Embedding project knowledge through reflective practice

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Abstract
The role of a lecturer in embedding project management knowledge is to appropriately apply the pedagogical process. Two issues need to be addressed in this process: the nature of the knowledge that underpins project management as an academic subject and the appropriate curriculum design.

Project managers collaborate in a social context and can further embed their knowledge with individual reflection. The exploration of how individuals behave under certain circumstances can illuminate future pathways not previously considered. This collaborative opportunity process is often ignored in practice in the quest to deliver outcomes in the changing and busy project environment.

A pivotal research study into the practice of project management found project managers need to develop from trained to reflective practitioners an evolution that can be enhanced and accelerated. The objective of a new subject in an Australian project management master’s degree aims to create a framework to develop reflective project managers.

Keywords: knowledge; learning; reflection; practitioner

Introduction
Enhancing and accelerating the development of a project technician to a reflective practitioner is the objective of a subject under development in a post-graduate program in an Australian university. Creating a learning experience for students, which “fosters critical reflection on theory while they engage in practice” (Thomas & Mengel, 2008, p. 313), builds on the foundations set by a study and work undertaken by scholars. The anticipated outcome of the new subject is that the project management students will have an enhanced capacity to deliver appropriate outcomes in a dynamic environment.

The Social Technical Nature of Projects – The RPM Agenda
The Engineering and Physical Sciences Research Council (EPSRC) in the United Kingdom funded research into the concerns of project management practitioners in the areas of project complexity, social process, value creation, project conceptualisation, and practitioner development. In this ‘Re-thinking Project Management’ (RPM) agenda, Winter, Smith, et al. (2006) presented three theories and five supporting directions for the practice of project management. The theories were proposed about, for, and in the practice of project management.

The fifth direction that addresses 'Theory in Practice' (Winter, et al., 2006, p. 642) involves how project management practitioners need to develop from trained technicians into reflective practitioners. In the RPM agenda, Winter et al. (2006) suggested project managers were capable of approaching complex projects reflectively while also pragmatically applying theory-in-practice. The measure of the success of projects was linked to a practitioner’s ability to conceptualise projects from different perspectives, read situations, establish the problem, deal with ambiguity, relate to wider issues, and be politically astute. This ideal required the project manager to possess qualities of reflection and leadership.

Reflective Practice
Sense making through reflective observation and conversations establishes a reality through practice. The approach to theory-in-practice from the RPM agenda assumes that “reflective thought includes a conscious and voluntary effort to establish belief upon a firm basis of evidence and rationality” (Dewey, 1933, p. 9).

The levels of expertise, competence, and knowledge in project work and management can be linked to the reflective capability of the practitioner. The Proficient Performer possesses “reflective understanding and participation in power relations,” and the Expert or Virtuoso exhibited “participative critical reflection over the intuition – the self and the group” (Cicmil, Williams, Thomas, & Hodgson, 2006, p. 680). Professional artistry or the ”competency practitioners display in unique, uncertain, and conflicted situations in practice” (Schön, 1987, p. 13) relies on the ability of a project manager to recognise, judge, and then deliver, which is also referred to as reflection-in-action. The development of reflective practices when taught to a trained technician can evolve into what Winter et al. (2006) described in the fifth direction as a Reflective Project Practitioner.

Teaching Strategy
https://www.pmi.org/learning/library/embedding-project-knowledge-through-reflective-practice-6369
Project managers can develop reflection-in-action by pausing after an unexpected event and reflecting, or pausing during the event and taking corrective action, with the reflection being unconnected to the anticipated outcome. This individual approach to reflective practice can utilise a variety of tools, such as reflective journals, voice recordings, emails to oneself, or another appropriate way that will assist the project manager develop problem-solving skills that can adapt to change.

A collective approach to reflective practice can involve the exchange of “essential knowledge, including technical knowledge, [which] is often transferred between people by stories, gossip, and by watching one another work” (Pfeffer & Sutton, 1999, p. 90). Relating stories of lessons learned, which may or may not result in successful outcomes, can provide an effective form of reflection. “Storytelling is probably the oldest art form, and is just as effective today as any time in history. People think in terms of metaphors and learn through stories” (Martin, 2000, p. 10).

**Subject Development**

To develop the reflective practitioner identified in the fifth direction of the RPM agenda, a new subject is being introduced in a Master’s of Project Management program in an Australian university. Students at the university will be asked to participate in what Schön (1987) identifies as a reflective conversation to enable the application of theory-in-practice. This form of cognitive apprenticeship “supports learning in a domain by enabling students to acquire, develop, and use cognitive tools in authentic domain activity” (Brown, Collins, & Duguid, 1989, p. 39). It also allows students to learn within boundaries that are “firmly set by the task, culture, and history of the community” (Nonaka, Toyama, & Konno, 2000, p. 15).

To ensure that knowledge attainment is demonstrated, students will be formed into teams to conduct a debate on whether project management can be considered a profession through the adoption of reflective practices. Individual assessments will include a critical review of one of the topics and a reflective essay applied to a project of ones’ choice.

The experiential learning cycle that the students work through in the subject links the abstract concept through active experiments, providing a concrete experience and then an opportunity to reflect (Kolb, 1984). To transition through this cycle the student may undergo “The Five Stages of Internship” (Brace-Govan and Powell adapted this from Sweitzer and King [1999] 2005, p. 127), to progress from anticipation, disillusion, confrontation, competence, and culmination. In an educational facility, this form of internship can begin were students have the opportunity to share knowledge with their fellow students and lecturers. These types of experiences can be linked to ‘real world’ projects, which are “educationally directed activities involving out-of-classroom action settings complemented by student and/or instructor directed reflection on the links between theory and practice” (Wankel & DeFilippi, 2005, p. xi).

**Conclusion**

To prepare project management students to become reflective practitioners, educators need to consider including a structured approach to reflective practice. The conscious development of the novice to a proficient performer can be managed through guided study and applied workplace reflection. The aim is to provide the foundations for a project manager to recognise, judge, and then deliver outcomes through applying reflective theory-in-practice to meet the growing demands of a complex and changing environment.


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