

FOURTH EDITION

The
**HANDBOOK OF
PROJECT-BASED
MANAGEMENT**

LEADING STRATEGIC CHANGE
IN ORGANIZATIONS

J. RODNEY TURNER



**Mc
Graw
Hill**
Education

at two or more levels of the planning hierarchy can aid this. (The manager in Example 3.6 should have had weekly meetings with the representatives individually and less frequent meetings with the whole group to discuss common issues.) The meetings must have a fixed agenda, which means reporting against fixed criteria, including the plan. Without a structure people will report progress in a way that puts them in the best light. Finally, people sometimes hold meetings only when they have something to discuss. By then control is reduced to damage limitation. Meetings must be held at fixed intervals, although the frequency may vary depending on the risk and the point in the project life cycle.

Combine Responsibility with Authority. The manager in Example 3.6 had no direct authority over the syndicates and was not able to use other sources of influence, including that obtained by negotiating agreements. Without authority for control, the manager cannot take action to achieve the project's goals.

Five Necessary Conditions for Project Success

Two Ph.D. students of mine, John Wateridge (1995) and Ralf Müller (Turner and Müller, 2004), have between them identified what I believe to be five necessary conditions of project success.

Key Stakeholders Should Agree on the Success Criteria before You Start. I discussed the importance of this above. It will be repeated throughout the book.

Continue to Confirm Agreement at Configuration Review Points throughout the Project. It is not enough just to agree on the project goals once at the start of the project; you need to ensure that people maintain a common vision of the project's outcomes throughout. This can be done at configuration review points (Chap. 11) and end-of-stage reviews (Chaps. 7 and 15).

Maintain a Collaborative Working Relationship between the Project Owner and Project Manager, with Both Viewing the Project as a Partnership. There is increasing evidence that to have a successful outcome, the project owner and project sponsor must work together in partnership toward mutually beneficial goals. They must play a win-win game. Unfortunately they so often try to outdo each other, viewing the project as a fixed cake, and each tries to benefit at the other's expense. They play a win-lose game. But there are no win-lose games on projects; it is either win-win or lose-lose. If the owner and manager try to play a win-lose game, they will both lose; one will just lose more than the other. Everybody has to do what is best for the project and not for himself or herself individually.

Empower the Project Manager, Setting Medium Levels of Structure. Unfortunately the owner often tries to impose rigid structures on the project manager to maintain control. As a result, the project manager has no flexibility to deal with risk. But the other extreme doesn't work either. If the owner gives no guidance, laissez-faire management and anarchy reign. In fact the owner should impose medium levels of structure. Agree on the goals with the project manager, and set parameters within which the project manager should operate to achieve those goals; but allow the project manager the flexibility to deal with risk. Also, as I mentioned in Sec. 1.2, the owner can release authority to the project manager between stage-gate reviews, knowing they can take it back at those times.

The Owner Should Take an Interest in Project Performance. Ralf Müller observed that where the owner took an interest in progress, the project performed well, but the owner usually thought the project was doing less well than it was. Where the owner didn't take an interest in progress, the project didn't perform well and the owner had a rosy picture of progress. In Chap. 4, I will describe communication between the project manager and sponsor to satisfy the sponsor's needs for comfort.

