

THE “EARLY TECHNICAL EDUCATION” PROJECT AS AN EFFICIENT LEARNING TOOL FOR UNIVERSITY EDUCATION SCIENCES STUDENTS

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Abstract

In this article we present a work of interdisciplinary and collaborative nature that has been carried out with Science Education students, regarding Educational Technology (E.T.) subject. This work was initiated in the scope of the “Early Technical Education” project (2002-2004) that which led to the production of a flexible e-handbook including innovative, didactic methodologies activities and experiences in order to raise scientific and technological interest in children and to contribute to teachers and educators professional development (Veiga Simão, A., Cabrito, B. and Rodrigues, E., “The Project ‘Early Technical Education’: some contributes to the integration of sciences and technology on childhood education, Technological Advances applied to Theoretical and Practical Teaching, Proceedings IADATe2005 IADAT, Barakaldo, 2005, pp. 122-126). The project arose by a process of analysing and looking for answers to the problem of youth scientific and technological knowledge in Europe. Nowadays, an understanding and knowledge of methods, contents and applications of science and technology are specially valued in a learning society. There is also a tendency to see Science and Technology (S&T) culture (literacy) as a prerequisite for economic development and innovation. It also plays an important social role, and in citizens cultural development. It was axed on these principles that we continued the work with the students of Education.

In this article we explain how the evaluation, testing and exploration of the pedagogical materials have been developed through a partnership work between the Education Faculty and schools or nurseries, implying the collaboration of students and teachers of the partners Institutions. Furthermore we describe some of these studies, including the context situations, the selected materials and some of the results and conclusions.

Finally, as a main purpose, we reflect on the pedagogical practice and we discuss how the involvement of the Higher Education students in S&T projects of intervention in real situations enhances students’ competencies in subjects beyond science and technology, such as curriculum development, pedagogy, methodology of research.

Keywords

Learning methodologies, science and technology culture, educational innovation, higher education