



# Edu-Escape rooms

Subjects: Education Studies

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## Definition

Escape rooms are cooperative games in which players must find clues, solve puzzles and perform some tasks within a limited time. The goal is usually to escape or leave a room, place or environment. When the escape-rooms have a pedagogical purpose are usually called Edu-Escape rooms and can be related to gamification and Game-Based Learning (GBL). The potential for student engagement and motivation is one of the main advantages of Edu-escape rooms.

## 1. Introduction

The European Higher Education Area (EHEA) advocates the implementation of active learning education methodologies complementary to the traditional ones to face the new socio-educational context <sup>[1]</sup>. Active methodologies are one of the most interesting approaches to developing cooperative learning and student involvement in the classroom <sup>[2]</sup>. Within this type of methodologies, everything related to games occupies a prominent place. Game is meaningful, spontaneous and motivating <sup>[3][4]</sup>. Both Piaget and Vygotsky <sup>[5][6]</sup> highlight game roles in cognitive development, as it allows the incorporation of strategies, norms and values in personal development.

Among the advantages offered by the games, it is worth highlighting their important didactic potential, which ranges from adapting to different learning rhythms, allowing mistakes, receiving instant *feedback*, developing creativity as well as increasing the motivation and socialization of the students. As well as their commitment and participation in tasks and the acquisition of skills <sup>[7][8][9]</sup>. As disadvantages or difficulties, excessive competitiveness or inadequate time management, along with other particular aspects of each game should be taken into account <sup>[10]</sup>.

In Education, there are three important concepts linked to the game: *gamification*, *Game-Based Learning* (GBL) and *serious games*. Although they are all related, they have different characteristics.

- *Gamification* is the most known, and it is often used to designate any activity in which playing and education or training are related; however, this concept is not precise. Gamification consists in the use of elements and mechanics of playing in non-playful contexts <sup>[11][12]</sup>. It is often implemented with help of online platforms such as Classcraft or Classdojo <sup>[13][14]</sup>.
- *Serious Games* are those games designed with a formative purpose rather than playful one. This term appeared in 1970 thanks to Clark C. Abt, an American researcher. He refers to serious games as an approach or simulation that starts from a real situation that develops as a game with an educational intention.
- *Game-Based Learning* (GBL) refers to complete games that are designed with playful intent and are used in teaching <sup>[15][16]</sup>. Also, within the wide range of Game-Based Learning (GBL), we can consider the Serious Games, and also the Escape Rooms.

## 2. Origins

The Escape Rooms or Escape Games are playful activities that offer an immersive experience. They are activities that are carried out in groups in a cooperative manner, in which they propose to solve enigmas or puzzles to escape from a fictitious situation <sup>[17]</sup>. There are variants such as breakouts, in which it is not necessary to escape from a place but to manage to open some boxes that contain a treasure or the answer to a mystery <sup>[18][19]</sup>. The origin of these games <sup>[20]</sup> is not clear, and there are diverse

interpretations. Probably one of the most relevant antecedents is the computer game "Origin", from 2006, which achieved a certain success in the USA and Asia. Other computer games from the 80s and 90s, such as graphic adventures, are outstanding milestones. With these precedents, in 2007 the first real escape room appeared in Japan, outside the virtual environment of a video game. Later, these games arrived in the West, specifically in Eastern Europe. But there are not only precedents in the world of video games. Other activities such as theme parks, films (from detective films based in Agatha Christie's or Sherlock Holmes' novels to others as The Name of the Rose, Indiana Jones and the Last Crusade, Cube, Saw, etc.), television shows with live tests, live role-playing games (LARP), etc., have had a notable influence on their development <sup>[21]</sup>.

When Escape Rooms arrived to Europe, they were configured in a similar way to what we understand today. In large part, this is due to the influence of the Flow Theory <sup>[22]</sup>. Flow refers to the balance between the challenges faced and the skills with which users must overcome them. Csíkszentmihályi <sup>[22]</sup> considers that there should be an optimal balance in which learning occurs. When a game maintains a balance between skill and challenge it gets the flow, and therefore maintains attention and motivation <sup>[12]</sup>.

