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# Project management education: The human skills imperative

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## Abstract

This paper is intended to provide an insight into the importance of human skills in project management success and the apparent lack of emphasis placed on this within the context of university education. The discussion will call upon the viewpoints of many notable authors in respect to the human or 'soft' skills that are necessary in the management of projects. Against this background a review will be conducted into how well project management literature and university education equips potential project managers in the area of human skills. As the PMBOK® Guide is one of the major recommended texts in Australian universities offering project management education, the paper will identify that it predominantly emphasises the required 'hard (technical) skills' at the expense of the 'soft (human) skills'. Subsequent discussion will highlight the need for a balance between hard and soft skills within project management education in universities. It will conclude that educators within this discipline should recognise the importance of incorporating greater human skills aspects into their educational programs.
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## 1. Introduction

The skill sets required for success in the work place have changed dramatically in the past few years. Employers insist on a better prepared workforce that is more adaptable, responsible and teachable to help meet the competitive realities of a global economy [1]. Most employers today expect workers to demonstrate and excel in many 'softer' skills such as teamwork and group development [2]. They are keen to tap into these vital soft skills obtained during study and periods of work experience, rather than just degree-specific knowledge [3].

There is a growing demand for project management skills as a consequence of the projectisation of organisations. Project management is being viewed as the 'new' form of general management which enables organisations to integrate, plan, and control schedule-intensive and one-of-a-kind endeavours in order to improve overall organisational performance [4,5]. To cater to this demand and to make education more relevant to the reality of the workplace many university degrees are offering project management courses either as core programs or as electives. The paper presents arguments on the need for universities to broaden their emphasis of project management education to include both human and technical skills.

## 2. Human skills and project management

The job of the project manager is demanding, complex and varied requiring the juggling of several issues concurrently. Though traditional project management competencies are critical for project success, communication between team members and the entire network is vital to support a shared understanding of the project and its goals [6]. Managing projects successfully therefore requires a mixture of skills including interpersonal ability, technical competencies, and cognitive aptitude, along with the capability to understand the situation and people and then dynamically integrate appropriate leadership behaviours [7]. Mantel

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et al. [8] categorised skills into six areas: communication, organisational, team building, leadership, coping, and technological skills. Katz [9] suggested that effective administration rests on human skills, conceptual skills and technical skills which can be developed independently. El-Sabaa [10] adds that the human skills of project managers have the greatest influence on project management practices and technical skills the least.

In his research on Canadian project-driven organisations Loo [11] found an almost even split in top-rated internal best practices between technical and people practices. The people skills set that emerged included high-calibre project teams, stakeholder participation, effective team and external communication, customer satisfaction, conflict management, and staff management and motivation [12]. Other studies have also highlighted the significance of people skills for project success [13,14].

Realising the importance of people management skills, Turner [15] has reframed his definition of "project" to recognise its human aspects. He defines a project as an:

> ….endeavour in which human, financial and material resources are organised in a novel way to undertake a unique scope of work, of given specification, within constraints of cost and time, so as to achieve beneficial change defined by quantitative and qualitative objectives. (p. 3)

Kloppenborg and Petrick [16] suggest that project leadership requires more than just technical competence and encompasses the ability to manage a team. Skills in managing relationships are critical to achieve stakeholder satisfaction through all stages of the project. Relationship skills complement the effectiveness of hard (technical) skills because project outcomes are achieved through people, using their knowledge and creativity not through the mere use of techniques or hardware [17]. Creating the right relationships with team members and other stakeholders is one of the biggest challenges that face project managers. This requires them to cultivate both hard and soft skills [18,19].

Belzer [20] identifies soft skills in managing projects as 'the missing link', critical to project success. Some of the skills in this category include communication, organisational effectiveness, leadership, problem solving and decision-making, team building, flexibility, creativity and trustworthiness. Halstead [21] contends that

> Whist a project manager must focus on the task, real success comes from knowing how to get things done through others. Whilst some may see managing the human issues within a project, as a soft option it is neither soft, nor an option, if a project manager wants the project to succeed. (p. 5)

Against this background the question then arises as to how well current university training in project management equips potential project managers in the area of human skills? The next section will focus on evaluating the coverage of these skills in the PMI PMBOK®due to its wide-spread use as project management text in Australian universities. This will provide insights into assumptions in respect to the education and skills required to practice as a project manager in Australia.

