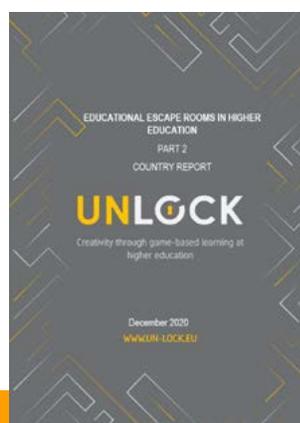


...we finished and published our research reports.



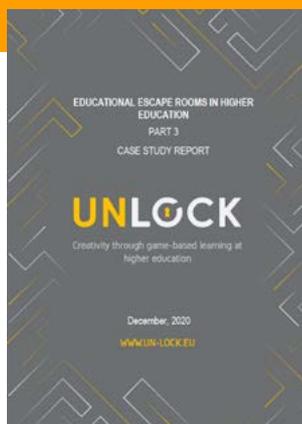
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Literature Review

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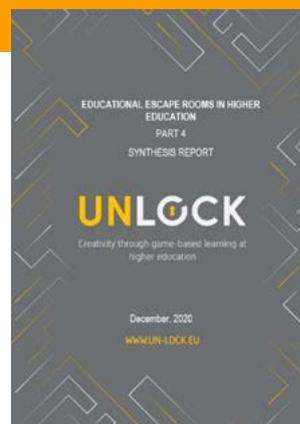
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Country Reports

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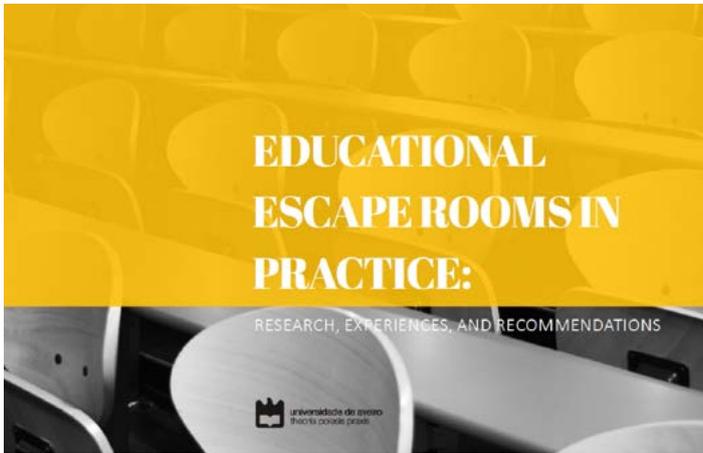
UNLOCK | PART 3
Case Study Report

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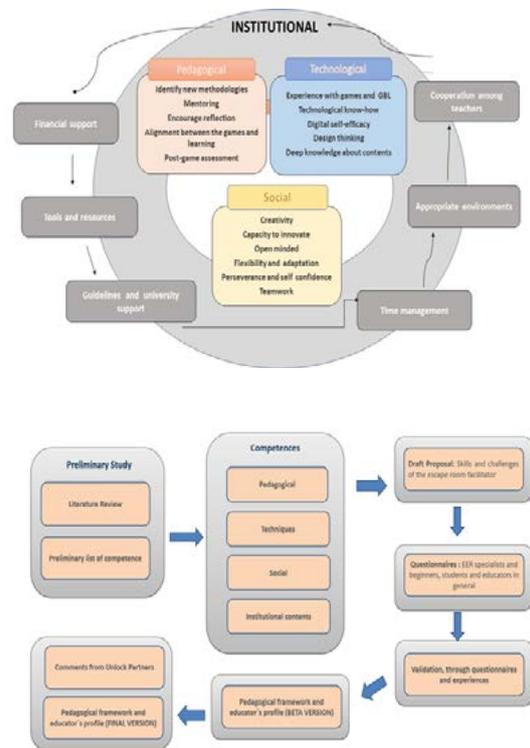
UNLOCK | PART 4
EERs Synthesis Report

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We published our **e-book** “Educational Escape Rooms in Practice: Research, experiences and Recommendations”...

...we finished the design of the pedagogical framework and will now discuss it with the Quality Committee...



...and we are now collaboratively designing our gamified Learning Platform!

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EDUCATIONAL ESCAPE ROOMS: RESEARCH AND PRACTICE (WP4)

In this section, we present a summary of the research phase of our project, which aimed to identify the status-quo of the EERs in the partner countries.



Photo by Freepik

FINDINGS FROM THE RESEARCH PHASE (WP4) ON THE EUROPEAN EER LANDSCAPE IN THE HIGHER EDUCATION CONTEXT

To establish the preliminary knowledge base for the project on the development and implementation of educational escape games, the consortium first conducted in-depth research to identify the status-quo of the EERs in their respective countries. This standardised process was led by the Science to Business Marketing Research Centre (S2BM-RC) of the Muenster University of Applied Sciences, in close collaboration with the Amsterdam University of Applied Sciences. The research methodology employed both primary and secondary data collection techniques. The consortium interviewed over 50 EER researchers and practitioners and captured 37 EER good practice case studies from across Europe, the USA and Australia (the latter two are used as global examples).

A growing interest in the EERs among higher education educators

Our research showed that in our target countries (i.e., Portugal, Netherlands, Germany, Spain, Denmark, and Lithuania), EERs are more common in primary, secondary, vocational, and adult educa-

tion than in HEIs. However, our interviewees reported growing interest amongst HEI educators in adopting EERs. While literature suggests the prominence of EERs in medical disciplines and the STEM fields, most of our identified cases are designed within Social Sciences (i.e., Business, Law, and Economics, Languages and Literature), followed by Formal, Natural, Medical and Health sciences. This adoption can be explained by our project's focus on physical EERs, as opposed to digital. We suggest that the former can be considered within Social Sciences as a more suitable model for understanding human behaviour and developing soft skills.

