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# The scientific papers in the science clasroom: a resource for learning science through reading

Antonio Mateos
School of Education. University of Castilla-La Mancha, Toledo, Spain

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One of the main challenges for Science education today is to find strategies, methodologies and teaching resources that are original and helpful to motivate and involve students (Vazquez & Manassero, 2008). We consider important to take into account in Science classes all those resources and activities to allow Science to get closer to the students and help them to understand and simulate how to work in the frame of a scientific discipline. Experience tells us that Science and scientific activity appear as something abstract, meaningless and difficult for many students (Osborne, Driver & Simon, 1998). In short, students see scientific work as difficult to access to and accessible only to certain persons who are usually located in a laboratory.

This communication tries to remember the potential importance of scientific articles as a resource for learning how to learn basics of scientific work. In particular, the idea is to use in the classroom a careful selection of scientific articles taken from journals or conference proceedings connecting the real interest to students of different educational levels, preferably Middle School and Higher Education. These topics can be included or not in their Science curriculum. A key aspect is that the articles have a common basic known structure: Title, Introduction, Methods, Results, Discussion and References since from it we can show the value and scope of each item. This type of activity can be performed in special seminars or as the initial part of the of practical work program or even as the final part of each lecture.

Paragraph Title enables us to work very useful concepts about the ability of synthesis of the students, teaching them to look for key ideas and writing in a sensible and objective way. These issues seem to be very important for their training. The Introduction section will be useful to reflect about where or how scientific research emerges and what role curiosity and observation play within it. We may also learn to select important ideas and goals for research were there implicit or explicit. The Methods section will allow us to discuss issues related to value, creativity, design of experiments, laboratory equipment, and the connection among sciences and so on. We can also get approach to the importance of tools, metrology, etc. The Results section will enable students to understand the idea of information processing, graphics, etc. Through Discussion students can learn how our findings can be inserted as a whole and how we should compare our results with others in a cautious way. Another sections of the scientific articles such as References, Summary and Acknowledgments, if any, will be extremely valuable in the students' scientific training process. Finally it is argued that scientific articles are a good source for learning both scientific work processes and relevant skills, for instance synthesis and others about mathematics, such as sizes, designs and language, for example (Campanario, 2004). Above all, this resource may specifically promote a range of values that are considered very important in Science education and that take part of the so-called scientific attitude.

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