

**HANDBOOK:
EDUCATIONAL
ESCAPE ROOMS
USED TO
IMPROVE THE
IMAGE OF VET**

**MAKING VOCATIONAL EDUCATION
AND TRAINING A FIRST OPTION
NOT A SECOND CHOICE!**



Co-funded by the
Erasmus+ Programme
of the European Union

Escape Stay

HANDBOOK: **EDUCATIONAL ESCAPE ROOMS USED TO IMPROVE THE IMAGE OF VET**



www.escape2stay.eu



IHK-Projektgesellschaft mbH
OSTBRANDENBURG



Šolski center
Nova Gorica



Co-funded by the
Erasmus+ Programme
of the European Union

The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

CHAPTER 1

INTRODUCTION



www.escape2stay.eu



CHAPTER 1 INTRODUCTION

The key challenges for vocational education and training (VET) are demographic change with all its consequences including the implications for securing the skilled workforce, and internationalization in business and society and the associated task of integration. VET has a key role in providing people with the initial skills and qualifications to enter the labour market and supporting their upskilling and reskilling in a lifelong perspective to enable them to successfully manage career transitions.

The OECD data show an enormous increase in the number of participants in academic courses of education for the period from 1995 to 2010. In the same timeframe, occupation-related and practice-related courses in the tertiary sector of education are stagnating.

Already today, the skills gap is largest among people with completed vocational training: 48 percent of the companies report a shortage here, while only 27 percent complain about a lack of academics.

At the same time, even in traditional WBL countries such as Germany, vocational training is becoming increasingly less important than studies. In 2020, for the first time, more people started higher education than vocational training.

The right Career orientation is a process with two sides: On the one hand, there are young people who orient themselves, get to know their own interests, competencies and goals. On the other hand, there are the requirements of the world of work, towards which young people are oriented.



As career choice research has shown, young people are guided by different motives in their decision-making for or against occupations. On the one hand, young people want the job to be fun for them, and other circumstances such as e.g. working hours, salary and opportunities for advancement should also be right. On the other hand, their career choice – often not even consciously – is also driven by the desire to find social recognition with their chosen profession and to strengthen their own social identity.

The main goal of the Strategic Framework for European Cooperation in Education and Training “ET2020” is to increase the attractiveness and quality of vocational training. This mainly relates to improving vocational guidance, orientation, and information and at increasing permeability.

In addition to the staging of information campaigns and VET advertising measures for various target groups and the introduction of practical components into school-based teaching, the objective is to enhance the permeability of training pathways. This field of activity thus indicates one important aspect that maintains the attractiveness of a vocational qualification– facilitating career and advancement opportunities together.

A European vision for the future Vocational Education and Training by 2030



Excellent, inclusive and lifelong VET

European VET systems by 2030 should aim to deliver excellent and inclusive education and training that offer opportunities for both economic and social cohesion, support competitiveness and growth and smart, inclusive and sustainable development, and foster democratic citizenship and European values - thus helping all individuals to develop their full potential in a lifelong learning continuum. They are defined by three core elements:

- They foster acquisition of skills, competences and qualifications which ensure employability, adaptability, personal development, and active citizenship of individuals.
- They provide accessible, attractive, valued and innovative quality assured provision for all.
- They are integrated, responsive, diversified and quality assured, and they are underpinned by governance, funding and guidance which foster excellence, inclusion, effectiveness and shared responsibility.

The Handbook “Educational Escape rooms used to improve the image of VET” addresses VET staff (teachers; advisors; etc.) in vocational orientation and provides the methodical-didactical concept behind the Escape room settings.

In essence it will be guiding the “creators” of Escape games on how to correctly plan, implement and follow up an Escape room intervention. It will also provide recommendations on how to integrate those settings into the whole set of vocational orientation activities.

Students are never as motivated as when they compete against the clock to stop a nefarious hacker or wander through a closed room and try to “Open the door...please?!”.

Escape Rooms promise an hour of puzzle fun, teamwork and logical thinking wrapped up in an exciting story, and many teachers are keen to harness this new trend for their classes.

Apart from that, the handbook serves to convince sceptical, traditional educators of the advantages of Escape rooms from a pedagogical point of view: Research pointed out the values of game-based learning in terms of social ties that are strengthened, individual efforts of the player gain importance and the committed participation leads to pleasure and positive impression of the subject (McConigal 2011).

In our case, it would be a positive attitude towards specific VET occupations and work-based learning, which represents the main objective of the project. As with the Escape rooms settings the handbook will serve not only as a guide but also inspiration and convincing document for the targeted group of actors in vocational guidance to create an Escape room themselves.



CHAPTER 2

PEDAGOGICAL APPROACH



www.escape2stay.eu



CHAPTER 2

PEDAGOGICAL APPROACH

2.1. Theoretical framework about Game-based learning (gamification).

Gamification is the process of adding games or game-like elements in education to encourage participation and make it more satisfying to win. Gamification promises to make work more rewarding and promote a sense of efficiency as well as an experience where solving problems leads to greater satisfaction. The gamification of learning allows teachers to work towards real-time, measurable, meaningful targets and get upper-level feedback as those targets are achieved. After all, you're never going to improve if you can't find out what you need to do better or find out how to upskill.

2.2. Advantages of gamification in education?

- Makes learning fun and interactive.
- Creates an addiction to learning.
- Allows learners to see real-world applications.
- Offers real-time feedback.
- Enhances the learning experience.

Gamification is tremendously effective, both in education, e-learning and even incorporating settings using it to train employees and students alike. Gamification works as games play into basic needs such as: (autonomy, value, competence,)

2.3. What are the necessities of the students on how to promote VET? What type of student is the target of the project?

Students need to know the different possibilities available for their professional careers. Young Students who have to decide their career path are the target.

Young students need to be engaged and motivated. They require new ways to learn. There are more and more students from disadvantaged backgrounds that need extra care and motivation. They need to learn to fail and work together in a safe environment. The best way to promote VET is with practical examples of work tasks presented in a fun and exciting way through, for example, escape room challenges. An added benefit is that the challenges themselves are made by current VET students, so future VET students can see exactly what they will be capable of making when they reach a certain year of education.

Our main targets are students who are deciding on their next level of education and they can decide on a VET path. We focused on making our Escape2Stay rooms accessible for all the students also ones with disadvantaged backgrounds in a way that they feel safe playing it and rewarded afterwards. Our rooms are also built to be mobile, meaning we can pack them into boxes and go to different schools enabling more students to use them.



2.4. Why Escape rooms are beneficial for our target group?

Escape rooms allow combining a playful aspect with an educational and informative environment. Escape rooms create a greater motivation and engagement of participants, which are in most cases young (target group).

Escape rooms are so successful at being fun **because they require members of a team to work together to win**. For example, the clues provided during the game are typically used to solve the puzzles. By combining mental resources and wit, team members can solve problems faster than if working alone. In some cases, it is impossible to solve riddles alone (it requires team effort).

Escape rooms provide different challenges and ways to solve them so each game can be unique. They **boost motivation** because they provide real-time feedback on what you've learned, thus boosting the learner's motivation and showing them how much they've learned since the beginning.

They also educate. You can cram a lot of learning material into them. Puzzles could be about practically anything. We could design an escape room specifically about electrical engineering and because escape rooms are inherently more fun and engaging, the learners will always walk away with more knowledge than usual.

Thinking outside of the box. It is essential in work life. While traditionally we are taught to fend for ourselves, escape rooms force us to work together and thus make it more fun. They develop teamwork, thinking outside of the box and logic. Escape rooms are perfect corporate team building activities because they get everyone on the team working together towards a common goal. If your students need to improve their communication, an escape room will allow them to work out the kinks by solving fun interactive puzzles.

They give small and big wins. It is not just about the final solution. Learners are getting real-time feedback on how they are doing, and every bit of progress is rewarded. It is also a safe environment to fail: While elsewhere, failure is punished, here it is encouraged. Students are encouraged to experiment and think logically, try new ideas and try again if they fail. Even if the time runs out, it can be extended so the participants still have a chance to escape. This kind of education promotes more novel ideas as there isn't as much fear about losing.

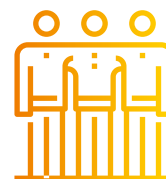
5 MAIN BENEFITS



Boosts engagement and concentration levels.



Cognitive development in students



Breaks down disputes among students



Offers real-time feedback



Allows learners to see real-world applications

2.5. What skills are demanded to participate in an Escape Room?

Educational escape rooms have many strengths and benefits for participants, however, to get the most out of them, participants need to have certain skills before participating in the game.

In general, escape rooms demand **intelligence**, participants need to make new connections and find reasoning while solving the riddles. In other words, **problem-solving is one of the most demanded and, in turn, trained skills in escape rooms**. Participants should be able to use their senses to find clues. The clues might be subtle, so it requires more attention.

Logical thinking is essential in escape rooms, especially if the puzzles are logic-based, but most of the temporal logic is promoted because the learners have to be very aware of clues and then logically piece these clues into a solution. Similarly, another **needed skill is critical thinking**. Escape rooms promote critical thinking and sometimes solve problems on your own.

Communication is a must in every escape room as puzzles cannot be solved without it. This is the bedrock of why escape rooms are so good at promoting **teamwork**. Having the capacity of working together is basic in escape rooms, this promotes cooperation, putting aside their ego and consider solutions that they might have not thought about, setting aside their differences to complete a common goal. It promotes equality and aims to show that they are not so different from one another. The aim is to focus on the task at hand. It takes away the meaningless differences between them and allows them to just focus on the puzzles, clues and solutions.

As **failure is not punished, learners are made free to experiment** and think outside the box and try novel solutions to problems, which might help them in the future in the real world.

DEMANDED SKILLS



Teamwork



Intelligence and problem-solving



Logical and critical thinking



Communication



2.6. What are the skills promoted through the Escape rooms?

There are many skills that are promoted and trained through the game in Escape rooms. Commercial escape rooms are more focused on the enjoyment of the participant, however, those designed in the framework of Escape2Stay- Project, and those used in training-educational environments, promote many skills that young people will need later in their professional life.

The most important skills in today's workforce are listed and described below:

- **Problem-solving** is becoming more and more important in this day and age. Big and small problems are always arising, and we need to solve them in a quick and efficient way. The escape room's failure-friendly environment is a perfect place to grow problem-solving skills that will be the key to our future workplace.
- **Creativity** is an important component of the aforementioned problem-solving skills. It gives us novel ideas on how to solve modern problems with logic. And, of course, there is no better place to exercise a bit of creativity than in an escape room!
- **Time management.** Time-based escape rooms are the perfect opportunity for students to practise their time management skills!
- **Communication in teams** is very important for resolving conflict and getting to solutions quicker. Unfortunately, in the last couple of years, we've seen a steady decline in these areas with young people. Fortunately, escape rooms designed for groups are the perfect environment where everybody is relying on each other, and failure isn't as punishing as in the real-world work or school environment.
- **Thinking outside of the box**, meaning coming up with unconventional ideas that were never thought of before might seem like a daunting task because failure is such a hard thing to get over in the real world. So why not practise it in an escape room where the prospects of a failure aren't as hard. This would also let participants relax a bit and just focus on learning.
- **Critical thinking.** Teaching people to think for themselves is very important and makes them an effective part of a group by suggesting their ideas and pointing out mistakes. An escape room is perfect for that.
- **Teamwork is essential.** Fortunately, escape rooms are a great way to foster these skills as participants are in a way forced to cooperate and trust each other. **Active-Listening** to teammates is also essential. Resolving conflicts and working together to find the best solution is paramount to solving problems and the problem inside the escape room.
- Other skills that are boosted through escape games are **reading comprehension, mathematical thinking, the ability to step outside of their comfort zone or Hand-eye coordination.**



CHAPTER 3

**PREPARATION OF
THE ESCAPE ROOM**



www.escape2stay.eu



CHAPTER 3

PREPARATION OF THE ESCAPE ROOM

When developing or choosing an Escape Room game to be played in an educational context, a Game Master has to carefully estimate the aims and settings as well as the necessary preparation steps. From choosing the right game flow dynamic for the specific purpose to creating the context and suitable challenges inside the Escape Game, a lot has to be considered. Once the content and topic are decided, an engaging storyline has to be developed that fits the theme and goal. Rules and a scoring system have to be established and the Game Master also has to assure the safety of all players and preserve the integrity of all materials and objects used.

