# A method to measure success dimensions relating to individual stakeholder groups

Kate Davis *

*Kingston University London, Kh-Bs2007, Kingston Hill, Kingston upon Thames, Surrey KT2 7LB, UK*

### Abstract

A new method to measure and identify project success dimensions meriting further investigation is detailed. It considers the conceptualization, diagnosis and understanding of these dimensions to judge the success or failure of a project. The method used an inductive thematic analysis to reveal two major themes: one related to the multiple stakeholders involved in a project and the other to project structure. Further analysis showed three new success dimensions linked directly to the perception of project success: benefit to the stakeholder group, client/customer specific issues and time/cost/quality. Inclusion of these dimensions to measure project success has the potential to allow all stakeholder groups to share the same perception of project success.
© 2016 Elsevier Ltd. APM and IPMA. All rights reserved.

## 1. Introduction

This paper introduces a method that adopts a post-positivist structured approach to recognize gaps in the literature that merit future empirical work. It is a response to the criticisms that project management is practitioner oriented, focusing mainly on technical tools, such as critical path analysis; lacks a rigorous literature base and consequent development of theory and inadequate scope of coverage (Turner, 2010).

The concept of project management continues to be a subject of conjecture. Turner et al. (2010) claim its roots date from the 1940s and operations research, whereas Kwak and Anbari (2009, p. 440) argue that it came from three management schools: "organizational management theory, operations research and management science applications, and real business practices and their applications". Bredillet (2010, p. 4) "notes an early interest (1914–1987) in the economic aspects of projects" and later in Information Systems (IS) projects and Information Technology (IT) support. There is,

however, some agreement in that project management originated from classical management theory (Kwak and Anbari, 2009; Shenhar and Dvir, 2007; Turner et al., 2010) based on the Taylorian model (Turner et al., 2010).

Classical theorists (Brech, 1953; Fayol, 1949; Gulick and Urwick, 1937; Mooney and Reiley, 1939; Taylor, 1911) focus on an organization's purpose and formal structure. Consideration is directed at hierarchy, formal roles and responsibilities, the 'iron triangle' (time, cost and quality — Barnes, 1969) and tools used within a project. This perspective expects everything to work in a linear sequence using generic tools (e.g. Gantt charts and methodologies) for all project types (e.g. IT, engineering and change management projects). However, Turner et al. (2010) observed the contradictory view that projects are defined as 'unique' and therefore need to have specific tools (e.g. PRINCE2, Project Management Body of Knowledge, Managing Successful Programmes, Information Technology Infrastructure Library) that are adapted for individual projects.

The difference between the opposing positions is that one concentrates on the organization and the other either on the people within it or issues concerning involvement, participation

---

* Tel.: +44 208 417 9000x65022.
  *E-mail address:* kate.davis@kingston.ac.uk.

and engagement. Wateridge (1995) pointed out this difference when examining perceptions of success and asked how a project can be judged successful if the people are not consulted. Furthermore, project management teams are typically temporary in nature and formed out of necessity, meaning that formal rigid rules and responsibilities characteristic of organization structure are not applicable. (Turner, 1999, 2014a, 2014b). For example, a project manager might have no direct responsibility or line control of their team, but is expected to meet project deadlines (Slevin and Pinto, 1987).

In addition to Turner and Zolin (2012) noting that stakeholder perception influences the perceived project outcome as a success, others demonstrated that the time point used to analyze success could change the outcome to perceived failure (Dalcher and Drevin, 2003; Morris, 1997; Turner et al., 2009). For example, the Sydney Opera House, when initially completed would be analyzed as a failed project as it was 14 times over budget (original estimate $7 million, final cost $102 million) and took 15 years to build as opposed to the estimated 4 years (WNW, 2015). However, the public judged it to be a great engineering achievement (Jugdev and Müller, 2005). Heathrow Terminal Five met the objectives to create a main passenger terminal for British Airways flights. The British Airports Authority regarded this as a success as it was completed and handed over to the customer within time, cost and quality constraints. However, British Airways, a different stakeholder group, had minor commissioning issues relating to check-in procedures for oversized baggage, leading to the later public and customer perception that the project was a failure and damage to the reputation of British Airways (Brady and Davies, 2009, 2010a, 2010b; Brady and Maylor, 2010; Savill and Millward, 2009).

