



# **DigiEduHack Solution**

## **Bucharest - Education 4.0**

### **Challenge: Use technology to build 21st Century Skills**

## **gamEmoton**

### **gamEmotion**

gamEmotion: a mobile app aiming to boost #SEL in students and teachers. Once you enter the story a new world will challenge you to observe, face and solve real life problems in a dynamic learning environment. A place where you don't have to play the hero. Be yourself! So be it!

## **Team: Red Team**

### **Team members**

Loredana Manasia, Andrei Parvan, Mirela Negreanu Mihai Lehaci, Hajnalka-Annamaria Georgies, Daniel Tila.

### **Members roles and background**

Loredana Manasia - Team Lider, University Teacher

Andrei Parvan - University Teacher

Mirela Negreanu - Psychologist, University Teacher

Daniel Tila - Developer IT

Mihai Lehaci - Undergraduate Student

Hajnalka-Annamaria Georgies - Undergraduate Student

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# Solution Details

## Solution description

The solution is a mobile app aiming at developing the social emotional competence of both students and teachers in lower secondary education (grades 5-6). The use of the app could be related to the personal development subject matter and proposes self-paced and collaborative synchronous and asynchronous learning.

The app is built on the pebble-in-the-pond pedagogical approach and proposes an evolving learning framework where student and teacher agency is highly valued. The approach encompasses two essential instructional strategies: gamification and storytelling.

Thus, we expect to achieve a high level of the enjoyment of learning in users. In this line of thoughts, the learning approach starts from a weak problem (a global learning task).

The general problem is divided into subproblems eventually addressed through concrete learning tasks. The global problem is represented by the social and emotional development.

The learning journey starts with a profiling activity (app assisted individual assessment of the social-emotional competence) conducted by both teachers and students. Based on the obtained typology, the app would recommend alternative paths (called missions).

The teacher would decide what missions would be assigned to the classroom. Moreover, the teacher could assign individual missions achieving the goal of customized learning.

In order to stimulate student agency and metacognition knowledge, the student could decide on what mission to accept. He/she could divert the mission to another colleague (metacognitive knowledge about others), to skip the task (knowledge about the task) or to accept it. An important feature consists of the fact that students could assign missions to their teachers. In order to do so, they could collaboratively decide on what task to choose for the teacher.

## Solution context

Emotions abound in classrooms. A high density of emergent emotions characterizes educational and academic environments: the enjoyment of learning, hope, pride, anxiety, boredom or despair (Goetz, Hall, Frenzel, & Pekrun, 2006). These emotions are intrinsically linked with student motivation for learning, and school performance, with the development of the self-identity or with the wellbeing in school.

The latest PISA OECD study reported that 19% of the students have experienced bullying at least few times on month. More than 1 in 2 students feel very anxious, even if they are well prepared for a test, says the same study. Students who feel anxious at school score lower in science and are less satisfied with their life. What are the major threats to students' well-being? Spreading nasty rumors, others leave them out of things, hit or push, threats. These make students vulnerable. Students in lower grades could be even more vulnerable. They experience a new often unfamiliar learning

environment, a new social group (including fellows and teachers).

What could improve the level of student wellbeing? Supportive teachers, positive peer relationships, and a disciplined learning environment.

2/3 thirds of the teachers in OECD countries feel that their work is not valued and experience low levels of enjoyment of teaching, anxiety and anger. The emotions of teachers are considered relevant not only for their own well-being but also for the functioning of classrooms (Frenzel, Pekrun, Goetz, Glassen, 2016). The world is facing a learning crisis.

## **Solution target group**

The target group consists of lower secondary students and teachers, grades 5-6. This segment of students experience a major life shift: changes in their school and learning environment (new teachers, new subject matters, different fellows etc.) body and mind transformations, search for meaning etc. They are exposed to making decisions in various life aspects, are dealing with new issues, social and inner conflicts. From a cognitive development perspective, the students aged 10-12 years experience the acquisition stage of development (according to Schaie theory). Within it, the subject is exposed to knowledge and skills essential to his/her future individual and social development.

The solution we provide is meant to expose the users to various learning experiences in a regulated environment, self-regulated and external regulated also. It will assist, guide and help the users to discover and to understand themselves and the others, to cope with the unpredictable and to manage daily challenges in a secure learning environment.

A secondary target group consists of teachers. They will better know and understand their student. Our approach triggers the self-assessment and increases the enjoyment of learning and teaching alike, enriching the teacher-students bonding

## **Solution impact**

We expect to achieve improvements in the social emotional competence of both students and teachers.

At the student level, the app would address specific skills and components of SEL: social relationships, conflict management, emotional self-regulation, self-awareness and management, bullying.

The development of social-emotional competence could improve the level of wellbeing in teachers and students, promoting vertical (between teachers and students) and horizontal (between students) cooperation. Moreover, high levels of wellbeing correlate with deep learning strategies and high cognitive performance. In addition, this could contribute to the development of a more secure learning environment where students and teachers experience the feeling of self-efficacy.

At the teacher level, the app could boost the social awareness of the teacher and increase metacognitive knowledge about the students he/she is working with. This could result in a more effective learning design addressing students' needs.

The impact could be measured by designing a (cvasi)correlational study that could assess the size effect of the intervention (the use of app). Similar studies conducted in physical environments

reported a medium to high size effect (Cohen's  $d > 0.5$ ).

## **Solution tweet text**

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## **Solution innovativeness**

The proposed solution is built upon the intervention of human agency and gets together students and teachers to achieve a common goal, namely the development of the social emotional competence.

The solution could be easily customized to reflect the users' age particularities. Moreover, it proposes a sequential learning approach, where teachers and students can decide the learning path. The app encompasses an innovative pedagogy, the pebble-in-the-pond cognitive approach that suits perfectly the goal.

## **Solution transferability**

The app could be easily customized for different age stages including adults. On mid term we expect to develop and test it for teenagers and adults by creating alternative stories.

From the adult age perspective, we intend to extend the app as a social game aiming at boosting the social interactions within a working environment and could also address intercultural skills (e.g. multicultural work environments).

Regarding the student learning, the app could propose an integrative learning approach addressing transformative competences (e.g. taking responsibility, reconciling issues and dilemmas - see the [learning compass framework](#)).

## **Solution sustainability**

The development and dissemination of the app will respect the FAIR principles (findable, accessible, interoperable and reusable) in order to facilitate the open access.

The App promotion is a key element related to acceptance and active usage. We will use channels and tactics available to get the maximum amount of exposure. In order to do so, it will be uploaded on open repositories. Moreover, it will be made available in online app stores.

## **Solution team work**

The team has achieved the performing stage and could work together in order to develop the proposed solution. We did everything together including storming and norming.