Educator competencies and availability of customisable resources are crucial

Inhibiting factors that influence the adoption of EERs in the HEIs are identified as: lacking competencies of educators; insufficient institutional support; student-related challenges (including unfamiliarity with EERs); and lacking time and finances. Our interviewees emphasised the need for ready-made EERs, guidebooks, blueprints, and support for the educators in the development of knowledge and skills, such as technical competencies and game design methodologies. Regarding resources, the Dutch and German funding programmes and institutional initiatives provide financial resources for educators to design and implement EERs.

Emerging themes

We identified three emerging themes in EERs in the HEI: (i) Hybridity – The EERs merge physical and digital learning spaces, they form collaborative learning environments involving mixed groups of players and include students and educators as co-creators; (ii) Institutional boundary spanning - European EERs are designed and implemented in collaboration with university internal and external stakeholders, and (iii) Aspirations for sustainability – The desire of the educators in making EERs both re-playable and an embedded element of the curriculum.

EER benefits for all involved actors

Our findings show that EERs positively impact the students' attitudes towards learning, the awareness and intention that stimulate student motivation, and overall enthusiasm for learning. We also found that the HEIs where the EERs are being adopted gain visibility and recognition among other HEIs to exploit innovative teaching methodologies. These HEIs tap the opportunity with third party income generation via integration of external groups as EER participants. Also, EERs with open public involvement leads to strengthened community-HEI engagement. Likewise, businesses that cooperate with the HEIs to develop and deliver the EERs benefit from the synergies, develop a knowledge base for new business models, gain a new customer base, and diversify income sources.

SELECTED EER CASE STUDIES

To inspire you explore EER in practice, we selected a number of real-life examples of EER implementation, which we collected during our research phase (WP4). You can check the case study collection and the final report at www.un-lock.eu/reports

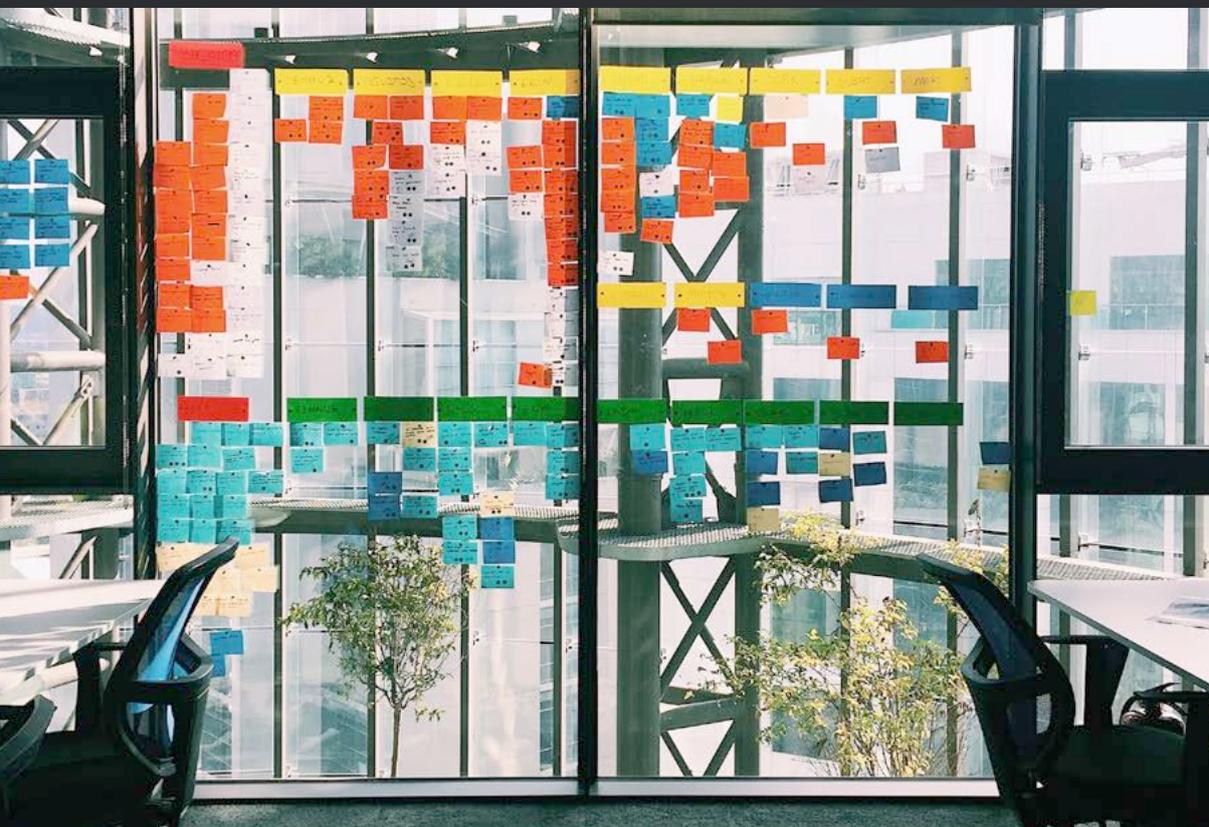


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4

ESCAPE 2 EDUCATE

Case Institution: Colégio do Sardão/
Escola Superior de Educação do
Politécnico do Porto/ inED - Centro de
Investigação e Inovação em Educação

Case Country: Portugal

Authors: João Almeida & Mário Cruz



"Escape 2 Educate" was conceived in 2018 as a final project of the bachelor's in Foreign Languages and Cultures, from the Porto School of Education, consisting of exploring the "Escape Room" methodology in the context of teaching and learning English in the primary level of education.

The title "Escape 2 Educate" has a double meaning: on the one hand, "Escape 2 Educate",

because the project is about using the "Escape Room" methodology. On the other hand, "Escape 2 Educate" refers to the sense of "escaping" traditional pedagogical approaches that are not suitable for the 21st century, in order to actually educate today's society.



