



## “Education Network” a new way to teach Chemistry

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### Abstract

The complexity of chemistry has implications for the teaching of chemistry. That chemistry is a very complex subject. The majority of the students at University think that chemistry is a difficult discipline and they have difficulty in understanding the concepts. Moreover, students' interest in chemistry decreases the first year at university. The reason for this decrease might be that the contents of chemistry laboratory classes are boring, out of date and lacking of dynamism that students experience through visual media tools.

For these reasons, new programs and methodologies should be developed. Those are based on making chemistry relevant through problem solving and collaborative learning hold promise for reforming chemistry education. It is about an education according to circumstances, which is adapted to context and virtual behaviour of people.

It's time to CRUSH boredom by transforming your classroom into an **Escape Room** adventure. School-based escape games are a great teaching tool. The students while playing, learn. The most important point is that they won't realize they're doing both at the same time.

How Escape Games Help your Students Learn:

- *Critical thinking*: In addition to reinforcing subject matter expertise, escape games also encourage critical thinking, teamwork and communication skills, all of which are key to survive in today's world.
- *Attention*: Timed challenges grab and keep students' attention much better than lectures and other classroom activities. Escape games involve elements that are similar to video games and role-playing games, resulting in enthusiastic student participation. Intrinsic Motivation to Learn.
- *Teamwork*: Some students may emerge as leaders, allowing you to seek out constructive ways to leverage their peer authority to improve classroom dynamics.

In this work, an educational gamification experience based on the escape room concept was developed. The first (Do It Yourself) DIY Escape Room was built the year before at Mechanical Engineer Degree started, that took more than three weeks of work. It was presented to other professors to the same subject at different degrees. That DIY Escape Room was modified and adapted to each group. Each professor changed the clues, problems and so on in order to orientate the topic as much as possible to their students.

That year 2019, eight Professors of Malaga University created a network to share the results of the Escape Room and the pieces of that DIY Escape Room. That network was called “**Red Docente de Excelencia INEDUQUIM: Red Docente de Excelencia en Innovación Educativa en Química**”.

The evaluation of the proposal was made by students of different Engineer Degrees at University of Malaga, with satisfactory results.

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