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OPEN LEARNING APPROACH WITH REMOTE EXPERIMENTS

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Olga Dziabenko, Airina Volungevičienė, Marius Šadauskas

The education in applied sciences, engineering, and technologies is one of the Key Competences for Lifelong Learning (2006/962/EC) and priority areas in the educational strategy in European Union. There is a widespread consensus in Europe that industry requires well educated STEM graduates. Since students' motivation to learn depends upon the knowledge and skills of the teachers, teachers should have access to high quality and real-life-based resources to build their competence, to support student's improvement, to familiarize with contemporary research and development, and industrial needs in STEM.

The OLAREX consortium realized that the knowledge and skills requirements exchange between school and industry through the university expertise should be established. For this purposes the consortium was been granted by Lifelong Learning Programme of the European Union (518987-LLP-1-2011-1-ES-KA3-KA3MP).

The OLAREX started at November 2011. The institutions from different EU countries (Spain, Lithuania, Austria, Bulgaria, Hungary, and Poland) are involved in the project.

The main project purpose is to innovatively implement ICT-based learning materials, remote experiments, and e-didactic methods into formal and non-formal lifelong learning settings. It will enhance and modernize science, technology, engineering and mathematics (STEM) curricula, foster student creativity and motivation, and develop professional skills and insights about the impact of evolving technologies.

What should be done during project? The organized training courses for teachers, future authors of learning materials and modules, and museum employees will build the e-didactic competences in the STEM by providing remote lab work explanations, offering practically-oriented approaches for strengthening educational programs and technical practices. During the training, 100 teachers will integrate designed by project team learning modules into their curriculum, test them in their classrooms, and encourage their students to apply what they learned in a final project. We will prepare six comprehensive learning modules with remote experiments – in English and the national languages of the partners. The learning and teaching

materials will be incorporated in an e-platform with personalized learning environment. On the basis of National Politechnic Museum, Sofia, the consortium will organize a museum exhibition with remote experiments. We believe it will emphasize hands-on experience, and context-based learning in frame of non-formal education.

Olga Dziabenko
University of Deusto, Spain

Airina Volungevičienė, Marius Šadauskas
Vytautas Magnus university, Lithuania