Let's get to it – step-by-step!

3.1 Setting a Goal

You plan to play an escape game with your learners... GREAT! But why exactly?

When deciding to use or develop an escape game for educational purposes, it is crucial to first set a goal that should be achieved through an escape game methodology. There can also be sub-goals that serve the complete achievement of the main goal.

For example, all escape games developed in the Escape2Stay project serve the main goal of enhancing the attractivity of VET in Europe and providing a first positive and interesting contact point to certain vocational sectors. Yet, all of them serve particular sub-goals that are specific to the theme and content of the game, which are expressed as "learning outcomes". They describe what a learner/player is able to do after completing the game successfully.

When setting the main goal and sub-goals, always keep in mind the available time frame. If necessary, revise your goals after developing the room and make sure that they are absolutely achievable and feasible.

3.2 Game Flow

The game flow directly affects how the game is played as it describes if there is any specific order in which riddles have to be solved. When developing or choosing an escape room, it is important to consider the abilities of the target group as well as the goals to be achieved through the game. Furthermore, the game flow style and the narrative style influence each other mutually.

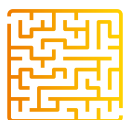


LINEAR OR SEQUENTIAL ESCAPE ROOM

In a linear Escape Room, all riddles have to be solved in a predetermined order. The clues are more or less found in the order in which they have to be used and the solution of one riddle leads to the next. This means, the players are facing one challenge at a time and can completely focus on what is in front of them.

This game flow setting is ideal for beginners, a single player, or smaller groups. Developing and guiding a linear and sequential escape room is also easier for Game Masters. Sequential game flow settings are often used in escape room board games or free mobile app escape games.

In linear or sequential escape games, either all riddles included follow the predetermined order of events or the whole story is separated into sub-rooms/scenes, which build the sequencing of the game. Inside the sub-rooms, the order of solving riddles can be linear, non-linear or open.



NON-LINEAR ESCAPE ROOM

Non-linear Escape Rooms can be very complex as they allow players to find multiple clues and solve multiple riddles at the same time without following a linear path.

In a Multi-Path Escape Room, different solution approaches and maybe even story line paths lead to the end of the game. Some paths may lead to a deadend (through so-called red herring riddles) or a bad ending, and some to one or more positive endings. Usually, multi-path escape games offer different paths to the same (successful) ending and the various paths serve the purpose of gaining extra points or wasting time. Some escape room board games use this game flow style as well as many commercial escape games for PC, console and VR-systems.

Open Escape Rooms are the most complex version. This game flow style is often used in real life escape rooms as they give the players complete freedom to scavenge for clues and solve riddles within a given time frame. In an open game flow setting, everything depends on how the players communicate and organize their solving process as they will find riddles and clues without any indication of the order in which they have to solve them. They will have a collection of different clues and riddles that need to be solved to move on to the next stage. Figuring out the end goal and final puzzle is also often part of an open escape game.

Developing, guiding, and playing open escape room games is quite challenging. This game flow setting is most suitable for moderate sized groups and advanced players. Beginners can join the fun or be part of the game, however, it may be too difficult for them. Real life escape room providers often indicate the difficulty level of their available escape rooms and also the recommended group size.

3.3 Narrative Style

As soon as the general game flow style is chosen, the nature of the narrative has to be decided.

An escape game is always set within a particular storyline that serves the complete immersion in the game. Why do the players have to “escape” and solve the riddles? Why is there a time limit?

The narrative provides the context and ultimately the motivation for the players.

The narrative can be based on reality or fiction. It is defined through the genre (adventure, crime, horror, sci-fi, historic, etc.), the theme/topic (zombie apocalypse, magic school, archeologic discovery, etc.) and story progression style.

In many cases, there is a story prompt at the beginning of the escape game, but nothing more. Story progression through solving riddles during the game is often utilized in linear and non-linear escape room board games or digital games. Since these are commonly played in smaller groups (or alone) and without a Game Master, the ongoing story progression drives the motivation of the players to finish the game. In real life escape games, the group dynamic and time pressure are usually sufficient drivers to reach the goal.



The narrative sets the context for the whole game, which means that all riddles that occur should fit into the general storyline, genre, and theme. Many riddle types are versatile and can occur in any type of story, for example decoding symbols. However, depending on the genre and theme, the symbols can be found under different circumstances and on different surfaces.

In the five escape rooms developed by the Escape2Stay project, players immerse into several engaging storylines: rescuing a missing scientist, being locked in a control room, finding five professionals to send to an alien planet, hosting a royal guest and escaping a classroom before the teacher gets back.

Figuring out the storyline is an extremely open process that is very complex at the same time. Everything is possible as long as all pieces fit together nicely in the end and form a complete and immersive experience.

When using a ready-made escape room, it is very important to get familiar with the provided storyline. To fully ensure the immersion, the room can be decorated according to the genre and theme. Furthermore, when delivering the story prompt (or bits in between), a Game Master should be in character and dare to be a bit theatrical.

3.4 Escape Game Riddles

There is no limit to the imagination of what an escape game riddle may be as long as it fits the storyline and is not dangerous.

There are a few typical types, which are usually combined as they complement each other:

- **Written Riddles**

Quite self-explanatory, these riddles occur in written form on any kind of surface. They can include symbols, numbers, letters, words, equations, pictures and more.

- **Physical Riddles**

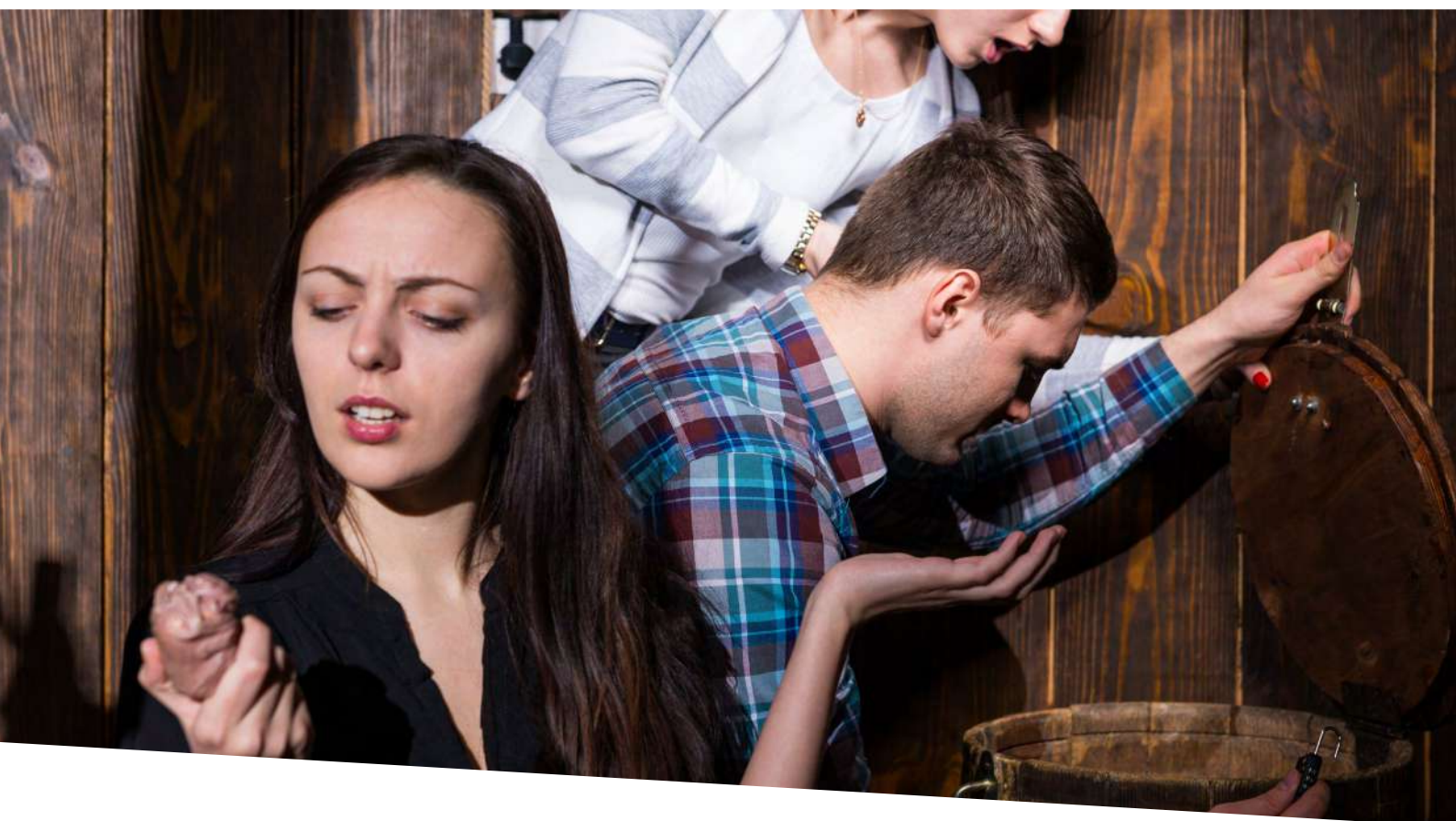
In these riddles, the players have to physically touch or manipulate objects. It is a real hands-on experience, and it can be anything from solving a jigsaw puzzle to connecting a mouse to a computer or even simply pressing a switch. These riddles may require dexterity, accuracy and teamwork or simply attention to detail.

- **Sense-engaging Riddles**

Touch, smell, lights, sounds – these riddles include anything that stimulates and requires the players' senses to solve the riddles. . From blinking lights to sound signals or a box in which they have to feel and identify objects – anything (non-harmful) is allowed.

- **Scavenger Riddles**

These riddles require players to scavenge for clues in the room and collect everything they find. It is the most typical type of riddle and extremely important for non-linear escape games.



In addition to the type, the solving mechanism is also relevant. Some typical methods are:

- **Logical Riddles**

In order to obtain the solution, logical thinking is required. Players usually find a clue that does not make sense at first, but by applying logical and creative thinking, they may uncover the solution.

- **Linguistic Riddles**

Deciphering a written code, putting letters together or making sense of poems and hidden messages in written text – as soon as language, words and letters are involved it is a linguistic riddle. They can be versatile; however, it is often difficult to play these games in a different language than the one they were developed in, because meaning can get lost in translation. Real life commercial escape rooms often refrain from using linguistic riddles for that reason.

- **Visual Riddles**

Visual riddles include everything that requires eyesight. Seeing visual clues may require certain perspectives or be image-based riddles such as hidden object pictures, mazes, search grids, connect the dots and more.

