

## **T5\_68 AN E-LEARNING WEB ENVIRONMENT FOR MATHEMATICS AND PHYSICS COMMUNITIES OF PRACTICE**

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It is generally accepted that the quality of the long term results of the scientific education depends essentially on a suitable initial and life-long teacher formation. Our decennial experience in conducting university courses in the Italian teacher training schools has shown that a methodological and operational reorganisation of teacher's formation must be based on valid interaction schemes between educational research and teachers. To support this reorganization, in a joint effort between mathematics and physics researches who have shared this ten-year-long experience, we have recently set up an e-learning web environment for Mathematics and Physics communities of practice, from infancy to upper secondary school, sponsored by the Science Faculty of the University of Torino, called "DI.FI.MA.", which stays in Italian for "Didactics of Physics and Mathematics", web address "<http://teachingdm.unito.it/porteaperte>". The reasons for this choice were essentially two. The first is related to the results of the educational research and practice, which underline that many aspects are as important as the disciplinary contents, such as sharing educational experiences, connecting different fields of knowledge, using non formal languages, opening towards new technologies, etc. An e-learning web environment is a flexible and efficient instrument well suited to support this approach. The second reason is related to the effective Italian educational situation. Since, at present, there are in Italy practically no incentives to foster a permanent teacher formation, the motivations to maintain a high professional profile rely on the teacher desire of responding to the student's explicit or implicit demands and a web environment provides a valid background support. The DI.FI.MA. platform was activated about one year ago, it has now about 600 participants, different sections covering a variety of activities, didactical proposals and documentation. In the presentation we will discuss the "rationale" of the organization, some of the problems which have arisen, the response of the teachers and present some example of materials regarding both mathematical and physical content