Chapter 12  
Educating Project Managers to Deal with Project Risks:  
Improvement of the Educational Programmes Design by Using Curriculum Management Systems

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ABSTRACT

During the last years, the development of the project risk management competencies became a ubiquitous objective for education and training in project management due to the increasing constraints which companies face on the implementation of their projects. Alignment to the professional standards and usage of innovative methods in designing and delivery of instruction represent common requirements that education and training providers should consider and fulfill. The authors examine the main challenges in addressing project risk management subject in the education programmes and identify how these challenges could be dealt by using curriculum management systems. In order to implement the identified improvements, the authors propose an innovative architecture for a curriculum management system, which can be adopted by those universities interested in developing competencies-based programmes in project management. Some preliminary results are presented and discussed.

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INTRODUCTION

Increasing constraints which companies face on the implementation of their projects impose a wider application of projects planning, scheduling and monitoring methods, with special focus on risk management methods. “Emerging environments increase pressure on the managers in developing, deploying and maintaining a practical, holistic risk management approach that can help them lead through immediate, long-term, and evolving risks and succeed in the new business environment” (KPMG, 2011). But lack of adequate training in the use of risk management tools and techniques is one of the major impediments.

According to the Institute of Risk Management (IRM, 2015), the risk management represents a fast growing profession. In many economic sectors, the professional risk managers are in increasing demand. Job positions related to risk management (project risk manager, senior enterprise risk project manager, corporate risk manager, cyber and IT risks manager, strategic risk consultant etc.) are often announced and the companies define a professional career path for the risk managers (IRM, 2015; SCE, 2015). But the recruitment process seems to be difficult and very often it is not successful, due to the lack of the required competences. The development of project risk management competencies became a ubiquitous objective for the project management education and training. Alignment to the professional standards (IPMA, 2015; PMI, 2007; ISO, 2015; ISO, 2009) and the usage of the innovative methods in designing and delivery the education represent common requirements that education providers should consider and fulfill.

As a learning subject, project risks management has several characteristics which make it difficult to be addressed (Dascalu et al., 2015; Bodea et. al., 2015; Bokor & Hajdu, 2014):

- The learning topics are related to different specializations;
- The learning outcomes are referring to knowledge, hard and soft skills;
- The learning outcomes are referring not only to the subject-specific skills (related to project risk management processes and methods), but also systemic (skills closing the gap between theory and practice) and generic/subject-independent ones (interpersonal and instrumental skills);
- The innovative teaching and assessment methods should be consider for assuring the competencies development.

Below, we present these characteristics and how they determine challenges for project risks management education and training.

First of all, managing project risks requires specific knowledge and skills, which are needed when the specific processes are executed (IPMA, 2015; PMI, 2013a; Purnus & Bodea; 2015). As main learning topics for project risks management, we can mention:

- Risk-related concepts (risk probability/distribution, project risks vs. business risks exposure, impact, proximity, expected monetary value).
- Risk identification (risk sources, risk breakdown structure, risk register, risk identification techniques).
- Qualitative risk assessment (assessing the probability and impact of project risks).
- Quantitative risk assessment (assessing the probability and impact of project risks).
- Selecting strategies and implementing response plans to address project risks (risk owner, individual risk profiles, response strategy and plan, residual risks, contingency and fall back plans).
- Evaluate and monitor risks, opportunities and implemented responses.