At the origin of the project are, on the one hand, a strong interest in the application of "Escape Rooms" in educational contexts, as well as the desire and the opportunity to contribute to its study, particularly in the primary level of education, where the research carried out so far is sparse. The aim of this project was to make educational "Escape Rooms" known and to motivate their use in Portugal, with a greater focus on how they can contribute to the teaching and learning of languages. It was also intended to make up for the lack of studies on this methodology, namely regarding its application in the Portu-

guese context and in the primary level of education.

Regarding the implementation of this Escape Room: two classes of primary students (one

from the 2nd grade with a total of 23 students and one from the 3rd grade, with a total of 20 students – all ranging from 8 to 10 years old) were divided into two groups. Before each group entered the room, the "spy" explained what was there to do and what was going to happen inside. The challenges were designed considering the goals of the English subject curriculum and the contents that the English teacher had covered in his classes so far. The students were informed a few days before the activity, but nothing was revealed to them regarding the history or the challenges they would have to overcome.

The biggest difficulty found in the elaboration of this "Escape Room" was trying to make the activity challenging for the students. This implies making the right decisions regarding the degree of difficulty of each challenge and the number of challenges for the defined time limit, and that was when there were failures. Although there was a concern with showing the activity plan to the English teacher and asking him for advice and opinions, too many challenges and some too difficult were included. In the first group of students, it was quickly realized that they were unable to come up with some answers or that they were taking much longer than expected, so there was a need to help them a lot and to improvise.

However, during the "Escape Room", it was interesting to see the different ways in which students collaborated with each other to overcome challenges, thinking together, distributing tasks, or sharing search sites among themselves to find a clue or challenge more quickly. Following the enthusiasm with which they became involved was also evident and the feedback obtained was very positive, which the developers were able to verify in their field notes and that account for the different aspects: a) collaborative work; b) development of critical thinking; and c) communication.

ESCAPE THE CLASSROOM

Case Institution: Segbroek College

Case Country: Netherlands

Authors: Joris Koot & Anne de Groot



The final exam has been stolen. There is only one copy of the final exam, but this copy is in a safe attached to a bomb. Can the players dismantle the bomb, crack the code of the safe, and get their hands on the last copy of the exam so the examination can continue? This question forms the narrative of the Escape the Classroom, an escape room for preparing for a biology exam designed for general secondary (mavo and havo) and pre-university (vwo) students. Escape the Classroom was developed by Joris Koot and Anne de Groot at Segbroek College in the Hague, Netherlands. Mr. Koot and Ms. De Groot participated in an escape room as a part of a school-related staff event and immediately saw the educational potential. They decided to apply the idea of an escape room to their end-of-year review lessons.

The Escape the Classroom, an educational escape room (EER), has a simple setup and used materials that already existed in the biology classroom as props and as the basis of puzzles. In addition, the main stakeholders, Mr. Koot and Ms. de Groot took care to laminate and re-purpose materials so that their puzzles would be reusable for years to come. For example, the instructions take the form of a short video, and parts of the laminated puzzles can be written on with a whiteboard marker and used for other activities outside of the escape room. A grant from the LOF (Teacher Development Fund) helped cover the cost of a few new materials, and students helped design logos and a lockbox.

In addition to creating an escape room with limited time and budget, a challenge for the developers was balancing the correct number, length, and level of the puzzles. For this, they received feedback from a colleague and did a test run before running the escape room with their students. Mr. Koot noted that while the content can be difficult, it is important that the puzzle is not too difficult or too easy. The goal is to engage the students with the subject content in a challenging and fun way. Thus, the content should be the core focus of the puzzles and activities. At the end of the EER, students should have a clear idea of what they will be required to know for the final exam and insight into their level of understanding of those concepts.

While completing the escape room activity, students must collaborate in small groups, communicating about their knowledge of cell division and protein synthesis and deciding as a group how to best apply their knowledge to solve the puzzles. Prominent design elements of Escape the Classroom that overlap with pedagogical practice are cooperation, competition, challenge, strategy, communication, discovery, rewards, and instant feedback. Hints are loosely organized, meaning that the gamemaster, or the teacher of the module, observes when students cannot proceed with the game and decide which tips to give. In this way, the teacher is facilitating the learning experience and acting as a coach. Once the groups have escaped, the teacher also guides the students in a reflection. This reflection can include discussing the puzzles, attempting them again for better understanding, or taking inventory of what students should focus on as they continue to prepare for the exam based on their results on the activities in the EER. Finally, Mr. Koot appreciates that students are using their knowledge and skills to problem-solve and think outside the box.

Escape the Classroom provides students with a new and exciting way of reviewing course material, showing their understanding, and developing their skills. The interactive nature of the EER also means students are exposed to new thinking and new perspectives that can result in entrepreneurial attitudes and mindsets. Escape the Classroom does indeed escape the limits of traditional exam prep, replacing them with a positive and meaningful learning experience.

The degree of difficulty of each challenge and the number of challenges for the defined time limit, and that was when there were failures. Although there was a concern with showing the activity plan to the English teacher and asking him for advice and opinions, too many challenges and some too difficult were included. In the first group of students, it was quickly realized that they were unable to come up with some answers or that they were taking much longer than expected, so there was a need to help them a lot and to improve.

However, during the "Escape Room", it was interesting to see the different ways in which students collaborated with each other to overcome challenges, thinking together, distributing tasks, or sharing search sites among themselves to find a clue or challenge more quickly. Following the enthusiasm with which they became involved was also evident and the feedback obtained was very positive, which the developers were able to verify in their field notes and that account for the different aspects: a) collaborative work; b) development of critical thinking; and c) communication.