It remains frustrating that despite extensive research, there is no single model of project management for any given context that will mitigate the risk of project failure. Most of the numerous measurement methods can be traced back to the 'diagnostic behavioral instrument' of Pinto and Slevin (1987) which measures project manager's perception (Azzopardi, 2015; Davis, 2014; Roberts and Furlonger, 2000). Although this instrument dates back to 1987, it is still widely used, but it does not take account of the various different stakeholder group views that could determine the success or failure of a project.

Whilst it is recognized that Metcalfe and Sastrowardoyo (2013) and McKenna and Baume (2015) have put forward methods for different stakeholder groupings, the aim of this study is to offer an instrument that examines multiple stakeholder perception of project success, rather than sole dependence on the project manager view.

## 1.1. Purpose of the study

Projects are increasingly recognized as critical to an organization's success (Jonas et al., 2013). Previous research (Davis, 2014) showed that the most cited instrument used to assess project success is Pinto and Slevin's (1987) quantitative 'diagnostic behavioral instrument'. Their instrument has been developed over the years by numerous authors (see Jugdev and Müller, 2005, for a review) to identify significant key dimensions

for project success. However there are many ways of determining the success of a project and direct comparison of these dimensions is not always achieved. This paper reviews the methods that have been used to measure project success by different stakeholder groups, so that previously excluded areas can be identified, enabling future empirical research that could be applied to both large scale and SME projects.

## 1.2. Background

High-profile project failure is regularly reported in the public domain, raising the question of the adequacy of prevailing project management concepts, practices and tools for organizations to predict and achieve consistent successful delivery of projects (Ojiako et al., 2012; Stanleigh, 2006). The Standish Group (2012) survey found that 18% of projects fail and 43% were challenged. In KPMG's (2013, p. 11) survey, they noted that "project activity is on the increase and so are failure rates" with only 33% of respondents agreeing that their project was completed on budget, 29% on time and 35% to scope, this was compared to the 2010 survey whereby 48% were on budget, 36% on time and 59% to scope.

For this reason, project management is a field where there is focus on the prevention of project failure. The management of projects to counter failure is a growing subject and is defined by an expanding body of professional associations, standards, methodologies and tools. This is reflected in continual upgrades of definitions of tools and methodologies, e.g. PMBoK (PMI, 2013) and PRINCE2 (*Office of Government Commerce,* 2009), but the upgrading of tools is not shown to be increasing project success. Project failure results in loss of money (Table 1), as well as associated time, loss of reputation and decreased morale of the workforce.

There are many literature reviews, which comprehensively discuss project success (Jugdev and Müller, 2005; Turner and Zolin, 2012), but the definition of success is inconsistent. There is a clear need for an appropriate measurement method that uses proven existing dimensions (success factors and criteria) together with new dimensions of which the impact of different stake holder group perception is possibly critical (Davis, 2014) to the prevention of project failure. However, the method must be easy to access and use as well as yielding consistent results.

## 1.3. Stakeholder perception of success

Davis (2014) identified and defined the dimensions of project success and stakeholders found in the literature. A brief summary is given in this section to demonstrate the need for measurement of stakeholder perception. Table 2 summarizes the dimensions of project success identified in the literature. A theme was only cited when two or more stakeholder groups recognized it. The main dimensions, common to the three stakeholder groups were 'communication' and 'time'. Senior management and the project core team both recognized 'identifying/agreeing objectives/mission', 'project manager competencies and focus', 'the project delivering the strategic benefits' and 'top management support'. The project core team and project recipients both identified,