

Duration: 2016 - 2019

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ICT and Multimedia in Education

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Technology enhanced teacher education programs may represent an added value to the quality of prospective teachers' training. This powerful idea can be contextualized within the initial and continuous teacher education courses in the areas of Biology, Informatics, Mathematics and Physics (BIMP). The problem underlying the project is to find an answer to the following question: How does the use of technology in learning spaces offer opportunities to provide innovative ways of designing teacher education for the future?

It is based on the following research working hypothesis: Web environments and digital technologies provide affordances to the creation of new types of learning spaces, providing opportunities for a more effective, personalized and sustainable learning. This hypothesis is built upon the premise that the future will blur the boundaries between living, learning and working and this will result in the creation of flexible multiuse spaces that can accommodate

different activities and serve different learning purposes. This will lead to the need for rethinking educational spaces and didactic approaches involving a wide range of stakeholders.

The main problem of the project will be addressed through the articulation of piloting of real experiments in initial teacher education courses together with an analysis and development of theoretical accounts based on previous work of the research team on teachers' 21st century skills. The project defines the following research questions:

- i) what is distinctive about teacher education in technology enhanced learning spaces and how might it change teachers' views about the future of schooling?
- ii) what key competences should be part of teachers' repertoire for the future school?
- iii) how does technology enhanced teacher education can improve the quality of Initial Teacher Education programs?

The experiments in initial teacher education BIMP courses that constitute the empirical field of the project, will be carried within the Master programme on Teaching of IE, and developed in the context of specific courses of Initial Supervised Practice and at the Future Teacher Education Lab (FTELab).

The problem addressed is quite relevant given the clear indications coming from the literature review that stress for the need of forms of teacher education that induce innovation in classroom practice. However, it is a strong conviction of the project team that the kernel of the problem of innovation in teaching heavily depends on initial teacher education. The design of future teacher education programs has a fundamentally pedagogical nature and this idea is reflected on the strategic options of this project.

The Project combines technology, creativity and teacher education design in order to create a challenging context for the development of ideas, guidelines and products that serve teachers' preparation to become innovative practitioners. The Institute of Education of the University of Lisbon (IE) leads the project which includes a group of partners acting as key participants in the design and setup of the FTELab and the implementation of the dissemination and mainstreaming strategies.