MOOCs, Language learning and mobility
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Abstract template

Chemical language, a language that you need to know if you want to learn Chemistry

Mª Mar López Guerrero [(1)], y Gema López Guerrero [(2)]
[(1)]Department of Analytical Chemistry, Faculty of Science, University of Málaga. *mmlopez@uma.es*
[(2)]Department of Didactic and School Organization, Faculty of Education, University of Málaga.
Gemalopez@uma.es
Spain

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There is a little bit analogy between chemistry and foreign languages. One reason why people find Chemistry as a language is because of the orthography, the systematic way it is written. In order to learn a second language, one needs to know the new symbols,
In chemical language, it is necessary to learn 103 symbols, the chemical alphabet, this is the periodic table. After knowing the alphabet, the students are ready to begin the formation of chemical words. In this case, learning the compounds names are easier when only two elements are involved, but when there are more than two, the chemical language is more complex. As a language, students can build a huge amount of chemical formulas and reactions from finite components. After a few classes of chemistry, the students are ready to attempt intelligent conversation by combining the chemical alphabet words into sentences, the reactions. They can translate between Spanish and Chemistry. Actually, every chemist in every language refer to the same concept using the same word. It is true that in a subject as Chemistry, the language is laden with a specific vocabulary.

As a foreign language, chemistry demand hard work in the form of many hours of repetitions examples and problems, but why not easy the burden by beginning. Chemical education researches have recognized that students often have difficulty learning chemistry concepts, language and so on. Researchers have proposed several suggestions as to the reasons for this difficulty, including frequent overloading of student working memory [1-3]. One of the major goals in teaching chemical language with a contextual approach is that students will develop the ability to understand a make decision about issued they may face in their everyday lives outside of the classroom [4,5]. In this work, we report a study that employed computer simulations.

The proposal of this study is intended to design and implement a teaching strategy for teaching and learning the chemical language, first of all the chemical alphabet,the Periodic Table and then, the language which it is built the chemistry. For this proposal we will use some multimedia application (Information and Communication Technologies (TIC)), which consists in a interactive periodic table. Student will be able to push one element and they will be able to see the properties of this element and which other element will be able to combine with it, and furthermore, if this element will be able to combine with itself. Whenn they know properly the simple language, they will be able to continue studying more complex words, in this case, the reactions. With this multimedia application, the students will be able to watch how the atoms will change, one atom changes to a new atom during a whole reaction. And finally, they will be able to watch how these new atoms have new properties, and they combine each one.

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