

Escape rooms as an educational experience

Using games as an educational tool is a common practice. All over the world, specialists continue to search for new educational approaches to make the learning process easier, more effective and permanent. Quizzes, simulations, board games and even computer and video games are some of the methods used to improve knowledge. More recently, escape rooms are also being employed to develop soft skills such as communication, teamwork, and leadership and to teach regular ‘school subjects’ such as history, art, and even healthy eating.

Escape rooms are a type of adventure games performed in real-life conditions. The players – usually a team of three to ten members – are locked in a room and have one hour to find the key to escape. Their task is not easy since the place is full of riddles, challenges, and surprises to overcome. To solve the puzzles, the players must work together, be quick, meticulous and demonstrate logical and strategical thinking.

Designing an educational experience for an escape room requires attention to detail, enthusiasm, creativity, and patience. The first step is to establish a clear gameplay objective and an educational goal. For that, the designer needs to answer the following questions:

- What analytical knowledge are the players expected to obtain?
- What technical knowledge are the players expected to gain?
- What skills are the players expected to achieve or master?

It is also recommended to define the target group of the escape room. This includes to determine the size of the team, the age of the players, their educational background, and the expected knowledge and skills before the game. This information may prevent the designers from making mistakes that may jeopardize the project.

Without a doubt, the puzzles are a crucial part of any escape room. The designers must remember that the gameplay has a strict time limit, thus on average, a team should be able to finish solving the last riddle just before the time ends. Also, the puzzles should differ in structure, content, senses involved, and difficulty level. The amount and complexity of the information presented in each challenge should be adjusted to allow the players to understand the content and still stand a chance to win the game.

Evaluation is the last and most demanding stage of designing an educational escape room. To verify if the educational goal is achieved, the gameplay should be tested by different teams of players matching the target group’s criteria. Depending on the results, the escape game should continue to be improved and tested until accomplishing the expected outcome. This stage demands attention, precision, and patience since it is vital to determine the educational efficiency of the escape room.

Finally, one cannot forget about the most critical factor of a successful educational experience in the escape room: fun! Gameplay without fun can not only affect the players’ mood, but also interfere with the learning process. It is of great importance to find a balance between teaching and entertaining.

‘Zombie Attack’ is the perfect example of an educational escape game. It was created in 2018, by an international team of scientists from Europe and Asia called ‘Games of Food’, within the European Knowledge and Innovation Community EIT Food. The goal of the project is to

increase knowledge and awareness of balanced nutrition and healthy lifestyle through escape games. The team is currently developing two escape games – ‘Mission Nutrition’ aimed at elementary school students, and ‘Zombie Attack’ in two variations: one for children and one for adults.

The gameplay of the ‘Zombie Attack’ escape game includes the following topics:

- Food pyramid,
- Macro-nutrients and corresponding energy intake,
- Calculating energy from protein,
- Recommended daily protein intake,
- Essential amino acids,
- Sources of complete protein,
- Sources of complementary protein,
- Protein’s role in the human body,
- Environmental aspects associated with protein consumption.

The escape game has already tested its educational and entertaining potential on over 200 players. Before and after the game, each player filled in a questionnaire to evaluate their knowledge of healthy eating. Among other things, participants were asked how many calories are in one gram of protein, how many grams of protein an average person should consume per day, what are complete and complimentary proteins and what role do they play in our diet, what are essential amino acids, and what environmental issues are related to protein consumption. The results proved that the ‘Zombie Attack’ escape game is a useful educational tool, as well as a pleasant experience.

The plot of ‘Zombie Attack’ begins with a group of survivors of the zombie apocalypse locked in a small, secluded house. The house is surrounded by rotting, bloodthirsty undead. A healthy lifestyle is the only thing able to protect the survivors from the zombie bites and subsequent death. The players must learn about healthy eating and solve a series of puzzles to escape and survive. Will they succeed? That is up to the players.

Escape games are a versatile tool for both entertainment and educational purposes, although its educational potential has only recently been discovered. There is no specific formula to create an effective learning experience for an escape game. Designing it demands a creative and individual approach based on the characteristics and needs of the target group. It also requires numerous hours invested in the design, development, and testing of the concept. However, there is no denying that the outcome is always worth the effort.