

Chapter 75

Innovative Approaches in Project Management Blended Education: A Case Study on Introducing Agent-Based Simulation in a Master Degree Program

Constanta Nicoleta Bodea
Academy of Economic Studies, Romania

Corneliu Alexandru Bodea
Carnegie Mellon University, USA

Augustin Purnus
Technical University of Civil Engineering, Romania

Ruxandra-Ileana Badea
Academy of Economic Studies, Romania

ABSTRACT

In recent years, many business education programs have focused on the development of competences, instead of knowledge transfer. For this reason, various innovative training approaches were adopted, including educational simulations. The increasing availability of the simulation resources also contributes to the proliferation of simulation in business education curricula. The chapter presents how the simulations were introduced in a Master degree program on Project Management, in project planning and controlling module. The Master program has a blended-learning approach, which nicely fits to the simulation requirements. The simulations are based on an agent-based model of the project resource leveling process, part of the project planning and scheduling topic. The authors made several evaluations of the students' results before and after the simulations. The main conclusion of the experiment is that the educational simulations improve the competence development process, only if they are properly designed and performed.

INTRODUCTION

Formal education is essential for the development of the project management profession. Different project management education systems across Europe were studied and the conclusions were that the delivery of project management education differ significantly based on national/regional context, characterized by the maturity of the project-oriented society, the history of the project management education provision, the rigidity of the education system, the government support for establishing a project management education framework, and the training methods adopted/required by the project oriented companies (Turner & Huemann, 2001). Most of the studies include project management education in the framework of the business education, assuming that there are not significant differences for project management, as a specialization inside business education.

Pant and Baroudi (2008) emphasize on different competence categories (technical and behavioral), which are mainly addressed by the academic education. This study pointed out that the university education predominantly addresses the “hard” (technical) skills’ at the expense of the “soft” (human) skills. Another study of the educational practices in different countries was performed in the framework of the Project-oriented Societies (POS) project (Gareis & Huemann, 2001), promoted by the International Project Management Association. In Romania, the importance of project management education was acknowledged by the national bodies in charge of educational regulations (for setting of national catalogue of specialization in higher education system, accreditation standards etc.). Several Romanian universities delivered master degree and PhD programs in project management (Bodea, 2006).

The Academy of Economic Studies (AES) is a university, considered as one of the best representatives of the higher education system in Romania, in economics and business administration. The university has 11 faculties, over 49.000 students

and course attendants; 35500 in the graduation cycle, 9400 in master programs, 2500 PhD students, over 1600 students in continuing education programs and 1500 didactical and technical and administrative staff. AES started to deliver master degree programs in project management in 2000. In 2010, 10 master programs of the AES had project management as specialization. The first project management master degree program, named Computerized Project Management is still being successfully delivered. Until 2010, the Computerized Project Management program, known as MIP was organized in two different ways: as a full time program (on campus) and as online studies. The curriculum was the same for both programs, but the teaching methods were adapted to the program format. Since 2010, only one program is delivered, using the blended-learning approach. In this way, the didactical experience achieved in both programs is valued in a complex learning environment, which combines traditional face to face classroom methods with more modern computer-based activities.

The program objective is not only to transfer knowledge from teachers to students, but also to develop professional competences, empowering the students to perform the relevant actions for the behavior of a competent project manager (IPMA, 2006). 24 disciplines are included in the program curricula. Each discipline is delivered in two weeks period. The program lasts two years, and every year has 14 weeks for didactical activities (face-to-face and online activities). According to the European Credit Transfer and Accumulation System (ECTS), 180 ECTS-credits can be earned by those following the entire program.

Some of the teaching process and interactions take place on a Moodle e-learning platform. Moodle is a Course Management System (CMS), also known as a Learning Management System (LMS) or a Virtual Learning Environment (VLE). Figure 1 presents the MIP home page, as defined in Moodle. The virtual learning environment has two distinct areas: a teaching area, organized for each

19 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:
www.igi-global.com/chapter/innovative-approaches-project-management-blended/77282

Related Content

Feral Systems and Other Factors Influencing the Success of Global ERP Implementations

Don Kerr (2008). *Enterprise Resource Planning for Global Economies: Managerial Issues and Challenges* (pp. 147-165).

www.irma-international.org/chapter/feral-systems-other-factors-influencing/18434

Sentiment Analysis in Business Intelligence: A Survey

Laura Plaza and Jorge Carrillo de Albornoz (2013). *Enterprise Resource Planning: Concepts, Methodologies, Tools, and Applications* (pp. 1500-1521).

www.irma-international.org/chapter/sentiment-analysis-business-intelligence/77287

ERP Software Inspections and Audits

Julius Murumba and Jackson Kipchirchir Machii (2020). *Metrics and Models for Evaluating the Quality and Effectiveness of ERP Software* (pp. 330-347).

www.irma-international.org/chapter/erp-software-inspections-and-audits/232361

ERP Systems in Universities: Rationale Advanced for Their Adoption

Dave Oliver and Celia T. Romm (2002). *Enterprise Resource Planning: Global Opportunities and Challenges* (pp. 43-60).

www.irma-international.org/chapter/erp-systems-universities/18463

Measuring Utilization of ERP Systems Usage in SMEs

Hedman Jonas and Johansson Björn (2013). *Enterprise Resource Planning: Concepts, Methodologies, Tools, and Applications* (pp. 22-34).

www.irma-international.org/chapter/measuring-utilization-erp-systems-usage/77210