THE SNAKE CULT

Case Institution: Vallekilde Højskole & Aalborg University, IT, Learning & Design Lab

Case Country: Denmark

Authors: Thomas Vigild, Heidi Hautopp & Stine Ejsing-Duun



Photo by Vivek Doshi on Unsplash

The Snake Cult is a secret sect that controls all knowledge in Society. It is up to the EER-participants to gain the sect's trust and prove worthy. By proving worthy, participants must act as disciples willing to undergo a number of trials to obtain a position within the sect. The Snake Cult's rite of passage is simple: Drink poison - and find the antidote within one hour by solving puzzles that prove your worthiness of the sect. This ritual is based on the premise that all the cult's knowledge is reserved for the cultists, and all "unworthy" disciples must die if they do not prove their worth. The narrative is opening a conversation around different theoretical positions and schools of thought, and how truth is relative to the individual who holds it.

Didaktisk Gåderum is a product of a collaboration between two educational institutions (a folk high school and a university) and was initiated by Game Design teacher Thomas Vigild from Vallekilde Højskole, PhD-fellow Heidi Hautopp, and Associate Professor Stine Ejsing-Duun from Aalborg University, IT, Learning & Design Lab. The overall aims of the escape room can be outlined as the following: 1) to use didactic puzzles to train students in Philosophy of Science with special emphasis on changing perspective (literally in the Escape Room, and metaphorically in the course curriculum); 2) to gather experiences that could point to new perspectives for other cases where puzzles are included as learning tools at higher education, 3) to train folk high school students in game design and game development. The EER-narrative was developed by the game design students from Vallekilde folk high school who worked around the principles: "expedition - cult - ritual" and began the process by making mood boards with inspiration from South American occultism. The game designers used the principles to tap into themes like the centralisation and control of knowledge. By doing this, the game designers were able to bridge the narrative with the EER-participants' course content from Philosophy of Science, Aalborg University, Denmark.

The EER consists of five major main puzzles, where the solution of these leads to the solving of the keyword; "Arise". When this word was spoken out loud to the cultist in the room, the players were given the last code that opened the box with the antidote and the players were free.

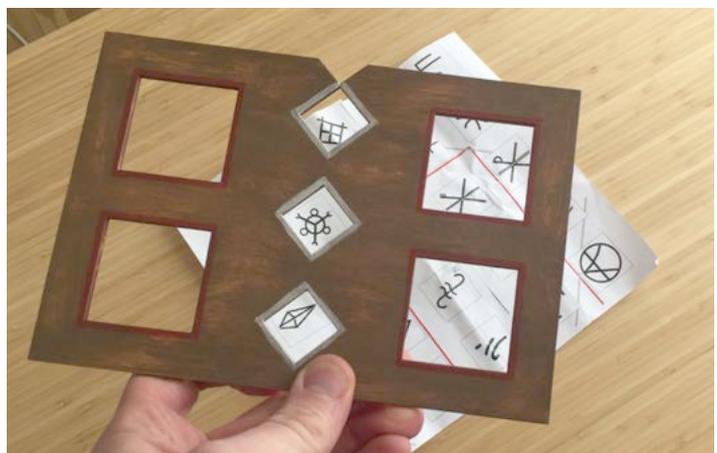
The folk high school students designed the space as a mixed-media space, where the puzzles were primarily about thinking logically and using visual and hearing senses in different ways. One of the puzzles called “Change Perspective” consists of a variety of actions, senses, and interactions that can be related and interpreted in philosophy of science. The puzzle incorporates a tangible and direct physical shift in view because the players had to separate the object (the paper with the symbols) from the "lens" itself (the wooden glasses with the holes inside). At the same time, it required the player to completely close one eye in the interaction with the puzzle, thus limiting and narrowing the point of view to see the solution.

On an abstract level, this could be related in a professional way to one's awareness of one's perspectives when working with philosophy of science.

In the actual gaming experience of the EER, factors such as time pressure, game framework and group dynamics made the immersion and reflection of some students a priority, so that the focus was on the game's framework (gamification) rather than professional reflections and learning processes (course content). In the tests, it became clear that some students were focusing on philosophy of science-related topics and how they were unable to find references in the puzzles, while others were able to think more abstractly about the puzzles and how “changing perspectives” physically and metaphorically was central to the EER.

The authors see learning potentials in the use of didactic puzzles at universities. They advocate that didactic puzzles are considered dynamic learning spaces, which are adjusted and discussed in collaboration with the

learners: game designers and players. The teacher's role is to explicitly create spaces for dialogue about gaming experiences and discussion of perceived ambiguities in the puzzles. At this stage, the players' physical presence and experience in space can be the subject of theoretical reflections, where the interaction between practice and theory is prioritized in relation to both the Problem Based Learning (PBL) approach and the pragmatic learning understanding. Going forward, the authors see potential in the fact that the learners' process of creating didactic designs for others - in this case, didactic puzzles - can form the basis for new investigative approaches to knowledge in various disciplines.



THE FLORENCE NIGHTINGALE CODE

Case Institution: University of Granada

Case Country: Spain



The Escape Room is called “The Florence Nightingale Code” and it was created by José Luis Gómez Urquiza at the University of Granada and targeted to undergraduate Nursing students. The players must save the nursing profession by locating a falsified document that claimed that Florence Nightingale and Virginia Henderson were not nurses. This Escape Room was implemented during the 2016-2017 summer semester. The Escape Room game for nursing students was developed to be used in the same classroom where the theoretical-practical classes are taught and for the course ‘Adult Nursing 1’. The Escape Room was implemented in order to take into account the benefits of game-based learning to motivate and engage students.

As previously stated, the teacher’s initial goal was to motivate students, but then he realized that he could use Escape Rooms to assess cross-curricular competences such as leadership, communication, and observation skills given that students had to demonstrate the knowledge acquired during practical seminars such as techniques related to cardiopulmonary resuscitation, taking and reading an electrocardiogram, donning sterile surgical



attire, blood sample collection, and insertion and removal of sutures with staples. José Luis Gómez-Urquiza remarks that this kind of competencies are very difficult to assess in traditional exams, therefore, Escape Rooms offer a new approach concerning the evaluation of transversal skills by using rubrics during the development of the game.

