# Chapter 4
# Enhancing the Learning and Application of Knowledge in University Students:
## An Escape Room Proposal

**Alba González Moreno**

https://orcid.org/0000-0003-2254-7456
*University of Almería, Spain*

## ABSTRACT

*Gamification is an innovative strategy to improve learning and knowledge application in university students. The study proposes a gamification design based on escape rooms adapted to the university context, integrating specific curricular elements in the challenges posed. These challenges require students to apply academic concepts and theories to solve problems and escape from the confined space in a limited time. The research highlights the effectiveness of this strategy in improving knowledge retention and students' motivation to learn. It also highlights the importance of collaboration and communication among participants as key elements for active and participatory learning. It is worth highlighting how the educational escape room proposal proves to be an effective strategy to involve university students in their learning process and encourage the practical application of their knowledge, which improves their understanding of academic content and strengthens their key skills.*

## INTRODUCTION

Gamification has emerged as a dynamic and innovative strategy in the realm of education, offering a unique approach to enhance learning experiences for university students. This chapter delves into the transformative potential of gamification, particularly through the adaptation of escape room concepts within the university context. The integration of escape room challenges, tailored to incorporate specific curricular elements, serves as a catalyst for fostering active engagement and practical application of academic knowledge.

The central premise of this chapter revolves around the exploration and detailed examination of a gamification proposal based on escape room dynamics, designed to elevate the learning experience within educational settings. By immersing students in challenges that demand the application of theoretical concepts and problem-solving skills, this approach aims to transcend traditional teaching methods.

The objective of this chapter is to explore and detail a gamification proposal based on an escape room to enhance and enrich the learning experience in educational contexts. It seeks to analyze in depth how the combination of game elements and escape room challenges can motivate students, promote collaboration and critical thinking, and increase information retention. Through concrete examples and practical strategies, this chapter aims to provide educators and course designers with a solid guide for the effective implementation of this methodology in the classroom. Thus inspiring education professionals to adopt this innovative pedagogical strategy and adapt it to their specific needs in order to improve their students' participation, engagement and learning outcomes.

## Background

Gamification, a technique that involves incorporating game elements into non-game contexts, has been gaining recognition and popularity in a wide range of fields, from the marketing industry to human resource management. However, one of the fields where gamification has demonstrated transformative potential is education. Higher education institutions are attempting to reformulate and revolutionize their teaching approaches using video game-related technologies in order to enrich students' education (Alhammad & Moreno, 2018). The incorporation and increasing diffusion of gamification in educational environments and learning processes stimulates a critical evaluation of the creation of initiatives that change the way students experience learning (Garone & Nesteriuk, 2019). In this chapter, we will explore in detail how gamification can revolutionize the way we learn and teach by motivating students and fostering more effective and engaging learning.

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