- **Calculus Riddles**

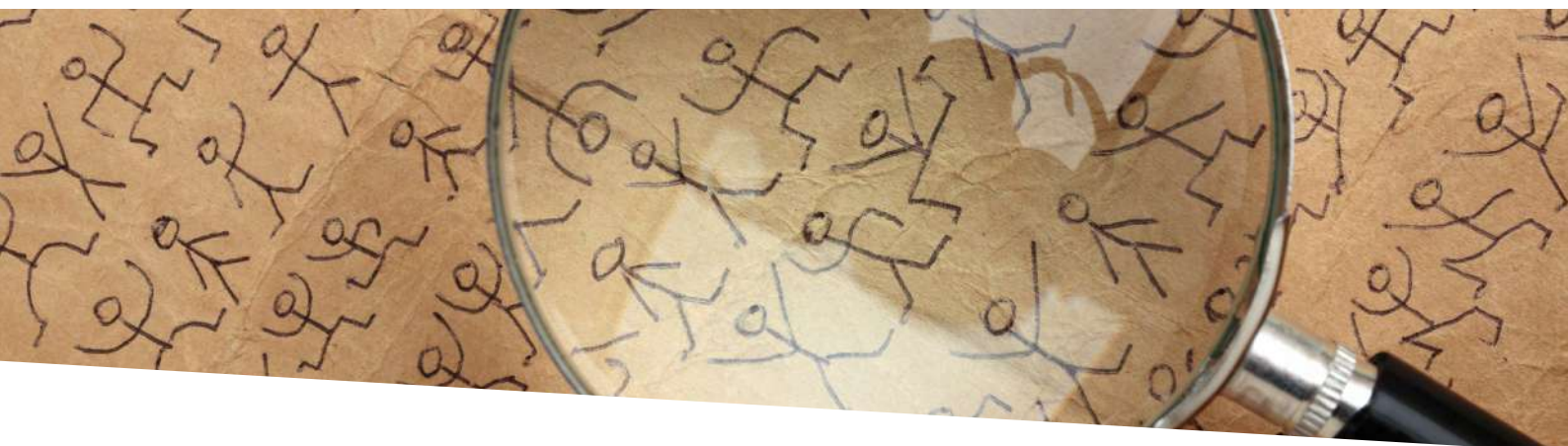
In this riddle type, players need to calculate something to obtain the result, which may be the code to open a lock. The basis and values of the calculation are often found through other types of riddles and the calculation builds the last step of getting to the solution.

- **Teamwork Riddles**

A core element of all escape games is to work together as a team. Hence, there are often riddles that can only be solved through cooperation and direct communication. It may involve pressing switches at the same time or being in different locations, for example because a code is written on a fixed surface and the lock, where it has to be entered, is all across the room and out of sight.

- **Topical Riddles (very specific to a certain theme or learning outcome)**

These riddles are closely connected to a specific theme/topic or learning outcome. They can be combined with other riddle types, but additionally focus on particular field of knowledge or skills, for example chemical formulas. All escape rooms provided by the Escape2Stay project serve the main purpose of promoting a vocational education and career path by offering games in the sectors mechatronics, hospitality, electronics and more. Usually, all needed knowledge is also supplied as clues in the escape game and does not require the players to have the specialised expertise as a precondition.



3.5 Points for consideration

When choosing or developing an escape game, you have to make sure that you are aware of all the resources you need. Consider the following aspects:

1. Time.

Find out how much time you need for the preparation of the game, for playing the game with a group, and for resetting the game for the next team. Keep in mind that you want to brief and de-brief the group, too.

2. Space.

Estimate how much room you need to play the game. Does the escape game require specific elements in the room or particular furniture? Do you need to have groups play multiple games at the same time, each in a different space? Is the room safe to be played in (see security measures below)?

3. Mobility.

Is it necessary to transport the escape game? Or will it be placed in a permanent location? Either way, make sure that the game you wish to play fits your needs.

4. Objects.

Does the escape game require certain objects such as numbered locks? Do you have these objects, or do you need to purchase and prepare them?

5. Budget.

Make sure you have the budget to buy elements for the room if needed. Even if you can print materials, ensure that the printing costs and resources are within your financial framework.

6. Staff.

If you are playing the escape game with a class of 20 players, you will probably form 4 small groups of 5 players. Ideally, each group is supervised and supported by a Game Master. Do you have enough staff available to be Game Masters?

7. Group Dynamic.

To ensure a cooperative group dynamic, the Game Master should carefully moderate the group formation. Ideally, the players already know each other and have a friendly or at least neutral relationship. The Game Master can facilitate the team building process further by clearly communicating the rules and aims of the game. Giving the group a common goal towards they can work is a crucial step to making them a cooperating team. In bigger groups (5+ players) it may make sense for the group to elect a team leader or manager, who keeps an overview of all uncovered clues and open riddles.



3.6 Scoring System

Playing an escape room is fun. Getting out in time is satisfying but finishing the game better than another group is even more gratifying. So how will the players know who has won the game?

The most usual scoring system is based on time. The escape room has a time limit (e.g. 60 minutes) and the quicker a group escapes, the better they are. This is commonly practiced in real life escape rooms.

In addition to that, players can use hints. There can be a number of hints (e.g. 3 hints) that the players may ask for without negative consequences, but it can also be decided that each hint costs points or time. In real life escape rooms, a certain amount of time is often added to the real time the players needed to solve the game (e.g. 5 minutes).

Many non-linear multi-path escape games feature a point-based scoring system because the players may find additional clues and riddles. These do not serve the main goal but provide a bigger and more in-depth experience. As this scoring system can be quite complex, it is commonly used in digital, single player escape games or comparable board games.



3.7 Security Measures and Basic Game Rules

When preparing the room and the players for the game, certain steps have to be taken.

Preparing the Room

A Game Master must be sure that the players have the opportunity to leave the room at any given time. Being locked in the escape room must always be only an illusion to which all players agree. In real life escape rooms, there is always an emergency mechanism that allows the players to exit the room when necessary. This is not only relevant to avoid anxiety attacks and in case of personal emergencies, but of course also in regard to external emergencies such as a fire in the building. While players should be instructed to use the play time they have as efficiently as possible they must also have the opportunity to use the bathroom if necessary.

Furthermore, the Game Master has to assure that players cannot hurt themselves during the game by checking that:

- Furniture is fixed to the wall and cannot fall on players.
- Windows do not have to be opened in the game so players do not have the opportunity to climb, lean or fall out the window.
- Electrical outlets and other electrical infrastructure elements are visibly marked to NOT be part of the game.
- No clues are hidden in dangerous or not accessible locations (e.g. on top of a high book shelf). Players should not need to climb on any furniture to obtain clues.
- There are no sharp edges or objects with which players may hurt themselves (e.g. knives, saws, etc.). Even scissors should be used with caution, especially when the players are not supervised. If objects like that are absolutely necessary, it may be safer to limit their use to a specific area (e.g. table) by fixing them in this particular location.

Players must be instructed that they must not use force when uncovering clues or solving riddles and that nothing has to be destroyed. If the Game Master is not in the room with the players, the group must have a quick way of communicating with him/her in case of emergency (and of course for asking for hints).



Preparing the Players

Before the escape game can start, the players undergo a briefing with the Game Master. In the briefing, the Game Master states the rules of the game and explains some basic mechanisms, which the players may need to solve a riddle. The latter includes for example showing how a numbered lock works. In this preparation phase, the Game Master can also ask the players to form small groups. A rule of thumb is that max. 6 players should be in a team, because communicating in bigger groups can be a challenge of its own.

Here are a few basic game rules that can be communicated to players:

1. No danger.

At no point will you be in real danger. You can always leave the room and quit the game if you need to. Just note that the game will be over.

2. No breaks.

There are no breaks during the game. So prepare yourself now and eat a snack, drink something and use the bathroom, if you need to. Get ready now!

3. Forbidden & needed objects.

Do not bring any objects that are not allowed (e.g. smartphone) and make sure you have all objects you need (e.g. pen & paper).

4. Game Zone.

There may be objects in the room which are not part of the game (e.g. electrical outlets, air condition, etc.). The Game Master will define the game zone and let you know which objects in the room are off limits.

5. Do not damage or break anything.

You will never need physical force to uncover a clue.

6. Communicate.

Work as a team to uncover clues and solve riddles. Everyone brings something to the table – use each other's strengths and support each other to reach the goal. You may want to elect a group leader who is mainly responsible for keeping an overview.

7. Take notes.

Write down your findings to assure that everyone has access to the clues you found. It also makes sense to note which items have already been used, because it is likely that they do not need to be used twice.

8. Watch the time.

Do not forget the time limit!

9. Use hints.

There is no shame in using hints. Maybe you are already very close, so ask for help before you jeopardize winning the whole game.

10. Democratic principle.

When in doubt, the majority of players should decide how to proceed. Especially when using hints, all players should agree.

11. Have fun :)

The Escape Games provided by the Escape2Stay project follow the described guidelines and can be applied right away. Their usage is completely free, and they can be accessed here: www.escape2stay.eu

If our work has sparked some inspiration, this handbook and the included guidelines will support the development of more escape games for educational purposes.

CHAPTER 4

IMPLEMENTATION OF THE ESCAPE ROOM



www.escape2stay.eu





CHAPTER 4

IMPLEMENTATION OF THE ESCAPE ROOM

4.1. Initial group talk with indications to the participants

The initial briefing is one of the most essential parts when promoting an Escape Room. It is in this part that the participants will know the story behind the activity that they will participate, and the rules that they will have to follow to accomplish the Escape Room.

The Escape Rooms developed by the Escape2Stay partnership all have the briefing material presented in the resources provided. In this material, one will find the base storyline for that particular Escape Room and the rules. The rules of the Room must have the number of riddles that the participants have to fulfil in order to accomplish the room. The time that the participants must finish all the riddles must be presented in the briefing part (for the participants to be aware of the time that they have left a timer in the room can be very helpful). Other aspects that are present in the rules of the Room are the hints that the Game Master can provide to the group of players. Concerning the hints, the players must be informed what type of penalties they will receive when they ask for a hint, and how often they can ask for during that particular Room. The number and the type of hints must be in accordance with the level of difficulty of the Room, in that way the most challenging Rooms can have more, and more significant hints than the easiest ones.

Finally, the scoring system of the room must be explained. This scoring system normally is connected to the time that the players take to fulfil all the riddles present in the room.

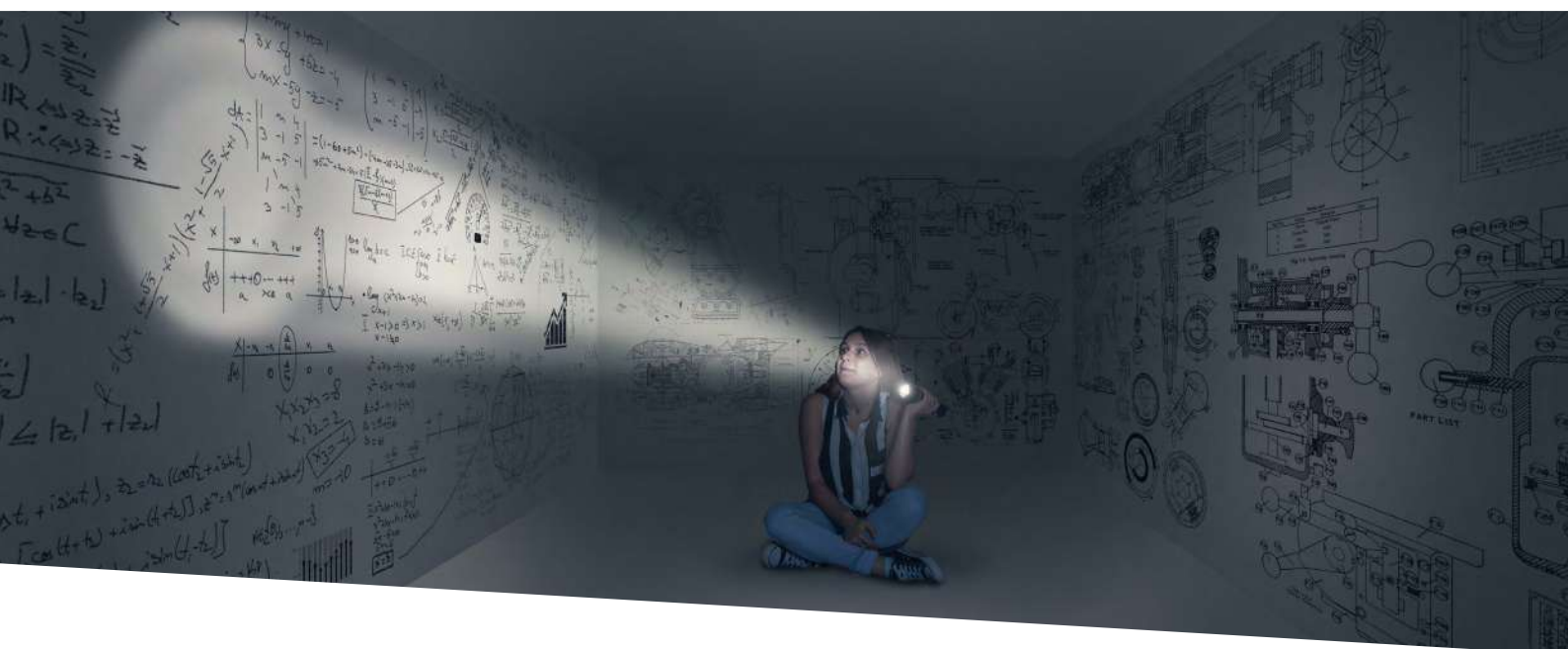
4.2. Recommendations or hints for better performance