Before the game, the teacher generated expectations or hype by creating a narrative

about the Escape Room which included a trailer and a fake press release. This served to engage students and motivate them since even before playing the Escape Room. To participate in the game, students were organized in groups of five and given 30 min to solve the puzzles presented in the room, find the exit key, and escape. For example, one of the tests to unlock a padlock with three digits indicated the clue 'heart rate'. In a computer located in the classroom, there was an electrocardiogram, with which the heart rate could be calculated, thus obtaining the three digits required to open the padlock. Each group was given two clues related to the development of the game; one after 20 min, and the other one after 25 min. Approximately, the Escape Rooms consisted in 10 different riddles and puzzles. The fastest group to escape was awarded 5 questions out of the 100-test questions of the final exam, the second team was awarded 4 questions and the third team 3 questions. José Luis Gómez-Urquiza, the teacher, says that this kind of award served to prevent students to tell the other groups the solution of the puzzles and riddles.

Concerning the results of the Escape Room, 66.5% percent of the groups were able to escape from the nursing Escape Room and the mean time to escape from the room was around 27 minutes. In addition, according to the participant students, they found the Escape Room really enjoyable and useful, and it helped them to recall and apply knowledge, and it also promoted



teamwork. Moreover, it motivated students to study despite the fact that no exam was imminent. According to the students, there should be more initiatives of this kind in nursing teaching.

ROOM OF JUSTICE

Case Institution: National Courts administration of Lithuania

Case Country: Lithuania

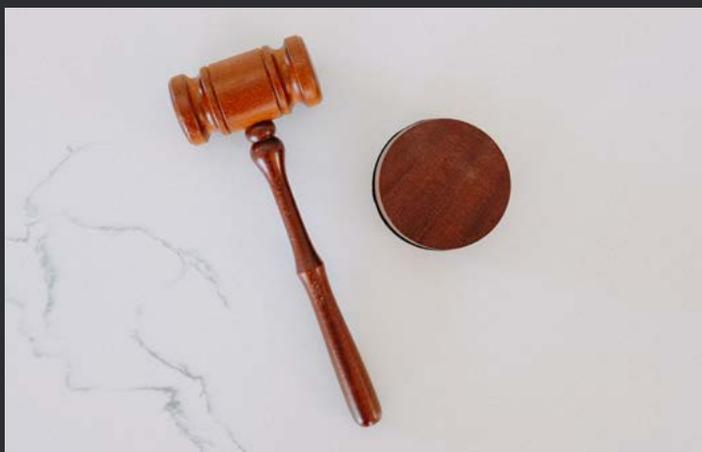


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Imagine a situation where the mother is having lunch with her little daughter at a restaurant. At some point, the mother goes to the ladies' room to wash her hands and when she returns, she is shocked to discover that her little girl is gone. The mother is desperate. After some time, she receives an anonymous call with a demand to pay a ransom. No doubt, the family pays the ransom, and the girl returns home. This incident becomes a criminal case in court and the main suspect is the girl's uncle. The participants of the escape room are the judges, who are solving the case. They have to solve a number of puzzles to unlock different items of evidence, and when they have all evidence, they have to piece it together to decide on the verdict.

This is the plot of an educational escape room organized by the National Courts administration of Lithuania. Survey results have demonstrated that majority of Lithuanian society members learn about the implementation of justice from mass media or social networks. Therefore, for a few years, the National Courts administration had been consistently organizing different initiatives about the openness of courts, which allows people to understand



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Photo by diena.lt



Photo by diena.lt

better the processes of court work, to educate people and to increase general legal literacy among the population, to develop a more constructive society. There are still situations when in some cases people expect a very radical decision even before the court has a chance to investigate it. Therefore, by choosing this project, "Room of Justice", the aim was to show people the specifics of legal profession and courts in an interesting and

unconventional form of communication. The specific aim of this escape room was to familiarize the audience with the job of a lawyer and to try to solve a complicated case.

The escape room was built in a trailer, this way the “Room of Justice” travelled all over Lithuania with stops in different towns and cities. The prominent design element was a challenge to put all pieces of the puzzle together and to solve the case. The puzzles were locked in numerous boxes. The game had a sequential method of organization thus, the participants could only move on to the next puzzle after solving the previous one. The game master usually was a representative of the National Courts administration, who first would request the participants to read the justice’s oath and then they would be allowed to enter the room and the rules were explained to them. The estimated time for solving the puzzles was 45 minutes, with a maximum number of four participants. This was limited due to the physical capacity of the room. The hints were provided in person, there was always a district court representative. The level of difficulty of this game is high and as the game masters reported, only two thirds of all participants could open the last box and finish the game.

The organizers of the game needed quite a substantial input as the room was built in a trailer and it took a tour across the country. Other equipment was boxes, locks, picture frames, props, etc.

As the EER was in a camper trailer, which would be parked in a town square, the challenge might have been to attract as many participants as possible to take part in the EER game. Coordination and cooperation between different local representatives in different towns and the National Courts administration could have been a challenge, because game masters needed preparation. In addition, the challenges mentioned above could have been as supporting factors. In every town, where the “Room of Justice” was touring, there were members of the town court administration to take care of the trailer and to send a local representative to be as a game master.

It could be stated that this kind of game was a case when a state institution made a step towards the community to establish closer links. The outcome was the achieved positive publicity about the work of lawyers and courts. The participants of the game could appreciate the challenging work of lawyers, how complex and responsible it is. The EER helped changing perceptions about the work of courts and the legal profession. The idea of solving a legal case or investigating a case could be transferred to the university and used as an educational escape room for students studying Law.