SUMMARY

1. There are six steps in developing a project strategy:
 - Develop the organizational strategy.
 - Identify the project requirements.
 - Develop the project business plan.
 - Set the success criteria.
 - Identify the project success factors.
 - Develop the project model: plan; resources; organization.
2. The seven forces model represents the project strategy through seven forces acting on the project:
 - The context
 - The expected benefit and urgency
 - The project requirement
 - Attitudes of stakeholders
 - The project plan
 - The people involved
 - The project organization
3. There are two elements of project success:
 - *Success criteria*—how we will judge the project to be successful.
 - *Success factors*—the elements of the project we can influence to increase the chance of success.
4. Different stakeholders judge the project to be successful in different ways. It is important to achieve a balance of those different criteria, meeting the needs of the different stakeholders.
5. Criteria for judging project success include the following:
 - The project increases the shareholder value of the parent organization.
 - The project generates a profit.
 - The project provides the desired performance improvement.
 - The new asset works as expected.
 - The new asset produces a product or provides a service that consumers want to buy.
 - The new asset is easy to operate.
 - The project is finished on time, to budget, and with the desired quality.
 - The project team had a satisfactory experience, and the project met their needs.
 - The contractors made a profit.
6. Overall the project will be successful if it delivers the desired performance improvement, or better, at a time and cost that provides value for the organization.
7. In a classic piece of work, Jeffrey Pinto identified 10 success factors on projects:
 - Project mission
 - Top management support
 - Schedule and plans
 - Client consultation
 - Personnel
 - Technical tasks
 - Client acceptance

- Monitoring and feedback
 - Communication
 - Troubleshooting
8. In setting up the project, you need to consider success factors under
- Establishing the project
 - Planning the project
 - Organizing and implementing the project
 - Controlling the project

Management Process. The organization also needs to understand how it will operationalize the management process. It may adopt the very simple cycle suggested in Chaps. 1 and 15:

- Plan the work.
- Organize the resources.
- Implement by assigning work to resources.
- Control progress.

Or it may adopt a more extensive process as suggested by the Project Management Institute (2013) comprising

- Starting processes
- Planning processes
- Organizing processes
- Controlling processes
- Closing processes

The organization also needs to understand the difference between the management process and the project process, and whether the difference matters for its size of projects. For instance, if the organization is involved in programs of small projects, it will apply a program process at the program level and the management process at the project level. If, on the other hand, it is involved in large projects, it will apply the project process to projects and the management process at each stage of the project as illustrated in Fig. 1.8.

The Functions of Project Management. The third component of the body of knowledge is the functions of management. In Part 3, I suggest seven functions: scope, project organization, stakeholders, quality, cost, time, and risk. The Project Management Institute (2013) suggests 10 functions:

- Six of my seven from Part 3.
- What it calls *managing integration* rather than project organization.
- What it calls *managing communication*, covered under stakeholder management (Chap. 10) and communication between the sponsor and manager (Chap. 4).
- Managing human resources and procurement—I do not suggest that these two are unimportant; I have just made them beyond the scope of this book, each deserving a book in its own right (Turner, 2003b, 1995, respectively).

Project Management Methodology

Not only does the organization need to know how it is going to operationalize the individual knowledge areas, but also it needs to put all those together into an integrated project management methodology to deliver individual projects from concept to realizing benefit from the strategic change introduced (operation of the new asset). None of the professional associations' bodies of knowledge actually recommends a methodology. The PRINCE2 process (The Cabinet Office, 2009) is a methodology, but I would offer the methodology recommended in this book.

Technical and Craft Skills

This last component of organizational capability does tend to be underemphasized by the project management community. Yes, project management is a generic skill, and so the techniques can be applied

to all types of project. But the techniques do need to be packaged in different ways depending on the type of project (Payne and Turner, 1999; Turner and Müller, 2006), and the organization does need to be expert in the basic technical and craft skills that are used in the projects it undertakes. If it has the necessary technical and craft skills, it will know how to tailor its project management methodology and the project management functions to its types of project.

6.2 INDIVIDUAL COMPETENCE

A necessary component of organizational capability is the competence of individuals. Without competent individuals the organization can have no capability. In this section, I consider how we define the competence of individuals, the components of competence, how it varies at different stages of an individual's career, and how to assess and develop it.

Defining Competence

There are two main ways of defining the competence of individuals.