In order to enhance the performance of the Escape Room experience, several steps must be taken. Those steps are (Lyman, 2021):

- **Before the Game**, the most important step to be done is the testing phase. Depending on the time at your disposal the game can be tested as a whole or, at least, all the puzzles that are part of it must be tried to ensure the proper functioning. During the testing phase, you should develop a document that includes all the answers to the riddles and puzzles, all the hints that you may give in the specific parts of the game, and a “map of where you hid everything” (Lyman, 2021). This document will be the Game Master’s best friend during the game, and it should be kept away from the players’ eyes.
- **Set up the Room**, this is the part where you organise the selected room where the game will happen. In this phase it is important to check all the riddles and puzzles one last time. “Re-count any items that need to be counted, re-measure anything that needs to be measured, and just double-check everything to ensure your room runs smoothly” (Lyman, 2021). If your Escape Game has any technological aspect ensure that those components are running smoothly as well (websites, internet access, passwords, ways to power devices, etc).
- **The start of the Game** is one of the most important phases of the whole game. It is in this phase that you set up all the rules that the players must follow to successfully fulfil all the riddles and finish the game. In this part of the game, you must instruct the players if they can use smartphones or if those devices are to be left out of the room. Some rooms require internet and smartphones, and others do not. Not using smartphones can limit access to the outside world and “can create a more immersive, authentic experience” (Lyman, 2021).

It is pivotal to ensure that the players understand completely the rules that they must obey, and that they are informed of the hint system being used in that room.

In this phase, the Game Master will introduce the backstory of the Game. In order to ensure a more immersive experience this exercise can be done already in the room, and it is highly recommended that the Game Master has the backstory memorised instead of reading it. It is important to make the effort to tell the backstory with emotion, to start embedding the players with the feeling of urgency needed to fulfil all the tasks.



- **During the Game**, the Game Master can be inside of the room with the players or find a way to ensure that we can see the players being outside the room. Being inside the room can take out some of the immersion of the game but can be helpful for you and the players since you will know exactly in each phase of the game and if they need assistance, you can provide it immediately. Being inside of the room can be useful if your game has any non-player character that is triggered at a certain part of the game. In this way, you will know exactly when to act as this non-player character.

If you want to stay outside the room, to enhance the immersion of the game, you must find a way to ensure that you know exactly where your players are in the game. Find a room with a window, or install cameras in the room. You will also need a system to communicate with the room (use a phone, a speaker or other device to ensure the communication).

The most difficult aspect during the game for a Game Master is to not tell the players too much information and to not give them hints when those hints are not asked for. "Remember, some of the most rewarding moments of an escape room are the "a-ha" moments, and if you tell your players the answer or give them too much help at the wrong moment, you'll rob them of those." (Lyman, 2021).

- **Finishing the Game** is the final phase of an Escape Room. There are three types of scenarios that can occur at the finishing of the game. The first one is that the players finish all the riddles and tasks during the time, and the game will stop when they finish. The second is that the players run out of time and the game will end at that time. The final scenario is that the players run out of time, but the Game Master agrees to let them finish the escape room either way.

If the Escape room is successfully finished the Game Master must praise the players and debrief them to understand if they learned what they were supposed to.. [See chapter 5: Game Master Role]

If the players did not escape the room in time the Game Master has to reassure the players that it was only a game and that they were very close to finishing it. After this, the Game Master can debrief them concerning their learnings, and about what they must improve in order to be successful in the next attempt.

4.3. In which cases should the game be intervened by the Game Master to provide clues?

The clue system must be chosen by the Game Master or by the game developer. Various systems can be put into place. Concerning the number of hints that a team can ask for or receive there are two main types of play, the one where there are a maximum number of hints that can be asked for, and the other where there is no cap on the number of clues. Clues or hints can be directly connected to a time loss, or not, depending on the level of intensity that the game is supposed to have. Not having a time penalty can be beneficial to "the casual player that may feel pressured by the time penalties" (Suleski, 2020).

There are various moments where the Game Master can intervene to provide clues (Quest Factor, s.d.):

- The team can't find what to do next and struggles to find the solution in 5 minutes or so.
- The players agree that they need to ask for a hint.

In the first scenario, the Game Master must ensure that the players want help (if the game has time penalties this must be stressed). The second scenario is a decision taken by all the group or at least by the majority of the group.

The Game Master can develop a system to know when the team wants to receive a hint. For example, create a certain area in the room where the players must touch or be if they require a clue/hint. In that way the players do not need to "yell or wave their arms to request help" (Suleski, 2020), ensuring that the game keeps its immersion.

For more information about this point go to chapter 5.4. Game Master Intervention.

4.4. Establishment of a system for the avoidance and, if necessary, the resolution of conflicts during the development of the game

When developing an Escape Room, the Game Master must be aware that possible misunderstandings and conflicts can happen among the team members. Those misunderstandings normally happen because the members have different ideas of the path to take to fulfil the room. To prevent those conflicts arising drastically the Game Master must ensure that the rules are very well explained in the beginning and that those rules have some conflict management aspect. This conflict management aspect can be that the group will follow the majority (for example when asking for clues the Game Master will only tell them if it is the will of the majority).

Within the rules, it must be told to the players that they are here to learn and that this is an activity to improve their soft skills, which includes communication, cognitive flexibility, and leadership. The Game Master (teacher) must tell the students that the game will not be part of the evaluation, but will count to evaluate another aspect, such as the aforementioned soft skills.

If a major conflict arises during an Escape Room, the Game Master must intervene and remove both conflicted parties from the game if possible or end the game immediately.

For more information about this point go to chapter 5.4. Game Master Intervention



CHAPTER 5

GAME MASTER ROLE



www.escape2stay.eu



CHAPTER 5

GAME MASTER ROLE

The figure of the Game Master or Game Host plays a central role in achieving a successful immersion. They often play a character in accordance with the Escape Room, so their performance will largely depend on whether or not the escapes feel part of the story that is set out.

In chapter 4 we have already seen in which cases the Game Master can intervene in the game to give clues and how the Game Master should intervene to resolve conflicts in case there are conflicts. In this chapter, we are going to discover what exactly the role of the Game Master is. We will understand what tasks they have to perform and what is needed to play the role of this figure. Finally, in this chapter, we will see what role the Game Master has in escape games for vocational orientation purposes. How do all these elements relate to each other? Let's get to it!

5.1. Game Master role:

Game Masters do not have a specific function or role, they are multitasking figures i.e., they have many tasks. They welcome the players, introduce them to the story, pose the riddles and puzzles, guide, supervise and assist them during the course of the game.

As a Game Master or Game Host, they are responsible for delivering professional service while creating an exciting, fun, and entertaining environment for the guests/players. The Game Master or Game Host communicates and works with the players throughout their entire live escape game experience ensuring a memorable Escapology experience.

Therefore, they are such an important figure because, without them, the games would just be a group of people in a room trying to figure out what to do.

5.2. Main tasks:

As already mentioned in the previous section, the Game Master is multitasking. However, there are some main tasks that every Game Master performs before, during and after the game:



PREPARING THE GAME

Game Masters are in charge of preparing the game room. They must know the game perfectly and how to place the clues and prepare the riddles.



NARRATOR

Game Masters bring the world of the game to life, so the Game Masters have to generate a feeling of excitement in the players so that the users participate.



ACTING AS DIRECTOR

Game Masters must ensure that the players always have something to do. They have to help the players if they get stuck or don't know how to follow the game.



AVOID CONFLICTS

Something might happen that causes the characters in the story to fight with each other, but Game Masters will make sure that the situation does not get out of hand and affect the team.



MANAGE THE POST-GAME

Once the game is over, it is time to lower the adrenaline levels and to comment in a calm and relaxed way on the different situations that have arisen during the session. The objective of having a good time has been achieved. All that remains is to immortalize the experience with a souvenir photo; the Game Master takes care of that too.

5.3 Professional requirements- Competencies:

There is no specific training as such to be a Game Master, however, all Game Masters must have some professional requirements and competencies that will help them to perform well in the role:



They must have good **use of language** and, at best, **theatrical acting skills**, as they have an authoritative role that must express a very specific message in the right way. In addition, each time the game is played, they can use new techniques of expression to improve the adventure.



They must excel in **imagination**, to be able to create an overall story where all the characters can play a part in it.



They must be a **patient person**, as not all groups are able to solve the trials in the same way or with the same effectiveness.



A Game Master must have the **ability to improvise** in order to be able to react to setbacks that may arise in the adventure.



Game Masters must be **aware of their own role because**, although they are a character with a strong presence, this figure is not the protagonist. The protagonists are the group of escape artists who have attended the Escape Room.

There are many other skills that can help a Game Master to perform their various functions successfully: communication, dedication, passion, improvisation skills, imagination...

Nowadays, following the rise of the escape room in Europe, we find more courses offered by public schools on how to be a good Game Master. In addition, more and more training institutions are offering courses for teachers on how to implement gamification in the classroom.

Going from the general to the specific, we will now discuss what characteristics a good Game Master should have who is in charge of an Escape Room in which the participants are young people. This applies to all Escape Rooms designed and developed in the framework of the Erasmus+ Escape2Stay Project, but it could be extrapolated to other Escape Rooms or games with vocational orientation purposes.



In this type of activity there can be certain **factors that can condition the game**:

- The Game Master is not a professional dedicated exclusively to it.
- The Game Master can perform, at the same time, the tasks of a vocational counsellor.
- The Game Master maybe does not know participants (personality, the existing relationship among them...).
- Young people do not know what to expect before they start. However, they know that it is not something playful (at least 100%). This can create initial distrust of the activity.
- In certain contexts or situations, the Game Masters do not necessarily have to be a vocational counsellor. The person in charge of supervising the game can give this important role to a student. This decision should be consciously analysed, giving priority to the most responsible student who can direct the game in an optimal way.

This and many other factors can affect the development of the game, so the Game Master must be ready to deal with this kind of problem. What skills does a Game Master need for this?



5.4 Game Master Intervention

Sometimes, when players are frustrated at not finishing the game on time, they blame the Game Master for their failure after not being able to complete the challenge.

To be honest, the Game Master can be the saviour of a group that is struggling with a puzzle. But to do so, a Game Master must get right into the game, know when to intervene and have a good command of the game.

The Game Master must mainly intervene in 4 cases:

1. When the players are stuck and ask for a clue.
2. When the players are stuck and don't ask for a clue.
3. When players are misusing game elements.
4. When there is a conflict between players.

The Game Master must know when to give a hint and what hint to give to the players. Often this hint will be asked for by the players if they are stuck, but it is possible that out of pride or stubbornness, some groups do not ask the Game Master for help in order to overcome a challenge when they are not making progress.

Now, if they have been stuck for a long time, why not ask for a hint? A "Game Master" has to identify when players are really stuck and need a hint that can give them the push they need to keep moving forward in the game.

Clues always must be clear and not create distractions for the team so that the timer does not beat them. So, it is important that a Game Master knows how to communicate an idea clearly.

There are "Game Masters" who only make the situation worse, unintentionally distracting and confusing the players because they don't know how to communicate a clue.