PHARMACY ESCAPE ROOM

Case Institution: University of North Texas System College of Pharmacy

Case Country: United States of America

Authors: Brittany Palasik



Photo by Freepik

Simulating challenges in the transition of care of patients with diabetes in an Escape Room at the University of North Texas

This educational game is embedded in a two-hour weekly course part of “Integrated Pharmacy Recitation” (University of North Texas, UNT System College of Pharmacy) with the aim to help prepare students for their rotations in advance and imitate the challenges that new pharmacists might encounter in the transition of patients from the hospital to the clinic. Started by Brittany Palasik (PharmD, Assistant Professor at the UNT System College of Pharmacy) and her colleagues, the activity has already been practiced for two consecutive years.

The activity itself was organized in two acts and required two rooms to escape from, namely:

- Hospital (inpatient), with 3 puzzles and a patient
- Clinic (outpatient), with another 3 puzzles and a patient

Brittany facilitated the “Hospital Room”, while her colleague oversaw the “Clinic Room”. Each room had a virtual patient, a resident (re-enacted by the facilitators as well) and 3 puzzles. The students had to interact with the patient and gather information to solve the puzzles.

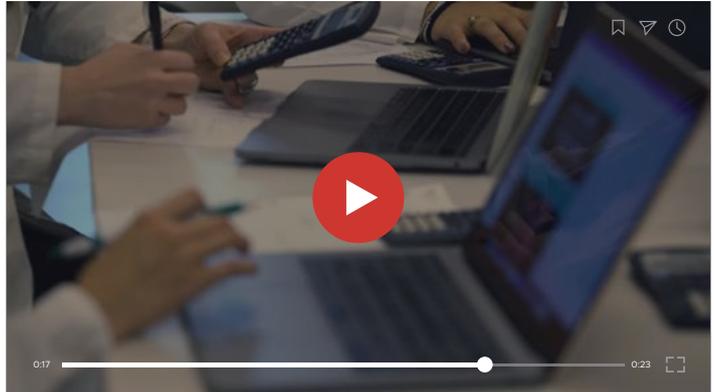
The puzzles varied in difficulty and the students had the chance to “request a hint”, which would grant them relevant information on how to solve the puzzle but would result in the team losing points. However, Brittany noticed that the system was discouraging interactivity and asking questions, so they modified it allowing the students to request 5 hints per room, which increased their interest in interaction, alleviated stress and opened them up for experimentation.

The exercise had two main goals:

- To strengthen student’s knowledge about diabetes;

- To help students understand the complexity and continuum of patient treatment with diabetes. After the hospital, the patients will appear in the clinic with, potentially, other diseases or challenges. Therefore, there should be a holistic approach to the patient care, which the student will not experience before their practice in year 4.

According to Brittany, in the first year the students did not fully achieve the learning outcomes due to a number of challenges related to the escape room methodology and the preparation of the students. However, the second year was completely different. Most of the students were able to make it through both rooms and scored significantly higher in the post-assessment test than in the pre-assessment test.



As for the intangible outcomes, as a result of the exercise, the students developed a variety of soft skills such as teamwork, communication and leadership skills and active listening skills, as well as a better understanding of inpatient/outpatient management and their needs in the transition from one phase to the other. The initiative can be easily transferred between student generations and can be applicable year after year.

STATUS QUO OF THE PEDAGOGICAL FRAMEWORK (WP5)

Drawing from the conclusions in the research phase (WP4), we extracted competences, knowledge, and attitudes necessary for an educator to be able to master the development of GBL activities, specifically the design and implementation of EERs. Here you will find a summary of the activities underwent to propose a pedagogical framework that can guide us into the next steps of the project.



5

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STATUS QUO OF THE PEDAGOGICAL FRAMEWORK (WP5)

Picking up from WP4, where we identified possible skills and difficulties for educators in activities related to Game-Based Learning (GBL), WP5 aims to define the framework and role of educators in educational escape rooms activities (EERs). In WP4 the research identified, through interviews to educators and experts, the main competences, skills, and factors (both positive and negative) to the implementation of GBL. An urgency in providing support to educators in game design theory and EER's as a teaching method was identified, that could be accomplished by providing educators with the right knowledge, and by giving educators both practical experience and theoretical understanding of the EERs. It was also considered crucial to create an European online EER platform, for sharing EER tools and methodologies, to facilitate the educators' work, bringing them together and creating new synergies. As the main objective of WP5, after identifying the new role of the educator as a GBL facilitator, through validation of competences, a Pedagogical Framework was set with the objective of establishing a common framework of competences, knowledge and attitudes HEIs educators needed to be developed to act as instructors, playmakers, guides and explorers when delivering game-based activities in learning environments for an educator to be a EER facilitator. First of all, more than 70 competences were identified, after validating the compe-

tences, 22 final competences were selected and separated into 3 main groups, which correspond to pedagogical, technological and social competences, necessary for the educator to develop in order to conduct EER activities. In our study we also identified that institutional content has a great impact on the development and success of these competences in educators, so this group was also identified. The 3 areas and 22 competences are interconnected and related, and the competences apply to all educators, from areas such as education, social sciences, natural sciences, and health sciences, and to the institutional system and those who support education. We listed all the competences, for them to be put in practice by the educators.

After the pedagogical framework and following the objectives of the study, a Persona was sought in order to identify and reflect the profile of the educator that is able to act as a facilitator in EER activities, and to motivate European educators to develop the right profile to benefit from these activities. The framework and guidelines will support the development of the learning platform and content to be developed in the WP6. The educator profile will be shared online and understood by a vast audience. Thus, the characteristics and knowledge required for an educator be able to interplay in escape room teaching games will be read not only by HEIs' academics and educators, but also by trainers and enterprises aiming to invest on the internal professional development of their staff.

DEVELOPMENT OF THE GAMIFIED LEARNING PLATFORM (WP6)

Drawing from the validation of the pedagogical framework (WP5), the UNLOCK team will start focusing on the development of the gamified learning platform, aimed at educators. Here we will just give you a few hints about the next steps, as they will be fully disclosed in our next Magazine!



