

A hands-on experience of the use of active learning and some innovative teaching techniques in a basic engineering subject

E. Centeno Hernández

Abstract-

This paper presents the experience of trialling a variety of combined learning techniques in the framework of a second-year engineering subject (Electromagnetic Fields), paying special attention to the point of view of the students and the usefulness perceived by them. The techniques include both traditional ones such as lecturing and problem solving by the teacher, as well as more innovative ones such as videos, minute papers, daily summary presentations and in-class team working. Engineering schools have been traditionally reluctant to implement profound changes in their teaching techniques but at the same time, the current evolution of the requirements of the industrial sector makes them aware of the urgent need for new ideas in the field of teaching, and so inevitably gives them a potentially leading role in the development of new classroom techniques. This work is intended as a firm step in the direction of positive change for engineering studies.

Index Terms- active learning; teamwork; peer-learning;

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