Attribute-Based Approach. The attribute-based approach, popular in the United States (Boyatzis, 1992; Spencer and Spencer, 1993), defines competence as the knowledge, skills, and personal characteristics required to deliver superior performance. A competency is an individual component of competence. There are surface competencies, knowledge, and skills, which can be easily measured and developed, and core competencies, which are less easily measured. Inherent in this approach is the idea of threshold and differentiating competencies. Threshold competencies are the basic ones essential for doing the job, and differentiating competencies are those leading to superior performance. The bodies of knowledge produced by the professional associations define the threshold knowledge and skills required to manage projects. They therefore conform to this approach, but define the basic competencies rather than the differentiating ones.

Performance-Based Approach. The other approach, rather than trying to measure the inputs to competence, tries to measure the outputs, and it has been popular in the United Kingdom and its former dominions (Australia and South Africa). Competence can be measured by performance in accordance with defined occupational, professional, or organizational standards (Crawford, 2007). Several performance-based standards for project management have been produced around the world. Lynn Crawford (2007) lists many of them.

Combined Approach. Lynn Crawford (2007) has developed a combined approach to defining competence (Fig. 6.1). She suggests there are three components to competence:

Input competencies: the required knowledge and skills to do the job. Of these, knowledge tends to be a threshold competency, whereas skill tends to be a differentiating competency.

Core competencies: the personal characteristics including motives, traits, and self-concept that improve performance. These are differentiating competencies.

Output competencies: the ability to perform required activities as defined by professional, occupational, or organizational standards.

An individual's competence also needs to be matched to the contingent requirements, which will be influenced by the nature of the work, and the team and the leadership they require. Thus although I think project management is a skill you can learn and take to different contexts, it does need to be changed depending on the required craft skills.

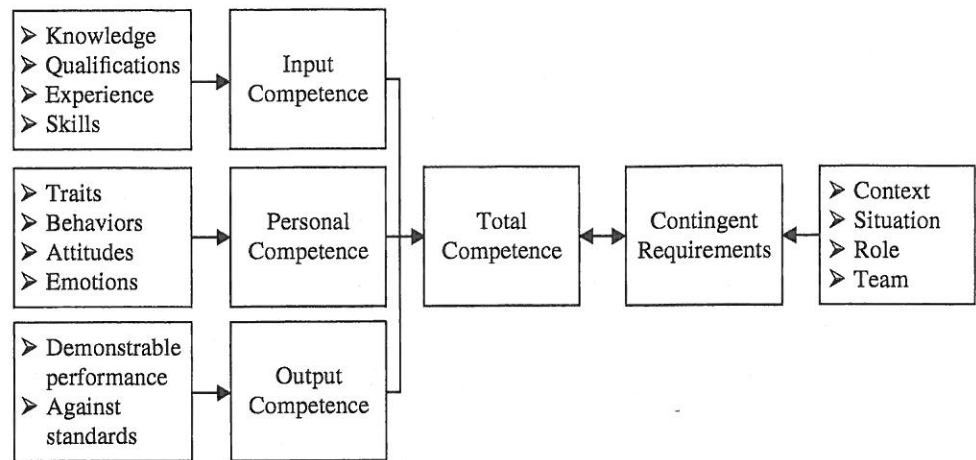


FIGURE 6.1 A model for individual competence.

Many years ago, I was introduced to a competency model by an Information Technology (IT) vendor. They defined three levels of competency, described by the phrases *I know*, *I can do*, and *I adapt and apply*.

I know: This is the knowledge required to do the job.

I can do: This is the ability to apply the knowledge to perform routine tasks (skill).

I adapt and apply: This is the ability to apply your skill in unfamiliar situations to develop new methodologies to deal with those unfamiliar situations.

According to this model, an individual does not perform until he or she could adapt and apply. Further, it was not that a certain level of knowledge gave you an equivalent level of ability to do and that gave you an equivalent level of ability to adapt and apply. You needed quite a bit of knowledge before you can start to do, and substantially more knowledge giving additional ability to do before you can adapt and apply. But you would reach a threshold level of knowledge where more knowledge would not increase your ability to adapt and apply any more. Only other things, including experience, would do that.

