USING A 3-TIER TRAINING MODEL FOR EFFECTIVE EXCHANGE OF GOOD PRACTICES IN AN ERASMUS+ PROJECT

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Abstract

VISIR+ is an Erasmus+ project that aims to develop educational modules for electric and electronic circuits theory and practice following an enquiry-based teaching and learning methodology. The project has installed five new VISIR remote labs in Higher Education Institutions located in Argentina and Brazil, to allow students doing more experiments and hence acquire better experimental skills, through a combination of traditional (hands-on), remote and virtual laboratories. A key aspect for the success of this project was to motivate and train teachers in the underpinning educational methodology. As such, VISIR+ adopted a 3-tier training process to effectively support the use of VISIR in the Institutions that received it. This process is based on the “train the trainer” approach, which required the participating partner institutions to identify and engage a number of associated partners, interested in using their newly installed remote lab. To measure the quality of the training process, the same satisfaction questionnaire was used in all training actions. This paper presents a detailed description of the training actions along with the analysis of the satisfaction questionnaire results. Major conclusions are that the quality level of the training process remained practically the same across all training actions and that trainees sometimes considered the practical use of the VISIR remote lab as difficult, irrespectively of where and when the training action took place.

Keywords: teachers training, remote and virtual labs, VISIR

1 INTRODUCTION

The Virtual Instruments Systems in Reality (VISIR) is a remote laboratory for conducting real experiments, at distance, with electrical and electronic circuits. It was originally developed by the Blekinge Institute of Technology (BTH), Sweden, in 1999, under the mentorship of Ingvar Gustavsson, and since then it has been installed at and used by several Higher Education Institutions (HEI) in Europe, namely in Austria, Portugal and Spain [1]-[10]. These two last mentioned countries have strong academic cooperation links with Latin American (LA) countries, which continuously favour the exchange of good practices among HEIs and its staff members.

The Key Action 2 (KA2) of the European Union (EU) Erasmus+ Programme aims to support the cooperation for innovation and the exchange of good practices, in particular through projects with Partner Countries in the field of higher education. These projects should support participating organisations/institutions and systems in their modernisation and internationalisation process.

The initial VISIR+ project proposal followed two motivational dimensions: a top-level, strategic one corresponding to problems identified by the Brazilian Association for Engineering Education (Associação Brasileira de Educação em Engenharia, ABENGE) and the Argentinean Federation of