## 3. Human skills and PMBOK®

Since 1969, the Project Management Institute in the United States has been the predominant professional association for project managers in North America, and perhaps, the world. It has taken a stewardship role in promoting the establishment of project management standards, training, education, and research. A central aspect of its mandate is the certification program resulting in the designation Project Management Professional (PMP). In 2002 there were some 55,000 credentialed PMPs worldwide which had increased to 108,000 by April 2005 [22].

A training blueprint for this certification is the *Guide to The Project Management Body of Knowledge* (PMBOK®) [23] which has also been adopted for accreditation purposes by bodies such as the Australian Institute of Project Management. This manual identifies the generally accepted best practice body of project management knowledge, providing a common language for project managers and uniform standards of project management quality, excellence, and professionalism. As a documented standard of how project managers ought to construct and define their success, PMBOK® provides authenticity to project management education [24]. Though there are other bodies of knowledge such as the APM Project Management Body of Knowledge (APM BoK) published by the Association for Project Management (APM) in England or the P2M Project Management Body of Knowledge issued by the Engineering Advancement Association (ENAA) in Japan [25], the PMI PMBOK® is a major recommended text in Australian project management education.

PMBOK® has been in existence since 1987 and its third edition was released in 2004. The focus of this project management literature has always been on the hard skills deemed necessary for managing projects, relegating soft skills to the background. Such an approach has not shifted significantly even in the current edition and its emphasis is still, in the main, on the delivery of hard concepts such as technical knowledge, scientific management principles, the usage of tools and tangible outputs. In contrast the coverage of soft skills appears to be both piecemeal and inadequate. Some might even suggest it is tokenistic.

Bourne and Walker [17] appear to agree that PMBOK®is more concerned with the hard skills required in project management than the soft skills. Further to this, the two knowledge areas concerned with human aspects, such as *Project Human Resources Management* and *Project Communications Management*, are typically seen as secondary to the more technically based areas. Even within these knowledge areas the emphasis would appear to be more about process and tools than human relations and thought [26].

Why PMBOK®is structured on such a 'hard' type of approach could possibly be explained by referring to the study of Systems Theory. The foundations for project management lie in concepts such as Systems Engineering and Systems Analysis [27]. These concepts are based within Systems Theory and are recognised amongst the hard types of approaches within this area [28]. However, Systems Theory has long moved on from the predominant use of hard ideologies so it could be suggested that it is time for project management to do the same. Buckle and Thomas [24] note that 'as this profession evolves, scholars are noting a shift from a discipline based on technology and control to a focus on interactions and learning' (p. 433). The strong influence that PMBOK® has, and continues to have, in project management education in Australian universities and around the world, warrants that its authors takes a more balanced approach in dealing with the soft and hard skills required for success in the profession.

## 4. University education in project management

Project management comprises a wide range of roles and responsibilities and this must be reflected in educational programs. However, the focus of most project management training, in the context of universities, has been on the technical skills deemed essential to achieve project success, that being primarily the iron triangle of time, cost and quality [29]. This is because technical skills are easier to deal with when compared to the more difficult areas of soft skills [30]. Carbone and Gholston [31] state that

> While certain aspects of the profession might be learned in a classroom setting through simulation and with case studies, there are other aspects of the job that require a different type of experience. Particularly hard to train in a classroom are the soft-skill aspects of the job. (p.15)

More and more organisations however are realising that it is people who undertake project work and therefore an understanding of the related people and management skills are vital for project success [32]. Such a view is also supported by Kliem and Ludin [33]. University educators need to take these views on board and increase their efforts in improving the skills of students in all areas pertinent to project management practice which include soft skills, hard skills and tacit and explicit knowledge [34]. Polanyi [35] was the first to distinguish between tacit and explicit knowledge. Tacit knowledge is usually in the domain of subjective, cognitive, and experiential learning, whereas explicit knowledge deals with more objective, rational, and technical knowledge and is both well-documented and accessible. The often overlooked assets of companies are housed within tacit knowledge. These are intangibles such as insights, intuitions, hunches, gut feelings, values, images, metaphors, and analogies [36]. Tacit knowledge is difficult to impart or assess [37] and is usually acquired over time and with experience.