Photo by John Schnobrich on Unsplash

WP6 INCLUDES THREE MAIN STEPS:

01

Definition of the MOOC specifications and design.

Aiming to deliver a gamified learning experience to HEIs' educators, partners will define the high-level concept, characteristics and structure for the Handbook and the MOOC itself.

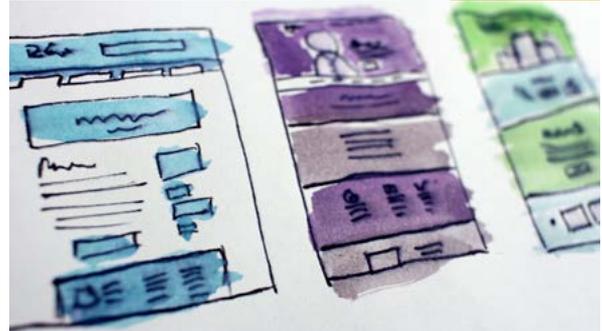


Photo by HalGatewood.com on Unsplash

02



Photo by Bernard Hermant on Unsplash

Development of a handbook on designing escape room games for creativity development as an entrepreneurial skill.

The partners will engage in a co-creation process of structure, contents, and validation, using a design thinking approach.

03

Development of a gamified MOOC to deliver a learning journey with the contents developed in the handbook.

The objective is to design and set up of a gamified MOOC to support HEIs' educators designing, planning, and implementing an escape room game experience as a learning activity, to explore specific content and develop creativity in students. The contents will be based on the Handbook but presented in a gamified structure, that contribute to develop innovative competences among participants – HEIs' educators.



Photo by Nathana Rebouças on Unsplash

MEET THE UNLOCK PARTNERS

In this section we present you the institutions and the expertise of the teams involved in the UNLOCK consortium



7

MEET THE UNLOCK PARTNERS



University of Aveiro is a young university, founded in 1973, with over 15000 full-time students (graduate and post-graduate). The University has a strong research profile, a unique model of governance (16 Departments, 4 Polytechnic Schools and various training centres), acting as a regional network for education and training promoting strong links with the surrounding community and was a pioneer in launching degrees in new subject areas.

The University is a member of the European Consortium of Innovative Universities and was one of the first institutions to be granted the ECTS label in 2004, with this distinction having been renewed in 2009 and the Diploma Supplement Label also awarded in that year. UA participates in five ERASMUS MUNDUS Joint Masters programmes (and is coordinator in one of these). UA also runs several joint doctoral programmes with other Portuguese Universities. It has also signed an agreement as one of the Portuguese institutions to participate in the programme of collaboration between Portugal and Carnegie Mellon University for the development of postgraduate

programmes and research in the field of ICT (Information and Communication Technologies). At the same time, the collaboration between the Telecommunications Institute (IT) and the Physics sector with Siemens is an example of the way in which the university has encouraged both innovation and commercialization linked to research.

Science Marketing Science-to-Business Marketing Research Centre

Münster University of Applied Sciences (MUAS) is part of the Germany-wide initiative "Innovative University" (Innovative Hochschule) that focuses on the "third mission" of the university alongside teaching and research transfer. With a multidisciplinary approach, the institution qualifies people for life in the global market and imparts a living understanding for the changing world of life and work.

Residing within MUAS **School of Business, Science-to Business-Marketing Research Centre** (S2BMRC) is a globally operating centre for research in the fields of student and organizational entrepreneurship, university-industry cooperation, and social innovation with a cross-cutting focus on digitalization. The S2BMRC performs research, teaching and continuous education with an emphasis on co-creation and knowledge transfer

among societal stakeholders, including higher education institutions, public organizations, businesses, and civic society.

Accordingly, the centre has undertaken a variety of publicly funded research projects that led to changes in the curriculum, such as projects on female entrepreneurship, social entrepreneurship, social design thinking, and e-leadership skills for business leaders and founders. MUAS involvement in the UNLOCK project allowed the members of the research centre to experiment with this innovative pedagogy and integrate it in their online classrooms to assess student interest and acceptance. Initial learnings from the project are transferred into the course module “Sustainability and Ethics in international Marketing”.

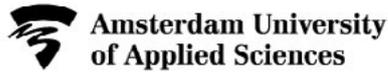


Advancis is a consultancy and certified training company committed to the development and sustainable growth of businesses and other organizations. Advancis renders innovative consultancy and training services based on research carried on in cooperation with international partners. The services and activities of Advancis comprise: Investing (supporting strategies for financing investments); Developing People (devel-

oping new solutions for HRM practices and training); Managing Costs (supporting solutions for managing costs more efficiently); and Starting-Up. Regarding to this last domain, ADVANCIS supports entrepreneurs to start and develop their business since the birth of the idea (Business Planning), to the sustained growth (Creation and Growth of business). Advancis is also involved in research activities concerning the entrepreneurship phenomenon, aiming to develop innovative solutions to support start-ups and entrepreneurs.

ADV has a very experienced staff, with strong competences in: business consultancy, adult and vocational education, R&D, International cooperation and financial management of national and international co-funded projects.

ADV has experience in valorization and dissemination activities at national and international level. Has created and managed websites, managed social media and web platforms in the context of national and international projects, has organized national and international events. It has also experience with presenting communications in seminars and writing papers and news articles.



One of the research programs within the **Amsterdam University of Applied Sciences** (AUAS) focuses on the role of entrepreneurship in economic and social change in the Amsterdam metropolitan region. Together with a wide variety of stakeholders, the AUAS Entrepreneurship program, which consists of the professorship of Entrepreneurship and the AUAS Venture Center, researches, initiates, stimulates and supports entrepreneurship among students, faculty, researchers and staff in order to recognize, develop and exploit creative solutions and sustainable innovations.

One of the focal themes in our program is Entrepreneurship Education. Working across the university, we seek to support lecturers from a variety of teaching programs ranging from nursing to technology and from teacher-training to commercial economics, in developing future-proof entrepreneurship curricula. But we also design our own modules and materials to be plugged into the curricula or be offered as extra-curricular programs to students interested in entrepreneurship regardless of their educational background.