They likened it to learning a language. You need a certain amount of vocabulary and grammar before you can compose simple sentences, but you need to be able to compose substantially more sentences before you can hold a conversation. I have a 2000-word vocabulary in French but have difficulty conducting conversations because I lack experience and self-confidence.

Explicit versus Tacit Knowledge. A related concept is that of explicit versus implicit or tacit knowledge (Nonaka and Takeuchi, 1995). *Explicit knowledge* is knowledge that can be codified and written down. It is mainly what we learn when we go on a training course or read a book. *Implicit* or *tacit knowledge* is inherent knowledge that we gain mainly through practice and experience. We know how to do things without thinking about them. You mainly drive a motorcar using tacit knowledge; you can't think through the process of doing an emergency stop when one is called for. Similarly with a foreign language, you start off holding a conversation using explicit knowledge, but it tends to be slow as you have to translate what you have heard and what you are going to say before replying. But with experience you conduct the conversation in the language, and the language has meaning without translating.

In the models above, knowledge mainly means explicit knowledge, and tacit knowledge mainly falls under skills. Kolb (1984) introduced a learning cycle for individuals (Table 6.1) showing them

TABLE 6.1 Kolb's Learning Cycle for Individuals

From		To	
		Tacit Knowledge	Explicit Knowledge
Tacit knowledge		<i>Concrete experience</i>	<i>Observation and reflection</i>
		Creating tacit knowledge through on-the-job experience	Understanding how and why things work
Explicit knowledge		<i>Testing of concepts</i>	<i>Abstract concepts and generalizations</i>
		Testing explicit knowledge in practice to see if it works	Codifying knowledge through education and training

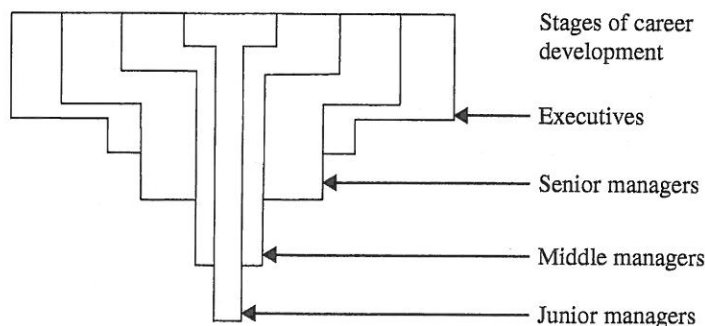
cycling between gaining tacit knowledge through experience and explicit knowledge through training and education. The two reinforce and support each other. Explicit knowledge gives you structures that explain why things work in the way you expect, and having those structures makes you better able to test out concepts through your work experience and improve your tacit knowledge further, and develop your own new explicit knowledge, enabling you to adapt and apply.

Threshold Competence. I wish to explore bit further the concept of threshold competence. Lynn Crawford showed in her own research that project management competence as measured by the professional associations in their certification programs tends to be threshold competence (Crawford, 2007). A pass grade on the certification programs is necessary to be able to work effectively as a project manager, but a higher score does not make you a better project manager. It is other things that make you a better project manager (in your current job role), including years of experience and emotional intelligence (Turner and Müller, 2006; Müller and Turner, 2010).

I should qualify this. In Chap. 5, I said there was a substantial difference between the management of a \$50,000 project and that of a \$50 million project. The former tends to require primarily technical skills (as measured by the certification programs, especially PMI's), whereas the latter requires substantially more people and strategic management skills. Thus more knowledge won't make you better in your current role, but different knowledge is needed for different, more advanced job roles.

Levels and Stages of Development

This leads to the concept of T-shaped managers (Fig. 6.2) illustrating different levels of management and different competence profiles required. The height of the upright shows the depth of professional involvement (primarily technical competence), and the width of the upright shows the breadth of that.

**FIGURE 6.2** T-shaped managers.