



DigiEduHack Solution

Lisbon - How can education and technology evolve together?

Challenge: Lisbon - How can education and technology evolve together?

Challenge 2021

Professions Game - Test your future



Play challenges related to professions before venturing!

As students, we're asked to venture into choosing a field according to our abilities and ambitions in our professional future. To help us choose, we have lots of theory but not enough sense of the real life practice. Why not play as if you were doing the job, understand the challenges?

Team: Kendir

Team members

Eduardo Nunes, Luisa Mallet, Heitor Silva

Members roles and background

Our team is composed of Eduardo Nunes who has been working as a game designer, structuring digital games for education. Luisa Mallet who is a game designer, 3D designer and illustrator and Heitor Silva who is a game developer (C#).

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Solution Details

Solution description

3D online video games that simulate real-life environments of professions, in which the player is presented with information and challenges. The challenges and narrative include characters and dialogue, as well as scenarios, which are built for each profession and the player can choose between several possible options. After completing the game, which will be scored according to skills related to each job, the player can self-assess what they believe is their fit into the profession. They can watch interviews about the work life of model specialists in the profession to understand it further and compare their self-assessment and performance in the game compared to what is expected in the profession. According to their outcomes, the game system will rank them and provide feedback in order for them to either expand on their skills, explore other more interesting choices for their skillset or recommend them to that profession.

Our idea is to create a game engine that allows for future adaptations of profession challenges and create new challenges and new professions into the system, expanding the possibility of other developers and specialists to create their own paths and students to access more and more professional options.

The game system or engine is developed in Unity with scriptable objects allowing for multiple developments and placed online through WebGL technology, assuring the game is always updated with all the professions placed in the system.

Solution context

We are solving the issue of connecting theory with practice in schools. We believe this is presented in a very negative way to students where they are asked to choose a field of study in high school (secondary level) with very little or no knowledge of the practical aspects of those fields and the professions connected to it. Even worse, sometimes the choice of technical and professional courses in the secondary level is done with no knowledge of the professions. For this reason, 30% of the students that go to a university course end up choosing poorly and change or quit university because of lack of match between their skill set and ambitions and the course/profession. Those students have a high chance of becoming NEETs, dismayed by the education system or wasting precious years, delaying their financial independence and work happiness.

Solution target group

Our target group is middle school students, between 7th and 9th grades, of anywhere in the European Union. In Portugal that represents 340 thousand students whose futures can be changed through this solution. In the EU, that number rises to 18 million students.

This solution will give them access to hundreds of different professions and they can evaluate their performance as specialists going through challenges and understanding what it takes to do these professions and what the day-to-day life is. They will, therefore, get a deeper and practical understanding of each profession and will help them make more sensible choices and opt for courses and professional futures in which they will be happy to work on.

It will be particularly impactful for students that might not have access to specific courses or career paths close to their locations and therefore cannot travel to talk with specialists or teachers about it.

Solution impact

We expect this solution can bring the practical side of each profession to any student with a computer and web access. We therefore assume the potential impact is that at least 50%-70% of the students which are undecided regarding their professional futures are able to choose better or at least improve on the knowledge of each field and profession and seek further assistance. This would help us bring down the number of NEETs and students who quit/change paths substantially. Being a solution that can be implemented throughout the European Union, we expect this impact to be not only local but global. We will measure it by questionnaires, evaluating how many students were having trouble choosing their career paths before and after playing the game, as well identifying changes in enrolment numbers in long-term courses and fields of study after the game are made available.

Solution tweet text

As a middle school student, we're supposed to know which field and profession we want in the future. But that's not easy. We've only looked at the theory, we caught mere glimpses. What if we could play as our future selves in that profession? Would we like it or change fields?

Solution innovativeness

We can find a few other solutions in the market that through queries and questionnaires try to guide students into looking further in specific professions, however, those lack the practical side of each profession and the challenges they face every day.

At the same time, there are open days in universities and technical schools that allow students to visit and explore more about future potential professions. However, not every student has the opportunity to participate and usually those only show a glimpse into the profession and as group activities, cannot be individualized.

There are some professions which have simulators, but that doesn't happen very often, and it's not accessible to most people, let alone middle school students.

Additionally, there are projects focusing on employability that already use 3D digital environments (<https://future-time-traveller.eu/future-time-traveller/>). However, we believe our solution is more scalable, transferable, simpler and more fun having a more game-like environment.

We believe our solution is innovative as it connects the queries to open days, but digital, in which students can actually participate in the challenges instead of just watching. The game elements bring fun, immersion and motivation to the students exploration of the profession. The 3D elements bring realism and allow for a more diverse interaction and variability of game elements.

Solution transferability

Our solution can be applied to any context in which a person needs a system to implement a simulation of a real life environment. Through this game platform, others can create systems by choosing scenarios, introducing dialogues and challenges and creating characters to bring their simulation to life. This enables the construction of games in simulation form for any profession in any country and perhaps even other types of simulations or more advanced experiences in each profession.

Solution sustainability

We plan to create a prototype/MVP with a few professions built in and several scenarios for multiple professions to create a proof of concept. With this, we believe either or both governments and/or schools (technical schools, universities, private schools) can purchase the system and implement according to each profession and course they want to promote. By offering these games to middle school students, they are assuring their future students are happy with their choices.

Solution team work

We worked very well as a team and had a lot of fun creating new potential solutions and ideas to the problems presented. We exchanged several ideas with other teams and helped them build on their own ideas as well. We will definitely work more together and have presented our contacts to the other teams to keep in touch and help with their own solutions and help bring those to life.