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Facilitating project management education through groups as systems

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Abstract

Project management education is currently facing several challenges to help people deal more effectively with the complexities of their future work. Students' exposure to 'real' project situations in which they can use, develop, and reflect on their skills as well as learn from each other has become essential and in need of further improvements. This paper presents a group-based approach to project management education which uses the notion of a 'group' as a system in order to develop students' individual awareness of and abilities to deal with both expected and unexpected project situations. The approach aims at nurturing and fostering students' involvement in project situations whilst challenging them to go beyond their own learning comfort zones. Reflections from our experience of using this approach in several courses in UK higher education institutions lead us to identify its benefits, different strategies that students use to respond to challenges, and new possibilities to continue improving project management education.

Keywords: Developing individual competence; Groups; Team roles; Project management education; Skills; Collaborative learning; Systems thinking

1. Introduction

Increasingly and worldwide, education in project management is facing several challenges. To some and despite its popularity, education does not adequately prepare people to deal with the complex realities of the real world (Winter et al., 2006). The exposure of project management students to 'real' situations through the provision of appropriate learning environments, and the need for them to reflect on their own skills in, and attitudes to projects has been put forward as an essential strategy to promote more sensible and adequate responses to the emerging complexities we see in project practice. This strategy also aims to balance reflection and action by going beyond technical orientations in project education (Crawford et al., 2006; Sense, 2007; Thomas and Mengel, 2008). However this strategy requires further improvements. With existing institutional constraints and opportunities, how can we in project management education better facilitate students' development of skills, awareness and reflective abilities so that they are better prepared to work with others and succeed in the future?

Proposals to shift from 'training-focused' to 'reflective practice' project education have already been made (Crawford et al., 2006) and we aim to contribute to their future improvements. In order to do so we argue that there are inherent assumptions that still need to be reviewed, one of them being the implicit privileging of self-interest and self-reward as the only drivers of students. In project management education, it is still the individual who is the focus of attention, as it will be him/her who is to acquire relevant skills or competencies, even if in the process s/he will be more able to reflect and develop emphatically and emotionally oriented, reflective and leadership oriented management styles and capabilities (Napier, et al., 2007; Sauer and Reich, 2009; Thomas and Mengel, 2008). We argue that we need to shift this individual focus, as it currently leads us to privilege the notion of 'who [individual] has got it [relevant project skills, abilities or competencies] and who has not' (Sauer and Reich, 2009) (brackets added). We need to move towards more collectively oriented (what we will later call systemic) educational efforts that better match the complexities of projects and thus future developments in education and practice. The aim would be to

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still facilitate an individual education in project management but with a view of emphasising its sensitivity to social contexts.

Our paper develops and assesses an approach that considers student groups *as systems* that can thrive through (often) a variety of expected and unexpected project situations. We set up a learning environment which allows groups not only to go beyond their focus on acquiring new 'hard' (technical) or 'soft' (behavioural) skills, competencies or competences individually, but rather to collectively use or develop their current skills in the face of challenges similar to (or mirroring) those encountered in 'real' (industry-based) projects. As we see it, students possess already many different skills and abilities that they can acknowledge as being useful as well as requiring further development. The setting of a group and its management as a system enables us to trigger students' awareness on the value of their skills and abilities and those of other group members, thus encouraging them to learn from each other in order to accomplish often uncertain tasks together.

We build on the importance that is given to systemic tools in project management to help people become aware of the *social context* of projects, as well as the need for project managers to develop their human and reflective skills to deal with complex situations (Pant and Baroudi, 2008; Thomas and Mengel, 2008; Winter et al., 2006). The importance of and engagement with the context of projects can enhance the chances of project success (Geraldi, 2009), as well as create a supportive environment for project learning (Sense, 2007).

In our approach we make use of key systems-thinking concepts and ideas which we relate to collaborative learning theories, some of which use the idea of groups as systems (London and Sessa, 2007). We find this notion useful to increase our understanding of the dynamics of student groups and how they can be encouraged to enhance their learning processes, opportunities and strategies for the benefit of individual members. Systems-based thinking is currently being valued in project management research as a way to integrate in practice different elements of a project (hard and soft) that need management in complex situations (Crawford et al., 2003; Neal, 1995; Thomas and Mengel, 2008; Winter et al., 2006:645). Systems concepts have also helped us to improve student support and assessment in project-based education courses, as well as to deepen our degree of understanding of how student groups work and relate to their learning (Córdoba and Campbell, 2008; Homans, 1957; Mabry, 1999). We intend to further the use of these concepts in relation to student learning in the area of project management education and practice.

We begin the paper by contextualising our approach in current debates in project management research and education, raising our concern about the individual nature of the latter to the possible detriment of its collective features. We then review a number of systems-thinking concepts which help us to design and manage student group activities and foster collaborative learning. We then describe an approach to project management education which we have used in several student cohorts at undergraduate and postgraduate levels. Reflections from its practice help us to identify a number of ways in which students work and develop their own skills in groups to deal with their projects; these ways can inform future designs of project learning environments. The paper concludes by highlighting the importance of group support for the development of project management skills as well as adequately managing individual motivation and engagement as requisites for continuous and enhanced learning.

2. Project management education in practice: the individual and the group

To many, the world is now a complex and/or uncertain one. Day by day new events take place which we had not foreseen or even thought of. The current economic crisis took us all by surprise and still has unforeseen effects. For instance, in the UK expectations regarding the country's economic development have had to be drastically reviewed and modified. Government policies are also impacting education plans and requiring increasing involvement of the private sector in funding and sustaining technological innovations. Many projects, clients and suppliers have scaled down their operations whilst others are being ring-fenced or prioritised to be later reviewed. Often and without prior notice, projects could get reduced in their scope if not cancelled. Increasingly, project managers have to live with the uncertainty and complexity that their work involves (Remington and Pollack, 2007; Thomas and Mengel, 2008; Williams, 1999). Changes in requirements can escalate greatly and make projects difficult to complete as initially agreed or scoped. This is paradoxical, given that projects still require greater degrees of participation, commitment and involvement of many teams across geographical regions, cultures and organisations in order to deliver on time and within budget. Project managers and team members need to learn to quickly adapt to changing circumstances within and outside their control. They also need to maintain good relationships with project stakeholders, so those relationships could enable them to work together throughout and beyond projects and their contingencies (Davey and Córdoba, 2009).

This degree of complexity in projects (also in programmes) has generated an increasing interest in understanding how successful project managers cope with increasing demands and pressures in their work; how they manage to succeed despite that many of their skills still seem to be undervalued by many of the organisations they have to be involved with (Thompson, 2007), and how they can act in the midst of almost chaotic situations by for instance choosing the right approach/method or technique at the right time (Thomas and Mengel, 2008). As part of the above increasing interest in areas like information technology, current studies aim to ascertain the different skills, strategies and types of behaviour that can be enthused and developed to help people to be successful (Napier et al., 2007; Sauer and Reich, 2009). Similar studies also put forward *typologies* of projects and their social, structural or political environment in which project managers thrive, so that more informed assessment of what a project faces can be made (Remington and Pollack, 2007; Winter et al., 2006). Other studies focus on the work of project *groups*, and on how they develop as a way to help project teams to transit adequately towards project completion (Belbin, 1981; Gersick, 1988; Partington and Harris, 1999; Tuckman, 1965).