### ■ 3. Benefits

The creation of these Edu-Escape Rooms requires taking into account a series of aspects, such as type of students, time, material, objectives, etc. <sup>[23]</sup>. As a counterpart to the questions to be taken into account in their preparation, Onecha, Sanz and López <sup>[24]</sup> point out the advantages or possibility of their educational use:

- Improve problem-solving skills
- Encouraging collaborative work
- Learning to think
- Facilitating motivation and learning by doing
- Improve learning immersion
- Developing the imagination
- Enhancing the vision of the whole

### ■ 4. Conclusions

Sierra Daza and Fernández-Sánchez <sup>[17]</sup> underline the growing interest in Higher Education for Escape Rooms. This may be due to the need for methodological changes in the European Higher Education Area <sup>[18]</sup>.

Motivation seems to be their main asset, in line with what is expected <sup>[12][24]</sup>. Undoubtedly, gamification, Game-Based Learning, Serious Games and Escape Rooms provide an attractive perspective for teaching, especially for interventions that encourage student participation and motivation, which are fundamental aspects of learning <sup>[5][6]</sup>.

The Escape Rooms seem to have an important educational appeal for developing various skills <sup>[24]</sup> by solving challenges or enigmas collaboratively <sup>[17]</sup>.

It is a growing interest although up to now we have found a small impact of prestigious journals, most of the articles being pedagogical experiences. This may be related to the very nature of the Escape Rooms, which are more suitable for activities of limited duration that may make it difficult to transfer them to the scientific literature. It would be interesting to contrast how many related activities of this type are carried out in non-university education.

To conclude, we must point out that this kind of activity reflects changes in teaching methodologies, and it can help to observe and verify the evolution of educational processes.

