

"Gh. Asachi" Technical University of Iasi, Romania

ICEEM/02 - ENVIRONMENTAL MANAGEMENT AND SUSTAINABLE DEVELOPMENT SECTION "Multidisciplinary Approach on Environmental Issues"

CURRICULUM DEVELOPMENT THROUGH SCIENCE SHOPS

Arie Fokking^{1*}, Henk A.J. Mulder²

¹ Green Grid Consultancy, P.O. Box 545, NL-7500 AM Enschede, The Netherlands; ² Chemistry Shop, University of Groningen, Nijenborgh 4, NL-9747 AG Groningen, The Netherlands

Abstract

More and more, European higher education is oriented towards the future role of students outside university, in society. The priority of higher education therefore shifts to teaching students how to continue to acquire new knowledge and to use knowledge in a societal context. Science shops offer one method to include experiences with these aspects in the curricula.

Science shops are university units that do research for civil society, they are present in many countries. Students under staff supervision do much research. Students learn valuable skills, such as communicating with non-experts and solving a problem in context. Students can earn credits for their work, which count towards their degree. There are various ways of including science shop projects in the curriculum. One can award credits to projects as such, or students can do projects as part of an existing course or practical period. A much used option is the MSc (or BSc) thesis; this can be based on a science shop request. To increase the benefits of science shop projects for the curriculum, science shop cases can be used as example in many other courses. Experiences from science shop work can also be used in methodological courses, teaching students in general on science and society. Finally, there are now examples of how science shops have advanced new master programs.

The value of the Science Shop approach is acknowledged by the EU and by the Netherlands' Minister of Education. Also in Romania, Minister Andronescu in 2001 committed herself explicitly to making Science Shop a structural element in higher education and research. Based on the experience acquired since 1998, science shops can be made a regular university activity in Romania; not only in environment, but also in other societal themes. Both university and civil society would benefit from this; on the short term through the results of individual projects and on the long-term by students that have learned to apply their knowledge in social context.

Keywords: Science Shop; Curriculum development; Science and Society; Science policy

^{*} Author to whom all correspondence should be addressed: e-mail: af@greengrid.nl, h.a.j.mulder@chem.rug.nl