Within our practice-based research on entrepreneurship education, a topic of attention is educational escape rooms. These games are an innovative pedagogy for improving entrepreneurship edu-

cation. Hence, we develop frameworks for educational escape rooms, study how the sustainability of these games can be enhanced through Information & Communication Technologies, and how the interaction between players can be fostered in online educational escape rooms.

The team working on this topic is multidisciplinary, bringing in knowledge and experience from (online) education and pedagogy, business models, institutions, psychology, social capital, and networks.

The word "bespoke" is written in a bold, black, lowercase, sans-serif font, centered within a white rectangular area framed by a thick orange border.

Bespoke is a global Strategic Design and Foresight studio based in Copenhagen, Denmark. Bespoke helps organizations and individuals understand their industry within a continually changing environment by applying design thinking and strategic foresight to imagine and create better futures.

At the center of the company is Bespoke's methodology called Futures Design which is a systematic approach to collaboratively identify, compile and analyze signals of change in the environment in order to understand one's role within the present landscape, and form new scenarios and perspectives to broaden our imagination about what the

future could be like and the potential that might exist as a result.

Bespoke works with private and public sector organizations across industries and nations. Bespoke engages in various Erasmus+ funded knowledge alliance-projects with the aim and ambition to boost innovation in higher education, business, and the broader socio-economic environment.

By collaborating with universities, Bespoke contributes to developing entrepreneurial mindsets and skills within higher education while simultaneously fostering a culture of collaboration with well-renowned academics to benefit a healthy private-public innovation ecosystem.

Bespoke's team working on this project brings in knowledge and experience from Business Administration, Cultural Research, Strategic Design and Entrepreneurship, Economics and Management, and Business Design.



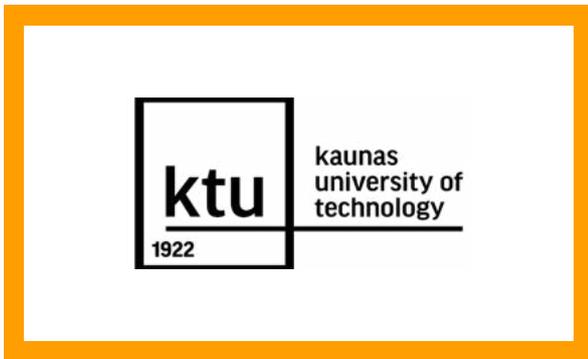
The University of Granada, founded in 1531, is one of the Spanish universities with the most long standing teaching tradition. The institution counts with 5 Schools, 22 Faculties and more than a hundred of departments spread over five different

campuses located in the city of Granada and two more campuses located in Ceuta and Melilla (Northern Africa). Around 80,000 people are part of the academic community of the university –including students, teachers, researchers, and staff – which makes the University of Granada one of the largest of the country.

The scientific output of the University of Granada is also remarkable, which places this institution in very high positions in national and international ranks. Concerning internationalization, the University of Granada is involved in different international programs, networks and associations covering teaching, studying and research and the

institution has a long and proven experience in implementing international cooperation projects. The University of Granada is also committed to improve knowledge transfer and socio-economic engagement while meeting the highest standards of corporate social responsibility.

The team working on this project brings expertise in the fields of Educational Research Methods, Communication, Research Methods and Diagnosis in Education, Institutional Accreditation, Teacher Training for Compulsory and Upper Secondary Education, Vocational Education and Training, and Language Teaching.



Kaunas University of Technology is a leading Lithuanian university providing a wide range of studies and closely cooperating with business. The University provides studies of engineering, technologies, physical and social sciences, arts and humanities.

Study fields across nine faculties include architecture, business and public administration, computer sciences, engineering sciences, health sciences, humanities, mathematical sciences, physical sciences, social sciences, and technological sciences.

KTU community comprises more than 9000 students (undergraduate and postgraduate) and about 1 thousand academic staff.

KTU memberships include the European University Association (EUA), the European Consortium of Innovative Universities (ECIU), the Baltic Sea region university consortium for Science and Technology (BALTECH), the European University Continuing Education Network (EUCEN), CESAER, the European association of leading specialized and comprehensive universities of science and technology, and other.

As one of the largest technical university in the Baltic States, Kaunas University of Technology has the resources and expertise in designing, setting and facili-

tating ICT-based learning and teaching activities. It has the potential for developing open source learning resources and various dissemination activities.

Kaunas University of Technology EDU_Lab Center for Excellence in Learning and Teaching has extensive expertise and experience in teacher training and adapting new teaching and learning methods into existing study environments.



UIIN is an international leader on university-industry engagement, entrepreneurial & engaged universities and knowledge transfer. We are dedicated to advancing the future of higher education institutions and supporting our global community of university-industry professionals. We conduct research, organise events and provide training and consultancy services to our community of 80+ organizational and 500+ individual members.

Founded in 2012, UIIN responded to a developing need within university-industry interaction moving away from the linear process of technology transfer and a shift towards a more holistic and strategic approach by all stakeholders involved. Our mission is to enable and enhance university and industry engage-

ment across education and research, through providing insights from research and practice, upskilling and supporting individuals and institutions, and creating a global community for sharing best practice.

With our **consulting offerings**, professional training and **events**, we actively convert **research** into practice and support universities, business and government in developing stronger and more strategic relationships, more future-oriented institutions and ultimately building a knowledge society for a better tomorrow. We have a proven experience of successfully leading **international events**, undertaking the implementation of **European research projects** and developing strategic partnerships with relevant stakeholders. We have a track record in leading and participating in research-heavy international projects, focussing on university-business collaboration (see **Spanning Boundaries** and **The State of UBC in Europe**).

UNLOCK

e-magazine

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FH MÜNSTER
University of Applied Sciences