Finally, on rare occasions, the Game Master will have to intervene if there is a conflict between the players. During the game, the participants are tense and fights can break out between them. The Game Master must make sure that these situations are avoided and that the game atmosphere is healthy and fun.

For more information about these points go to chapter 4.3 and 4.4.

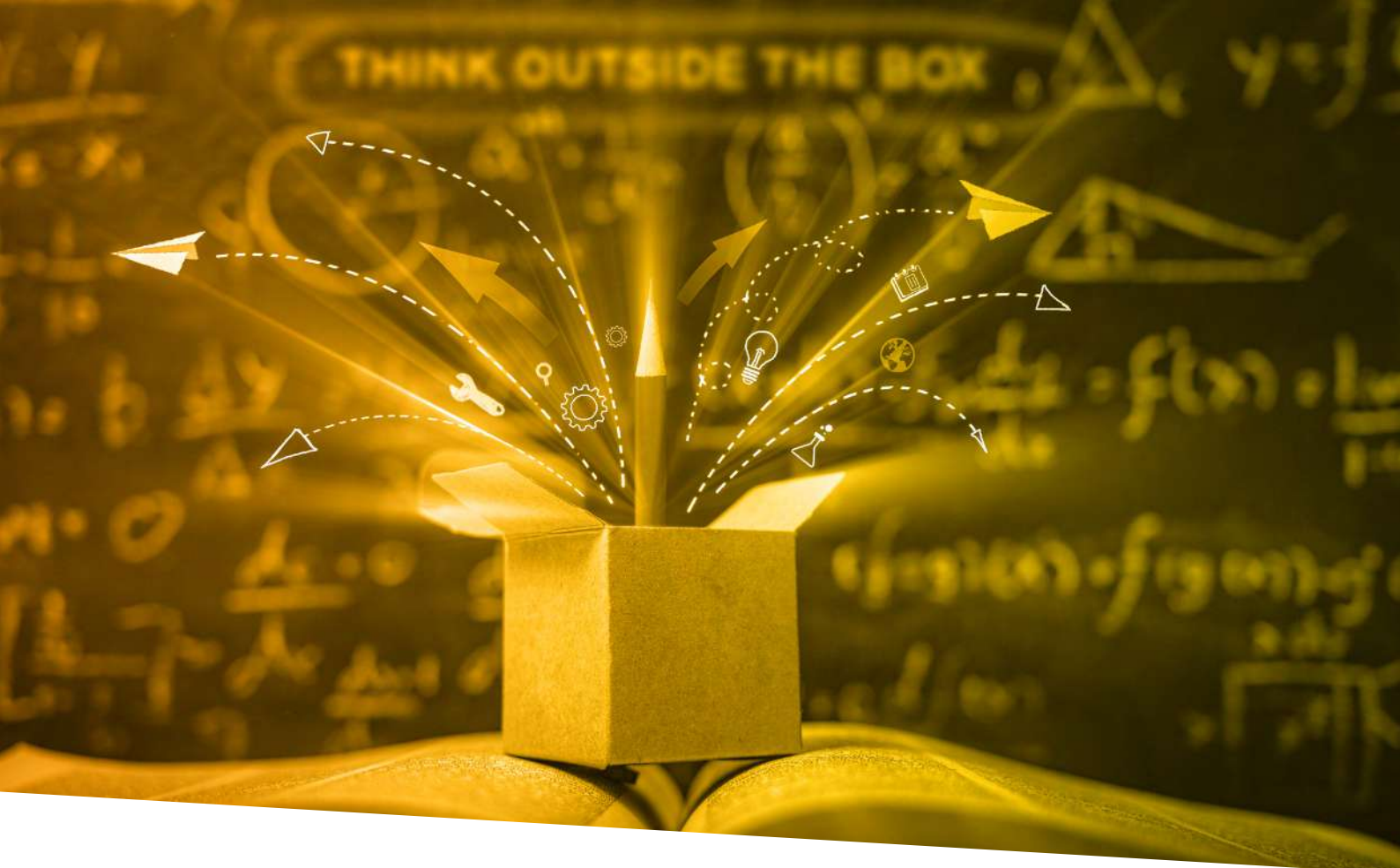


CHAPTER 6

**FOLLOW-UP OF
THE ESCAPE ROOM**



www.escape2stay.eu



CHAPTER 6

FOLLOW-UP OF THE ESCAPE ROOM

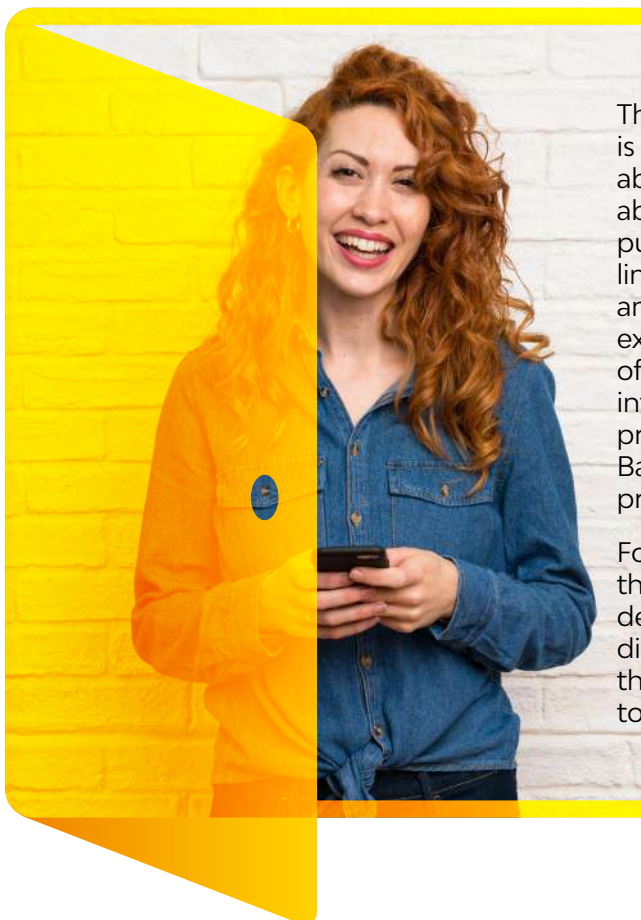
Escape2Stay rooms are primarily designed to motivate students for various vocational training paths such as mechatronics, electronics, or the hospitality sector by fun in the game. In the Escape Room, students work through theoretical and practical aspects of vocational orientation. It can be used as a new motivating and playful highlight.

The settings of Escape2Stay rooms aim to raise awareness and to introduce and familiarize participants with Vocational Training. Another very important aim is to promote soft skills such as team building and leadership. During the whole game there are interrelations between so-called “21st century skills” (Cruz, 2019) and various vocational training paths. In this context our Escape2Stay Rooms should stimulate collaboratively the participants’ ability to think outside the box, foster critical thinking and creativity. In the implementation of the rooms there is no knowledge of the participants or Game Master/school staff required.

Therefore, our follow-up is essentially divided into 2 steps:

1. Feedback about the game experience in general and
2. Vocational guidance session for the different games

TEACHER'S ROLE



The most important role of the teacher is to explicitly create spaces for dialogue about player experiences and discussion about perceived ambiguities in the puzzles and riddles. At this stage the link between theory and practice arises and the players' physical presence and experience in space can be the subject of theoretical reflections. Especially this interaction between practice and theory is prioritized in relation to both the Problem Based Learning (PBL) approach and the pragmatic understanding of learning.

For the future, there is a big potential for the learning process to create didactic designs and games for others – e.g. didactic puzzles or riddles - that can form the basis for new exploratory approaches to knowledge in different disciplines.

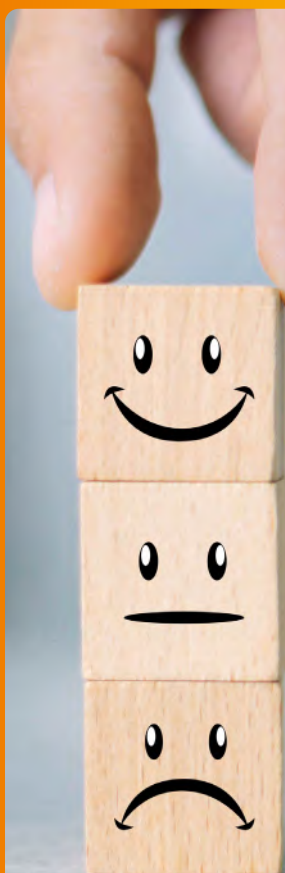


In the case that the Game Master role and the supervision of the game was given to a student, then the follow-up session should definitely be done as a group and involve a responsible teacher.

6. 1. Feedback about the game experience in general

Following the actual Escape2Stay game it is recommended to implement a postgame debriefing session. This phase caters to the purpose of providing room for reflection and critique on the Escape Room activity, reviewing problem-solving approaches and giving the opportunity to further discussion on VET topics. This session can either be conducted as a moderated (by teacher, mentor or Game Master) group **discussion** immediately after the escape experience or later on as a **written assignment** where students must reflect individually on their experience or a combination of those two methods.

GRADING EDUCATIONAL ESCAPE ROOM



Regarding evaluation of the performance of participants in the escape rooms, different opinions are found in the literature. Grading participants based on their performance could be an approach to motivate them extrinsically. However, evaluating the Escape Room performance is difficult since the outcomes are binary (i.e. escaping vs. not escaping) (Lopez-Pernas et al., 2019b). Nicholson (2018) argues that escape games serve the purpose of supporting students to develop an intrinsic learning motivation that is guided by curiosity instead of motivating them with grades.

Moreover, grading the students' performance in the escape game might increase the anxiety of the participants. Instead, giving participation points could be an alternative solution to improve participation. However, Ross & Bell (2019) report that students requested to be marked for their Escape Room activity. According to their statement, a partial grading accounting for approximately 5% of a subject's mark is reasonable.

We also recommend meeting the students after finishing the game inside of the room and give them feedback about how they performed. It's important to explain **what worked well**, if and where they were surprised, where they performed better than the average or expected and where team and individual efforts were good and fruitful. Also mention **what did not work so well** and where improvements in the group and the individual actions could have helped solve the riddles easier.

It is also important to ask about properties of the room and their evaluation:

- Feasibility
- Clearness of instructions
- Severity level of riddles

We recommend approximately 25 minutes up to one hour time for debriefing session after each Escape Room.

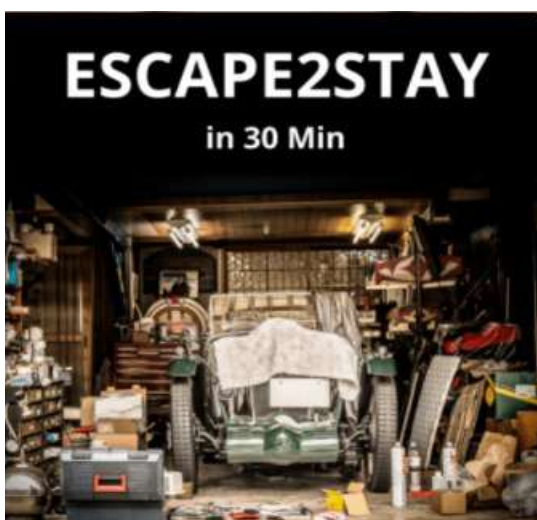
The use of Educational Escape Rooms leads predominantly to positive results. When reviewing the outcomes, the findings can be divided in three categories: 1. Results on the learning outcomes, 2. impact on the emotions and behaviour of the students, and 3. results on escape rooms as a teaching method (Roman, et al., 2019). Finally, we look at the factors that determine the performance of participants within Escape Room.

1. The most common **learning outcome** reported, which is common to all team-based escape games, is the teamwork and collaboration. Good teamwork skills in Escape2Stay games influence for e.g.

- Time management (30 min)
- Problem solving with the riddles and lockers
- Listening to the other players and Game Master
- Critical thinking
- Collaboration and leadership
- Communication as the foundation of effective teamwork.

