

# The PROFILES project as a way to provide continuous professional development of the science teachers

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## INTRODUCTION

Nowadays, we have been witnessing an interesting phenomenon, however, worrying: there are indicators that suggest that students do not like science, as it is taught in European schools [1]. Of course, the reason for this phenomenon is not from the responsibility of a single entity. Effective science learning is a challenge that all teachers must face in modern times. Therefore, it is essential that teachers develop a self-critical spirit on his school activity – in order to achieve the ultimate goal of teacher ownership [2].

Thus, from this inherent problem in science teaching has emerged a project promoted by the European Commission (through the Seventh Framework Programme – FP7) which aims to provide professional, methodological and self-reflexivity competences to science teachers: the PROFILES project. The PROFILES project arises from the need to invest in continuing training for teachers as a way to a better future in education.

## PROFILES



Professional Reflection Oriented Focus on Inquiry-based Learning and Education through Science

## THE PROFILES PROJECT

This project increases a spirit of self-efficacy on participating teachers that can be stimulated to other teachers from different scientific areas. This self-efficacy refers to two main components:

- ❖ The competence to teach students in order to increase their scientific literacy in a motivational manner.
- ❖ Have the confidence to be able to perform such teaching, despite the possible inherent restrictions.



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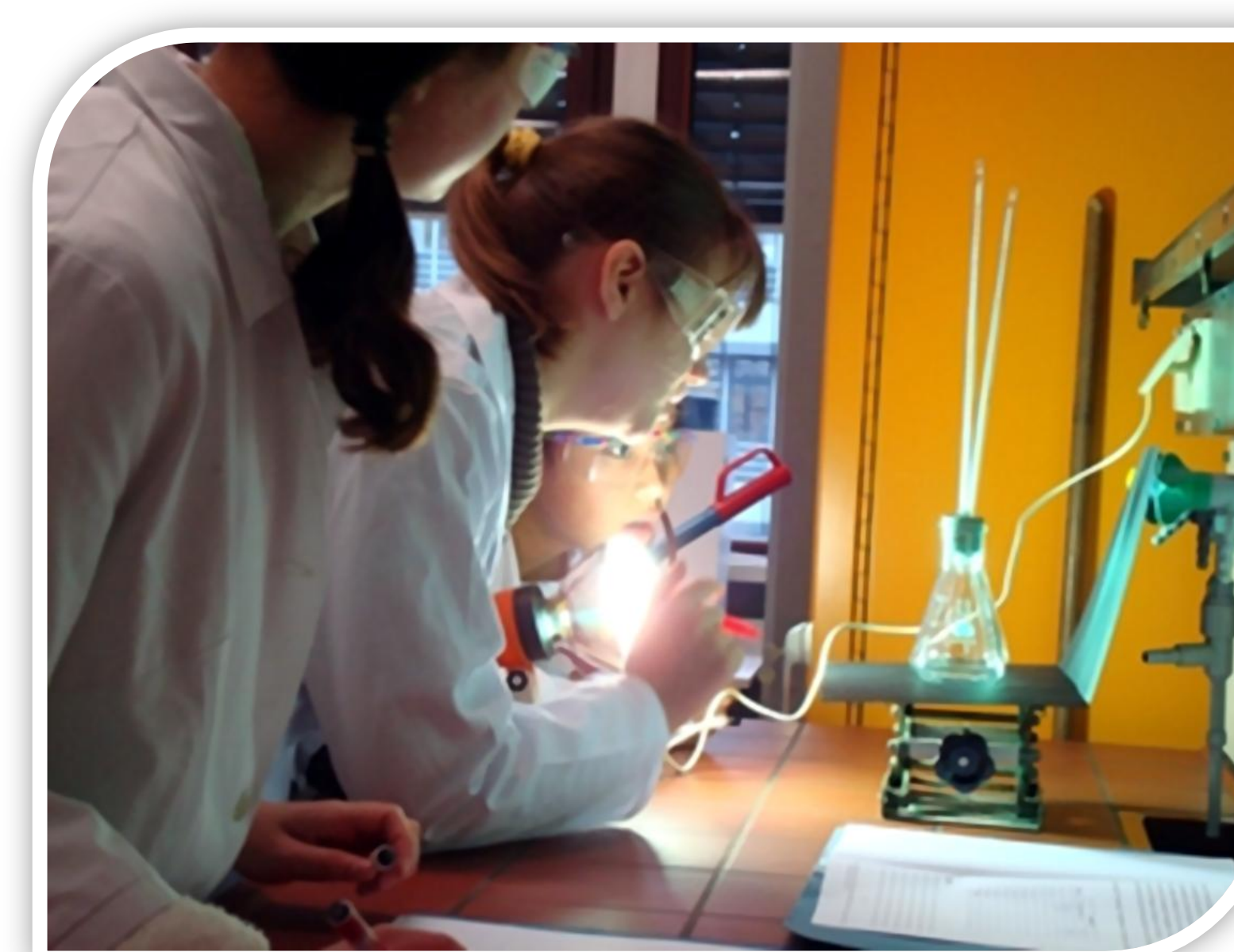
## PROFILES IN PORTUGAL

Portugal is one of the various participating countries in PROFILES and is represented by the Faculty of Sciences, University of Porto. A significant component of the project was implemented through an action of teacher training which was attended by about 30 chemistry teachers. The project promotes a formal learning through creativity, problem solving and socio-scientific decision-making procedures. Therefore, it is possible and important to establish a link between society and science, influencing the ways of teaching and educating through science [2].

So far, we have some interesting themes for research with students:

- ❖ “Do you need chemistry in order to be a good bone surgeon?”
- ❖ “How can we avoid energy losses in our school?”
- ❖ “What happens with the ice-blocks in my soft drink?”

All participants in the project are extremely excited about the opportunity to take part in this European project.



## CONCLUSION

The effective and sustainable improvement of education through the promotion of self-efficacy and teacher ownership can be enhanced through collaborative interactions and through self-assessment measures that focus on the reflective practices of teachers as well as through formative assessment and summative cognitive and affective learning of students.

For future steps, it is expected that teachers apply the PARSEL modules with their students and reflect the extent to which the application of new learning strategies promote teacher ownership. In the future, we expect to achieve good results from students and teachers. Until then, we will keep working with great enthusiasm! All comments and suggestions are welcome.

## REFERENCES

- [1] European Commission. *Science education now: A renewed pedagogy for the future of Europe*. European Commission: Brussels, 2007.
- [2] PROFILES. *FP7 Negotiation Guidance Notes – Coordination and Support Actions – Supporting and coordinating actions on innovative methods in science education: teacher training on inquiry based teaching methods on a large scale in Europe – Annex I – “Description of Work”*, 2010.