### References

1. García, C.; Martín, M.L.; Díaz, E.; Ybarra, J. Gamification and educational innovation: Design and implementation in Higher Education. V International Congress on Learning, Innovation and Competitiveness (CINAIC 2019) 2019, pp. 284-289. <https://bit.ly/2RqUFT9>
2. Rodríguez-García, A.; Arias, A. R. Use of active methodologies: a comparative study between teachers. In E. López-Meneses, D.; Cobos-Sanchiz, A. H.; Matín-Padilla, L.; Molina-García, A.; Jaén- Martínez, Eds., *Experiencias pedagógicas e innovación educativa*. Octaedro: Barcelona, Spain, 2018: pp. 247-261. <http://bit.ly/2NEXcrG>
3. Gibson, D.; Ostaszewski, N.; Flintoff, K.; Grant, S.; Knight, E. Digital badges in education. *Education and Information Technologies* 2015, 20(2), pp. 403-410. <https://dx.doi.org/10.1007/s10639-013-9291-7>
4. Santos, C.; Almeida, S.; Pedro, L.; Aresta, M.; KochGrunberg, T. Students' perspectives on badges in educational social media platforms: the case of SAPO campus tutorial badges. In 2013 IEEE 13th International Conference on Advanced Learning Technologies, pp.351-353. <https://doi.org/10.1109/ICALT.2013.108>
5. Piaget, J. *The Birth of Intelligence in the Child*; Crítica: Barcelona, Spain, 1985.
6. Chaiklin, S. The zone of proximal development in Vygotsky's analysis of learning and instruction. In A. Kozulin, B; Gindis, V. S.; Ageyev, S. M. Miller, Eds.; *Learning in doing. Vygotsky's educational theory in cultural context*. Cambridge University Press: Cambridge, UK, 2003; pp. 39-64. <https://doi.org/10.1017/CBO9780511840975.004>
7. O'Donovan, S.; Gain, J.; Marais, P. A case study in the gamification of a university-level games development course. In *Proceedings of the South African Institute for Computer Scientists and Information Technologists Conference, 2013*, pp. 242-251. <http://bit.ly/375QgLT>
8. Santos, W. O., Silva Neto, S. R., & Silva Junior, C. G.. *Uso de Games no ensino da Matemática. Uma proposta de virtualização dos jogos tradicionais, para uso como mecanismo de apoio ao processo de ensino e aprendizagem*. V Simpósio Hipertexto e Tecnologias na Educação, Recife-PE, 2013, 216.
9. Villagrasa, S.; Duran, J. Gamification for learning 3D computer graphics arts. In *Proceedings of the First International Conference on technological ecosystem for enhancing multiculturalism, 2013*, pp. 429-433). <https://doi.org/10.1145/2536536.2536602>
10. Pisabarro, A.M.; Vivaracho, C.E. Gamification in the classroom, gymkhana of programming. *Revista de Investigación en Docencia Universitaria de la Informática*, 2018, 11(1), 85-93. <http://bit.ly/36KVnkV>
11. Kapp, K. M. *The gamification of learning and instruction: game-based methods and strategies for training and education*. John Wiley & Sons. 2012.
12. Teixes, F. *Gamification: fundamentals and applications*. Anglofort S.A, Barcelona: Spain, 2015.
13. Hurtado Torres, D.; Gil Duran, N.; Aguilar Paredes, C. THE MAZE: gamifying the concept of identity. *Inter-University Teacher Training Electronic Journal*, 2019, 22(2), pp. 31-42 <https://doi.org/10.6018/reifop.22.2.370351>
14. Sipone, S.; Abella-García, V.; Barreda, R.; y Rojo, M. Learning about Sustainable Mobility in Primary Schools from a Playful Perspective: A Focus Group Approach. *Sustainability*, 2019, 11(8), pp. 23-87. <https://doi.org/10.3390/su11082387>
15. Charlier, N.; Ott, M.; Remmele, B.; Whitton, N. Not just for children: game-based learning for older adults. In 6th European Conference on Games Based Learning, Cork, Ireland, 2012, pp. 102-108.
16. Grande-de-Prado, M.; Baelo, R.; García-Martín, S.; Abella-García, V. Mapping Role-Playing Games in Ibero-America: An educational review. *Sustainability*, 2020, 12, 6298. <https://doi.org/10.3390/su12166298>
17. Sierra-Daza, M. C.; Fernández-Sánchez, M. R. Gamifying the university classroom. Analysis of an Escape Room experience in higher education. *REXE-Revista de Estudios y Experiencias en Educación*, 2019, 18(36), pp. 105-115. <https://www.doi.org/10.21703/rexe.20191836sierra15>
18. Moreno-Fuentes, E. The "Breakout EDU" as a key tool for the gamification in the initial training of teachers. *EduTec. Revista Electrónica De Tecnología Educativa*, 2019, (67), pp. 66-79. <https://doi.org/10.21556/edutec.2018.66.1247>
19. Martín-Caraballo, A.M.; Paralera Morales, C.; Segovia González, M.M.; Tenorio Villalón A.F. Evaluation and Breakout. *Annals of ASEPUMA*, 2018, 6(26). <http://bit.ly/38m7pB8>
20. Stasiak, A. Escape rooms: A new offer in the recreation sector in Poland. *Turyzm*, 2016, 26(1), pp. 31-47. <https://www.doi.org/10.1515/tour-2016-0003>
21. Nicholson, S. *Peeking behind the locked door: A survey of escape room facilities*. 2015. White Paper available at <http://bit.ly/33z5lnF>
22. Csikszentmihalyi, M. *Flow: the psychology of optimal experience*. Harper & Row: New York. USA. 1990.
23. Segura-Robles, A.; Parra-González, M. E. How to implement active methodologies in Physical Education: Escape Room. *ESHPA - Education, Sport, Health and Physical Activity*, 2019, 3(2), pp. 295-306. <http://bit.ly/30AhEPC>
24. Onecha Pérez, B.; Sanz Prat, J.; López Valdés, D. The limits of playfulness in the teaching of architecture. The technique of the Escape Room. *ZARCH: Journal of interdisciplinary studies in Architecture and Urbanism*, 2019, (12), pp. 122-133. [https://doi.org/10.26754/ojs\\_zarch/zarch.2019123549](https://doi.org/10.26754/ojs_zarch/zarch.2019123549)

## Keywords

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active methodologies;gamification;game-based learning;educational games;escape room;breakout

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