Successful teams work together, communicate well, and use delegation to tackle the challenges in the room. This positive team spirit should be used for further work with young people.

Teamwork skills are essential for the future work in a company.



The aim of the Escape2Stay game is to escape (**finish the game**) on time. Having to escape from a room in a limited time frame also helps players learn to work and make decisions under time pressure. It needs to be evaluated in the follow up session. If they finished the room in the 30 minutes timeframe, congratulate them on their success. Furthermore, the task of the game master is to help participants and offer a hint if they get stuck or don't find right solution of the riddle and get irritated. If the group needs a time extension it is possible to let them finish even if the time runs out. If they needed longer, still mention the finalization positively and explain what caused the delay.

Educational Escape Rooms experiences can further promote the confidence of students to communicate with their peers about complex topics and subsequently about their future also with teachers and mentors. Furthermore, it has been shown that through the Escape Room experience the gap between the values and the corresponding behaviour is closing. All these topics can be evaluated in the post-game discussion or feedback form.

2. Playing an escape room has great impact on the **emotions and behaviour** of the students.

Motivation is an important learning principle that impacts the fervour with which students engage in effective learning behaviours. Games are most effective when connected to well-defined outcomes (Kapp, 2012). “Serious Escape games” are designed with such outcomes as they are purposed beyond entertainment and **connect game logic with learning design**.

Furthermore, many of the Educational Escape Rooms use cases to increase motivation and engagement and by its participative approach integrate multiple perspectives into problem solving. The special approach of Escape2Stay rooms is not common yet for attracting young students’ attention to VET courses or inform them about VET choices. Further to that, there is no systematic approach to use challenged-based learning for **vocational guidance**. Hence the project will use the chance to bring together games and guidance, thus promoting a new, creative, and innovative method for learning about VET occupational profiles and also assessing own strengths for different jobs profiles.

Studies found out (Roman et al. 2020) that an Educational Escape Room can provide an environment where students can **explore knowledge with calmness and less stress** than in exams. However, the subjective perceptions of students might vary between individual escape room settings and the course of the game. Not well-designed Escape Rooms can also cause adverse effects and some participants can feel frustration and even anxiety due to high time pressure and a lack of instructions and guidance. Therefore, factors such as extrinsic outcomes or time pressure could have an influence impact on students’ stress levels. Moreover, Escape Room experiences offer a high level of enjoyment and by allowing students to take a more active role in the learning process, creates a stronger engagement compared to other traditional learning activities.

Furthermore the Escape Room experience is successful at **eliminating “out standers”** as more participants were actively involved in the activity compared to more traditional group-based tasks. In this context, players who show a higher level of engagement in EER activities also have a higher perceived learning effect.

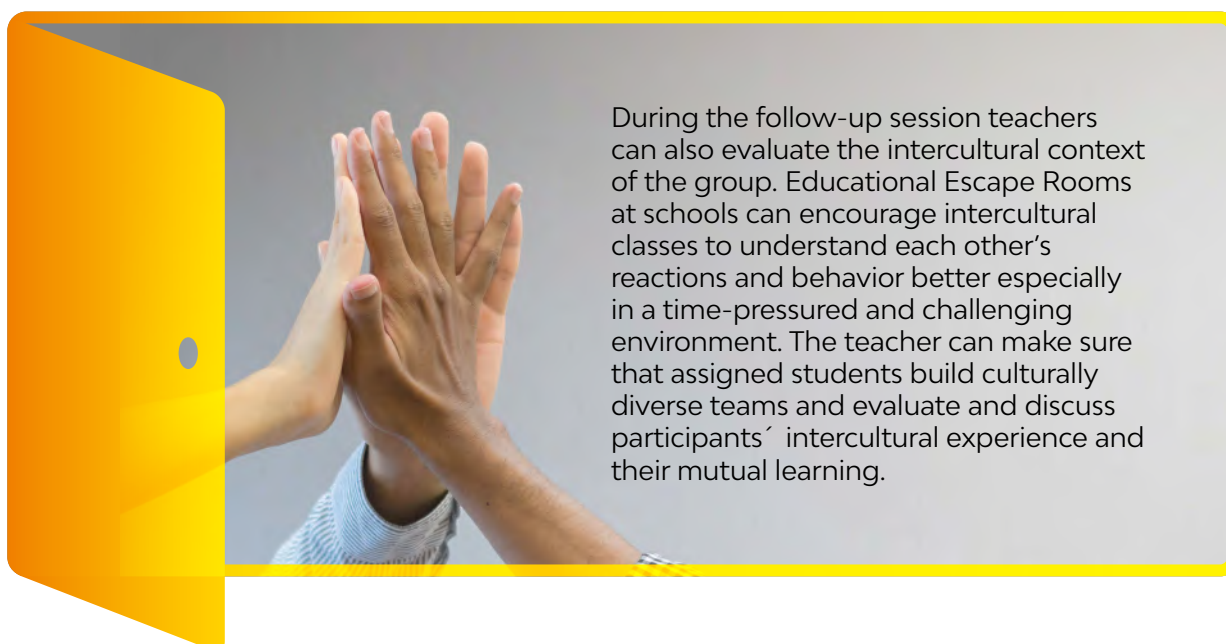


3. Escape rooms as an **effective learning method**.

After the experience there was a significant increase in students' knowledge and motivation. Following a pilot phase of Escape2stay rooms we stated that students have shown a significant knowledge gain about different VET sectors and their future possible vocational training paths. Furthermore, students are able to improve their knowledge about VET and required skills for different sectors. Hence, escape room experience can increase the interest of the participants in the VET topics in general.

Escape room games can also be used as an educational tool to increase learners' confidence in applying knowledge and certain techniques. The game-based learning allows participants to understand interrelations between topics and is a good method to **recap the VET knowledge**. It helps students seeing a bigger picture by understanding interconnections and required skills for different VET sectors. Thanks to five Escape2Stay rooms was possible to facilitate awareness rising across multiple VET subjects.

EDUCATIONAL ESCAPE ROOM IN INTERCULTURAL CONTEXT



Not only do Educational Escape Room activities facilitate more active student participation, but they also allow teachers and mentors to better observe their learning and problem-solving approaches, which can help to further improve teaching in general. This could be evaluated internally by school staff and also include and motivate other educators to learn and improve their skills.

6.2. Vocational guidance session. - Follow up – for each game experience separately

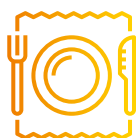
There are many determinants of Escape Room Performance. One of them is the team dynamics that has very strong effect on the performance. Those groups who had a strong collaboration between their members and structured their team by quickly assigning different roles to their members achieved better results. Furthermore, putting the learner in the focus through active participation in escape games increases their learning motivation.

In our pilot activities the heterogeneity of participating groups did influence performance – the participants felt free to express their opinions and suggestions on possible solutions and reacted spontaneously. Due to the fact that the target group of Escaper2Stay rooms are pupils at the general education school and are pretty young, it is very important to provide a confident environment and secure space to encourage them to actively participate. All these aspects can be evaluated in the follow up session.

The special approach of Escape2Stay rooms is to attract young students' attention to VET courses and inform them about VET choices. Hence the project uses the chance to bring together games and guidance, thus promoting a new, creative and innovative method for learning about VET occupational profiles and also assessing own strengths and skills for different jobs profiles. Therefore, it is extremely important to include a vocational guidance session in the post-game discussion with the participants.



Five Escape2Stay rooms cover five different VET sectors with five different missions and challenges. The following part includes description on VET programs and possible questions and input the evaluator (game master, teacher or mentor) can ask the participants after completion of the escape game.



1. Dinner for one Royal

During the Vocational guidance session, it is important to tell the participants about the connection between the game “Dinner for one Royal” and the VET sector gastronomy. Mention the QR codes on the back of the menu: They are actual places that offer WBL in the sector. Explain what actual skills and characteristics of the sector (cognitive skills (memory, thinking outside the box), ability to perform under time pressure, physical skills (balance), problem-solving competence) the different riddles showed and mention if one student was particularly good at one of them.

Provide the participants with more information material concerning the sector in your region. Give them the QR codes to the local places and VET schools and training centres to take home.



2. The Governor's papers

In the “Governor's papers” the participants get to know five important VET professions through the five fictive professionals: nursery assistant, IT specialist, mechanic, electrician and cook. The participants will get familiar with the CV of the electrician as an example for their future job applications. Already before starting the game, VET will be presented as a valid higher education option followed by the talk about the different professional sectors to be discover during the game.

In the debriefing of the game, the Game Master should ask questions to encourage a discussion about information young people have and information they are missing regarding VET and the VET professions:

- Did you know all VET sectors mentioned in the game?
- Did you know that VET offers so many options in your country?
- Which skills do you most relate to?

Finally, the Game Master should conclude the activity and give different promotional and information leaflets about VET to the participants.



3. Rescue Mission

The riddles of this Escape2Stay room cover several VET sectors and skills: electronics, maths and computer. Those skills are essential for many VET professions such as: IT-specialist or mechatronics. The participants should be asked about the skills used in the game and how they managed the riddles in order to define their strengths.



4. Open the door... please?!

This Escape room is all about electronic engineering. On completion of this Escape Game the participants acquired the following VET skills based on the fulfilled tasks: Ability to read and apply technical documents (basic terms and principles); Identification of work equipment, working methods, and safety measures; Understanding and repairing circuit boards and Logical, problem-solving and numerical skills. This are all very important capabilities in electronic VET sector. In the post-game session, it is necessary to highlight those skills and evaluate the strength of the participants regarding every riddle.

If the Game Master notices that the participants had a high level of satisfaction and fun doing the puzzles in this Escape Room, then he/she should inform the learners about local possibilities to complete electronic engineering VET.

On completion of this Escape Game, the learners will acquire the following skills:

- Name relevant basic terms and principles of electronic engineering
- Understand basic circuit boards and identify errors/ensure a proper electric flow
- Name and identify relevant equipment of electronic engineers
- Identify safety hazards typical for the work of electronic engineers



