

[DOI: 10.20472/IAC.2016.023.063](https://doi.org/10.20472/IAC.2016.023.063)

MARÍA DEL MAR LÓPEZ GUERRERO

Universidad de Malaga, Andalucía Tech, España

GEMA LÓPEZ GUERRERO

Universidad de Malaga, Andalucía Tech, España

IMPLEMENTATION OF ITC TO MAKE THE CHEMISTRY MORE INTERESTING IN ENGINEERER GRADES

Abstract:

Chemistry is a subject many students prefer to avoid, even if they have an interest in science, because of its reputation for lowering grade point averages. However, it isn't as bad as it seems. Chemistry has a reputation as being a difficult subject to master, but there are steps you can take to improve your chances of success. The key to learning chemistry is to take responsibility for your own learning. No one can learn chemistry for you. If you want to be good at something, you have to practice it. If you review chemistry every day and work problems every day, you'll find a rhythm that will make it easier to retain the material and learn new concepts.

Furthermore, in order to improve the Chemistry learning, it was thought that the use of ICTs could be very beneficial. In general, ICT can help to increase participation of students in the area and would improve the direct intervention of the students which motivates their learning. On the other hand, every student has smartphone and internet access.

After it was identified student misconceptions and misinterpretation in Chemistry for engineering students as they are attempting to interpret and explain the chemical processes. Oxidation-reduction reactions were identified the most difficult concept, following by solubility and formulation.

The objective was to carry out a proposal for teaching contents of chemistry using didactic resources for virtual environment, the use of a simulation that lets students to construct useful mental models in redox reactions; an online interactive periodic table of the elements was developed. Clicking on an element symbol in the periodic table to get facts for that element, discovering the elements, the properties and trends. Videos of solubility in which could be possible to watch the reactions.

Results. The used ITC demonstrated that students significantly increased the number scientifically acceptable ideas in student's conceptions of science due to the fact that the use of ITC has demonstrated that allows them to practise.

Conclusion. The use of either interactive table or the simulation or videos can be helpful in improving problem solving. This encourages students to develop new ideas about science, and allows them to create a memory from viewing animations, leading to confirmation or modification of the existing mental model.

Keywords:

ICT, Chemistry, simulations

JEL Classification: I21, I20, I23