Tacit knowledge is closely linked to another concept, which has gained recent popularity, namely emotional intelligence (EI). EI encompasses a composite set of capabilities that enable a person to manage himself or herself and others [38]. It was defined as

> the subset of social intelligence that involves the ability to monitor one's own and others' feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions [39] (p. 189).

EI is different from the standard rational intelligence, normally referred to as IQ, which relates more to the innate abilities of humans and as such cannot be taught. EI can be inherent but can also be taught and is enhanced with experiences gained over time [40]. EI is however considered a component of occupational competence [41] and falls into the realms of professional organisations rather than in the corridors of formal university education.

Further to this discussion the aspect of life long learning should not be overlooked. Hansen [42] suggests that companies that want to improve staff competencies should provide optimal environments that are conducive to an individual's development over their working life. Life long learning through further education should be seen as part of this development but such should endeavour to enhance an individual's hard and soft skills. Delaney [43] discusses life long learning and uses a quote by Dr. Anne Lytle, a lecturer at the Australian Graduate School of Management, to highlight its importance.

> Life-long learning is about adapting to a changing world. No matter how much education you have had, there is always the need for more education. Think of it as continuously updating knowledge and skills in a changing world.

As far as the use of Body of Knowledge (BoK) publications in teaching Gale and Brown [44] argue that they do not easily relate to competencies and learning outcomes of individuals. They provide theoretical knowledge but not a real practical application of the theory. The authors state 'there are some obvious gaps in all the BoKs, particularly in the area of people and culture.' (p. 417). Their observation supports the argument offered in this paper. It could be therefore considered that the information in the BoKs are only an initial guide to other knowledge and greater learning and the use of them alone will not bring success [45]. Note that PMBOK® does not appear to be alone in respect to the deficiency of information in relation to areas that highlight the softer concepts involved in project management. With that said the APM BoK would appear to be increasingly offering more than its American counterpart. In any case an argument could be mounted as to how well the documented BoK skills are absorbed by prospective project managers and particularly by those students who have little life experience in the area.

Finally, according to Morris [45] the 'management by projects' phrase was coined to accommodate a broader view of project management and one might consider this to include the softer aspects of project management. If students are to become more holistic thinkers, having regard for issues such as ethics, logical integrity and emotional acceptance, greater emphasis needs to be placed on the qualitative sciences [46]. Project management educators need to consider this. A point also highlighted by Whitty [47] stresses that 'projects are simply a synthesis of human sensations and expectations about how multiple resources are to be used' (p. 577). Such a statement would appear to hold great relevance to the arguments presented in this paper in respect to the importance of increasing the human skills emphasis in project management education.

## 5. Conclusion

Project management practice has long acknowledged the need to educate and train its up and coming professionals. In fact, what makes project management recognisable as a professional discipline exists within the teaching and learning of the knowledge it holds as well as its emphasis on the aspects of literature, research and bodies of knowledge. As such it could be inferred that what is taught in project management is what project managers are. It would therefore seem valid to question whether project management programs offered by various universities are equipping students with the appropriate knowledge/skills in respect to their preparation for entry into the workforce.

The paper discussed how the project management discipline still appears to place greater emphasis on hard skills at the expense of the softer human skills. Evidence to support this conclusion can be seen in body of knowledge guides such as that of PMBOK® as well as the program syllabi of many educational providers of project management studies. There are a growing number of those that are critical in respect to the suitability of such substantially hard approaches to project management. The criticism is not in respect to the teaching of technical skills within project management but rather the lack of emphasis on the human side. A more balanced approach between hard and soft concepts would see them complementing each other and enhancing project management education in the process.

As such it is proposed that a new way of thinking is necessary to broaden existing approaches by including the more human types of issues as previously identified by the likes of Strang [7], Mantel et al. [8], Loo [12] and Belzer [20]. Such a proposal may ultimately educate students and professionals of project management about the contribution that 'soft' thinking can make to successful project outcomes. Thus it is recommended that the presentation of ideas about such concepts should start in the classrooms of educational institutions that deliver project management education. Empirical research into this topic needs to be conducted to further investigate the claims made in this paper and to provide future directions for educators in the discipline.

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