5. Think as fast as lightning

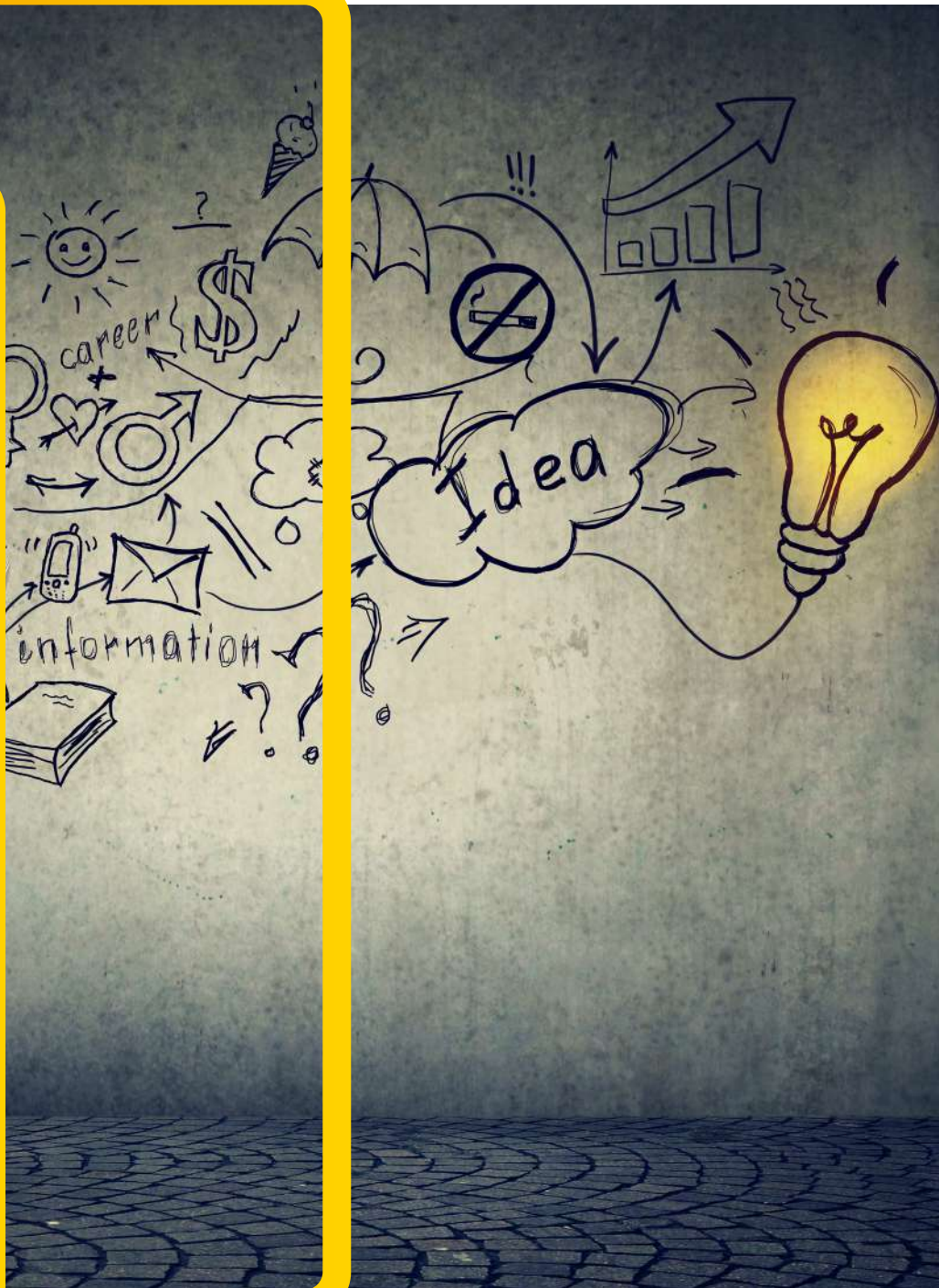
In the fifth Escape2Stay room it is all about Mechatronics. The participants will learn during the game the basic physical components and the combination of disciplines that are present in Mechatronics but also to understand how programming can improve daily life and what a microcontroller is, and some of its functionalities. All this should be explained and discussed with the participants.

This Escape2Stay Room shows clearly some basic knowledge concerning the Mechatronics VET course. Participants should understand many of the terms that are used in this subject. They will also understand the number of subjects that are presented in this course. The Escape2Stay Room will introduce some theoretical aspects, but also some practical parts of mechatronics. It is also important to inform the participants about possible VET paths and VET Schools and companies offering Mechatronics.

It can be very difficult to interpret the results and implications from the escape room experiments. The biggest challenge is the review of the Educational Escape Room experience which can lead to a poor or misleading evaluation. The educational effectiveness can be assessed by surveying students, whether they found this gamification method helpful or not, or based on the teachers/mentor's personal observations. Consequently, this method leads to very subjective findings and thus distorts the significance of these assessments. To analyse the learning effectiveness of Educational Escape Rooms empirically it is required to conduct a pre- and a post-test after the experience to measure the increase in knowledge about VET.

CHAPTER 7

VET PROMOTION



www.escape2stay.eu



CHAPTER 7

VET PROMOTION

The escape experience will not be successful if the main objective of the game (apart from having fun), which is to promote VET training, is not fulfilled and reinforced at the end.

In this chapter we are going to see how to complete the experience of the participants in these escape games by providing them with accurate and reliable information so that they have as much data as possible to make decisions in the future. How to choose what information is right for the participants? How to give them all this information? How to make it practical information? In this chapter we are going to solve the main questions that the person in charge of the activity may have. Let's get on with it!

7.1. What basic information about VET should the participant be given?

On the one hand, after they have completed the game, students should receive information about the VET system in general and, on the other hand, about specific fields (this depends on the game and its topic).

Generally speaking, it is not possible to establish a list of information that should be provided to participants. This information will not be the same in all cases. The information provided to young people should vary according to a number of parameters, among others, the main ones are:



Country



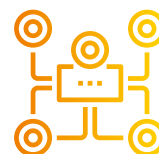
Region of
the country



Age of
participants



National VET
system



Available
resources

It is impossible that all participants of our games receive the same information. Besides being impossible, it is unnecessary and not worthwhile (because not every participant is covered by the same educational system and regulations). What we can actually do is to provide guidelines for the organisers of these Escape Rooms on how to establish what information is given to the young participants in each case.

However, the participants of the Escape Rooms receive information about the VET courses during the whole experience. In addition to the Escape2Stay games we have prepared in the framework of this project, the young people have the opportunity to try some challenges related to specific VET course and based on their experience can make their choice more easily.

7.2 How to establish what information is given in each case?

All information provided to participants must be official. Ideally, it should be information published by the regional or national government. In addition, information available at European level may be useful.

Information should be tailored to the educational level of the learners. It is not the same to inform young people who do not yet have to make a choice, as it is to give information to young people who are already considering all available higher education options for their career choice.

In all cases it is important to **focus the information on the career opportunities available within each sector.** Normally there is a tendency to relate a sector to a profession, but when it comes to providing information, it is important to open up the range and present all the professions that can be pursued with this training.

- For example, within the framework of the Escape2Stay Project, an Escape Room dedicated to the hospitality sector has been created. In this case, it is interesting to take advantage of the debriefing of this game to promote the sector in general: cooks, waiters, barman, barista... it is a very broad sector with many professions.

The information has to be practical. The young participants need practical information (enrolment deadlines, price, course syllabus, career opportunities and career prospects, etc.) and do not want to receive information on legal, formal or bureaucratic issues (at least initially).

In order to get the information to be disseminated updated and contrasted, **it is necessary collaboration with VET agents, regional government, national government, EU, associations...**

- When preparing the whole experience, research should be carried out on which organizations offer information on vocational education and training or on the specific VET degree you aim to promote. Training centres can use their own resources to promote and advertise the degrees they offer, but this information can always be complementary to that published by governments and other stakeholders.



At this point we must consider what information the organizers should provide. To find out what information young people need, we must think about what questions arise for them at this point in their lives. Generally speaking, the questions to be answered are the following:

- What career opportunities will I have in the future?
- How long do these studies last?
- What is the evaluation system for these studies?
- What level of education will I obtain at the end of my studies?
- Do these studies have European recognition?
- What professions and jobs are these studies related to?
- What is the sector like?
- In which school or VET centre can I study?
- Are these studies face-to-face or remote?
- Is the theoretical study combined with work practices in a work centre?
- What subjects do I study?
- When I finish these studies, can I continue studying?

That is, all kinds of practical information that may be of interest to someone who is considering and thinking about starting a VET course. The information we give to students must answer these questions (or at least the maximum number of them). We must be prepared to answer other questions that may arise after the game.

7.3 How should this information be delivered to the participant?

There are three main ways to deliver information to participants: online, paper brochures and social media. These methods are not mutually exclusive; we can complement them in order to be effective and get the information across:



Online: This is the most current method. Young people tend to consult everything in digital or online version. Putting it into practice, once the young people have finished the game, they can be given a QR code that directs them to the websites with all the information we want them to receive.



Paper: It is very useful for the participants, once they have finished the escape room, to have printed information (leaflets, guides, diagrams...) that they can take home to reflect and think about the information, also to share it and discuss the experience with their families. This is the least environmentally friendly option, as paper may be wasted or even lost, but it is a way for them to take something 'physical' away from the experience that they can refer to later.



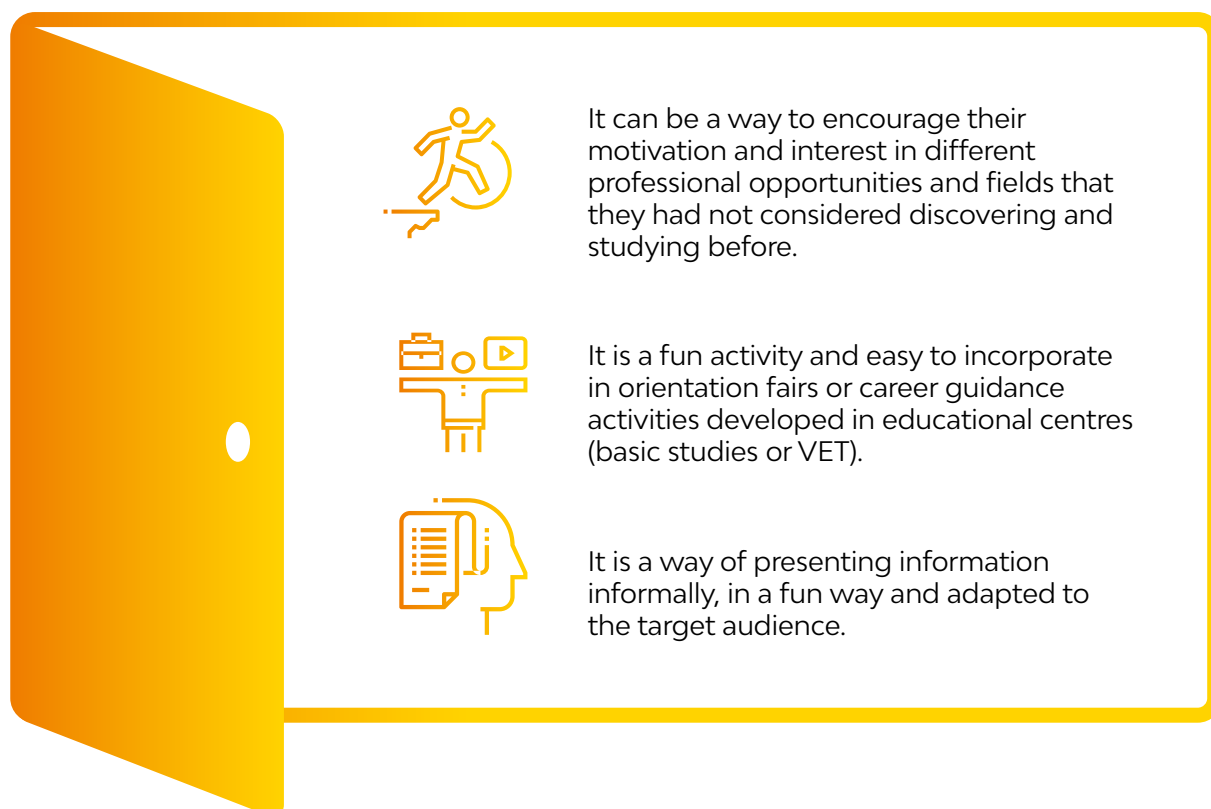
Social networks: participants can be given information about accounts on social networks where the subject is discussed: LinkedIn, Twitter... and there are more and more Instagram accounts of official organisations that disseminate this type of information.

This must be clear: no matter what method is used, the important thing is that the format is attractive, the language is appropriate and adapted to the target (young people).

