

Difficulty of Chemistry concepts. How to make easy the learning. Gamification

M.M. López Guerrero¹, Maria Isabel Santacruz Cruz², Antonia Infantes Molina², María Emilia Bertolo Pardo⁴, María José Bentabol Manzanares², Maria Angeles Gomez de la Torre², Elisa Vereda Alonso¹, María Moreno Oliva³, Ramón Moreno Tost², José González Rodríguez⁵

1University of Málaga, Faculty of Sciences, Department of Analytical Chemistry, Málaga, Spain

2University of Málaga, Faculty of Sciences, Department of Inorganic Chemistry, Málaga, Spain.

3University of Málaga, Faculty of Sciences, Department of Physical Chemistry, Málaga, Spain

4School of Psychology and Life Sciences Canterbury Christ Church University

5School of Chemistry, University of Lincoln.

ABSTRACT

Chemistry is considered highly complex by students. To achieve meaningful learning, it is necessary to show its usefulness in daily life, in the development of a country and a society. Learning will be significant when the student can incorporate it into the structures of prior knowledge that they possess, acquiring significance for them. In this specific case, the research aims to contribute to the improvement of the teaching-learning processes of Chemistry in the studies of the Degree in Engineering.

In this work we studied how gamification facilitates the learning of our students. For this reason, the research group has used an Escape Room based on the topics of our subject. The Escape Room is called Was it a murder or a suicide? They will find material in the classroom, and they will have to decide if it was a murder.

In the end, the students who participate in these activities have increased their calcification in the matter by around 1-2 points. And in the final questionnaire, they have said that they would like to use gamification in other subjects. Some students told us that it was their first time taking an exam and that it was fun.

Keywords: Chemistry, Learning, Engineering Degree, University, Escape Room