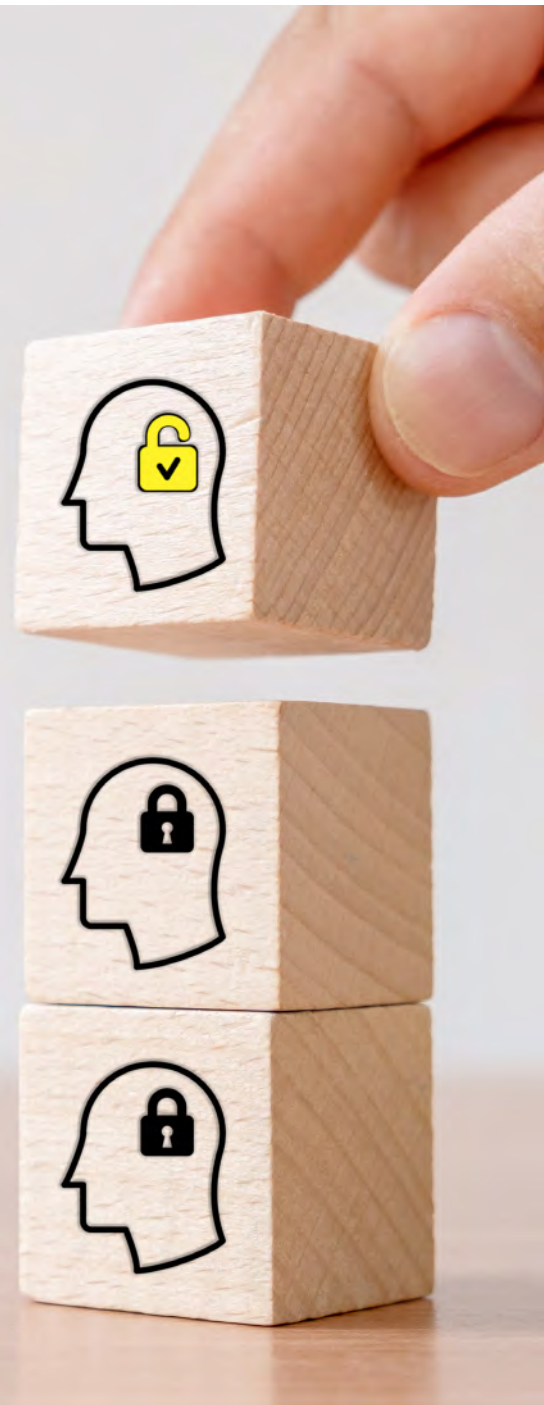
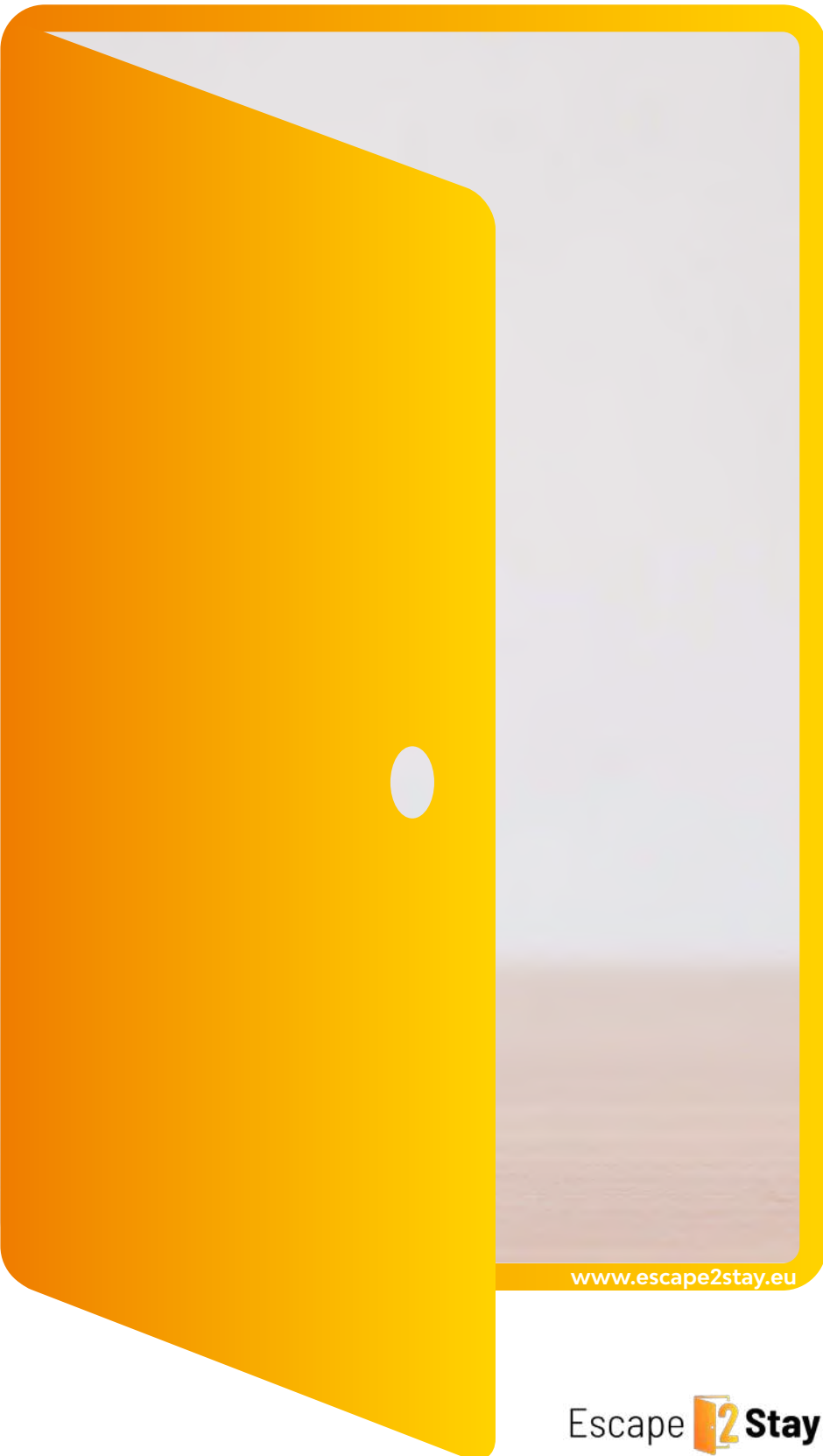
7.4 Escape rooms and career guidance activities:

Numerous studies show that Escape Rooms for educational purposes are a good way to motivate and enhance the motivation and skills of young people. In the same way, from the Escape2Stay Project we believe that the Escape Room experience and all its benefits for young people can be related to career guidance.

HOW CAN THIS ACTIVITY BE RELATED TO OTHER SPECIFIC CAREER GUIDANCE ACTIONS?



CHAPTER 8
CONCLUSIONS



www.escape2stay.eu



CHAPTER 8

CONCLUSIONS

There is no doubt that there is a methodical-didactical concept behind escape room scenarios. With our Manual "Educational Escape rooms used to improve the image of VET" we have aimed to explain, reason, substantiate and offer support to VET staff (teachers; counsellors; coordinators...) about what is this methodical-didactic concept behind the Escape room scenarios. Not only behind the ones we have designed in the framework of Escape2Stay project, but also behind the concept in general, so that it can be applied to their daily educative life and to their way of transmitting knowledge and guidance to their young students.

Regarding the pedagogical approach, it is known that gamification is very effective in education. As we have seen, Escape Rooms contribute to create a motivating and engagement area to participants, combining the playful aspect with the educational approach.

For these escape games implemented in an educational context, it is very important to establish a goal to be achieved. For example, the main objective of all the escape rooms developed in this project seeks the attractivity of VET. With that purpose, the time frame, the game flow and the narrative style, as well as the learning outcomes to be achieved through the game must be clarified. Once we have all of these, the following points need to be closed: time, space, mobility, budget, staff, group dynamic, scoring system and all the security measures.

At the game implementation, every escape rooms needs to be tested before implementation, and all the riddles and puzzles checked.. The initial briefing in which the participants contextualize the activity they are going to participate in is really important to get the motivation and excitement of the participants. During the game, players need to be given the essential information at the right time to follow the activity, without helping them too much. In the end, it will be necessary to take into account the cases where the game is not finished on time. Here, in addition to the briefing part, the participants should be given feedback on the points of improvement of their performance.

The figure of the Game Master is crucial in the implementation and development of an Escape Room, they need to have a multitasking profile and must know how to solve all the situations that arise in the development of the activity, identifying when his/her intervention is necessary in the game. In addition, in Escape Rooms aimed for vocational guidance purposes, Game Masters must have good prior preparation, and be clear of their role as a source of information on VET.

Escape2Stay's follow up is divided into sharing feedback about the game, where spaces are created for dialogue about the experience, and giving a vocational guidance session. Firstly, it is recommended to implement a postgame debriefing session, so that participants and the moderator can review the game in a constructive way and discuss about VET topics. Also, this project combines games and guidance, with the intention to get young students' attention to VET courses and inform them about their choices, as well as assessing participants about their strengths and skills for different job profiles.

After finalizing the game, all practical information related to VET should be provided, as well as answering all questions raised by participants. To this end, the information should be official, practical, and updated, in an attractive format adapted to the target audience.

This Handbook, which serves as a complementary guide and support document the 5 Escape2Stay games that we have prepared. It is a guide for the creators and those responsible for setting up the Escape games. It is a resource on how to completely plan, implement and follow up an Escape room intervention. It also provides recommendations on how to integrate those settings into the whole set of vocational orientation activities.

From the Project's partnership, we also intend to convince the more traditional and sceptical educators of all the advantages of the Escape Rooms from a pedagogical point of view.

We hope that the reading of this handbook and the realisation of the Escape2Stay rooms will help the young people, who are more sceptical and have more doubts and mistrust in the European vocational training, to choose the path of vocational training which, without any doubt, and creates a path of employability, opportunities, quality training and the implementation of all the necessary knowledge for the world of work.



SOURCES AND ADDITIONAL INFORMATION

- Quest Factor. (s.d.). *ESCAPE ROOM HINTS AND CHEATS*. Obtido de Quest Factor: <https://questfactor.us/blog/escape-room-hints-and-cheats/>
- Lyman, P. E. (2021). *The Do-It-Yourself Escape Room Book*. New York: Skyhorse Publishing.
- Lázaro, I. G. (2019). Escape Room como propuesta de gamificación en educación. *Revista Educativa Hekademos*, (27), 71-79. Retrieved from: <https://hekademos.com/index.php/hekademos/article/view/1777>
- Suleski, D. (29 de January de 2020). *REINVENTING THE ESCAPE ROOM HINTS SYSTEM*. Obtido de The Escape Effect: <https://theescapeeffect.com/reinventing-the-escape-room-hints-system>
- Martí Pérez, E. (2018). "Escape Room" educativo: Estudio de la gamificación como recurso didáctico y propuesta de intervención en el módulo de Formación y Orientación Laboral. Retrieved from:
<https://educationaltechnologyjournal.springeropen.com/articles/10.1186/s41239-017-0042-5>
- <https://www.trueeducationpartnerships.com/schools/gamification-in-education/#:~:text=The%20gamification%20theory%20in%20education,they%20are%20also%20having%20fun.&text=Gamification%20in%20learning%20involves%20using,information%20and%20test%20their%20knowledge>
- <https://ssec.si.edu/stemvisions-blog/5-benefits-gamification>
- <https://www.learnlight.com/en/articles/5-benefits-of-gamification-in-learning>
- <https://slejournal.springeropen.com/articles/10.1186/s40561-019-0098-x>
- <https://www.youtube.com/watch?v=LiD8MZtZDJY&t=3s>
- <https://theartofeducation.edu/2020/12/14/what-you-need-to-understand-about-generation-z-students/>
- <https://www.facultyfocus.com/articles/teaching-and-learning/generation-z-re-thinking-teaching-and-learning-strategies/>
- <https://www.aecf.org/blog/generation-z-and-education>
- <https://theescapeeffect.com/skill-sets-used-to-play-escape-rooms>
- <https://excitingescapes.co.uk/blog/real-world-skills-from-escape-rooms/>
- <https://premierescapeadventures.com/7-skills-that-you-can-improve-with-escape-room-games-what-to-know/>
- <https://www.starsandstrikes.com/blog/different-types-of-escape-rooms/>
- <https://theescapeeffect.com/reinventing-the-escape-room-hints-system>
- <https://elearningindustry.com/escape-rooms-used-in-recruitment>
- http://www.un-lock.eu/uploads/2/0/8/6/20866568/1_unlock_part_1_literature_review.pdf
- <https://escape-kit.com/en/escape-room-in-a-school/>

Escape Stay



HANDBOOK: **EDUCATIONAL ESCAPE ROOMS USED TO IMPROVE THE IMAGE OF VET**



www.escape2stay.eu



Co-funded by the
Erasmus+ Programme
of the European Union

The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.