

# Three conceptual levels of construction project management work

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## Abstract

The widespread use of project management standards for professional competence assessment and development is based on a rationalistic approach, whereby competence is seen as constituted by a pre-defined set of attributes in the form of knowledge topics. Yet little is known about whether and how these attributes are used by project managers in the workplace. In this paper we report an empirical exploration of project managers' ways of conceiving and accomplishing their work. We follow Sandberg's [Sandberg J. Human competence at work: an interpretative approach. Göteborg (Sweden): Bas; 1994; Sandberg J. Understanding human competence at work: an interpretative approach. *Acad Manage J* 2000;43(1):9–25.] phenomenographic study of automobile engine designers that found that the basic meaning structure of people's conceptions of their work constitutes their competence at work. From our interviews with 30 project managers in UK construction firms, we identify three different basic conceptions of project management work. Each conception has a different main focus and a different set of key attributes that appeared to project managers when experiencing and accomplishing their work, reflecting a hierarchical arrangement of three distinctly different forms of project management competence. The findings offer an opportunity for a new approach to professional competence assessment and development that complements existing standards-based approaches.

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## 1. Introduction

The rapid rise of project management as a professional discipline has given rise to a number of well-established standards that define the scope of the discipline and describe its tools, techniques and concepts. These standards are now widely used for professional competence assessment, development and certification. They are based on the assumption that individuals who are able to demonstrate their understanding of the principles of project management embodied in the standards are deemed to be professionally competent as project managers. This follows a so-called rationalistic approach, whereby management competence is pre-defined as a specific set of knowledge areas independent of context and individual. Yet, little is

known about whether and how these attributes are used by project managers in accomplishing their work.

In the first part of this paper we review the two traditional approaches to researching and defining project management competence. We argue that the resulting project management standards do not actually capture project managers' competence in the workplace. We find support for this position in empirical studies that have found no significant relationship between effective workplace performance and project management standards [1]. We suggest an alternative, interpretive approach developed by Sandberg [2,7] based on the principles of phenomenography, in order to explore practicing project managers' ways of conceiving and experiencing their work and understand their competence at work. We describe the methods and results of our study of 30 project managers in the UK construction firms, and conclude with a discussion of the implications of our findings for practice and research.

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## 2. Theoretical background

### 2.1. Rationalistic approaches to competence at work

There are two principal rationalistic approaches to studying competence at work, namely *worker-oriented* and *work-oriented* [2,3].

The *worker-oriented* approach takes the worker as the point of departure, and emphasises workers' attributes such as knowledge, skills and abilities and personal traits [3]. Since different work requires different competences, the worker-oriented approach has been criticised as being too generic and context-independent [4]. In contrast, the *work-oriented* approach takes work as the point of departure, and treats work as existing independently of the worker, definable in terms of the technical requirements of work tasks [5]. Advocates of this approach argue that by identifying work activities that are central for accomplishing specific work and then transforming those activities into personal attributes, more concrete and detailed descriptions of competence can be generated, and thus the main problem of the over-generic worker-oriented approach can be largely overcome. However, it is difficult to transform descriptions of work activities into workers' attributes, and it is questionable whether a list of work activities can be sufficient for indicating all the attributes required [6].

### 2.2. Interpretive approaches to competence at work and phenomenography

In order to overcome the criticisms of the two rationalistic approaches, Sandberg [2,7] developed an alternative, interpretive approach to understanding competence at work based on the principles of phenomenography. Defined as a research approach 'for mapping the qualitatively different ways in which people experience, conceptualize, perceive, and understand various aspects of, and phenomena in, the world around them' [8, p.31], phenomenography was first used in the 1970s to better understand the process of academic learning. The approach has since become increasingly popular for exploring and describing how learners and teachers understand and experience learning and teaching [9,10]. In recent years phenomenography has started to gain supporters outside the educational research domain in fields such as health care [11], academic freedom [12], leadership [13] and most notably human competence at work [2,7].

Sandberg's phenomenographic study of automobile engine designers found that a worker's conception of their work has an integrative function in constituting competence, in that 'the basic meaning structure of workers' conceptions of their work constitutes human competence' [7, p. 20]. Further, his study showed that variations in conception between individuals may form a hierarchy of competence in terms of increasingly advanced forms of understanding of work. The most central methodological

premise is that '...competence is not primarily a specific set of attributes. Instead, workers' knowledge, skills, and other attributes used in accomplishing work are preceded by and based upon their conceptions of work'. The term conception here refers to 'people's ways of experiencing or making sense of their world' [7, p.12].

### 2.3. Project management competence

Existing studies of project management competence follow one or other of the two rationalistic approaches described above. One strand of research takes the work-oriented approach and focuses mainly on the development of project management standards [14]. These standards have been developed primarily based on surveying experts' opinions, including those of employers and practitioners [15,16]. The second strand, which takes a worker-oriented approach, seeks to define sets of generic personal characteristics of competent project managers, reflecting the argument that being a competent project manager requires more than just possession of the 'hard' knowledge and skills described in the project management standards [17,18]. The fashion for lists of 'soft' personal characteristics required by competent project managers is revealed in a variety of texts and research-based reports [19–21]. In addition there are a number of empirically based frameworks [22–26].

By separating project managers from their work activities the indirect description of context-free attributes – whether the 'hard' components of a standard or the 'soft' characteristics hidden in personal qualities – specifies the prerequisites for what competent project managers should know and do rather than whether and how they will use these attributes in the workplace. In particular, the tacit dimension of competence that is apparent only in the workplace is overlooked [27]. Since project management is above all a practical rather than a theoretical discipline, project managers' tacit competence and their capability to integrate effectively both their tacit and explicit knowledge into their work should not be neglected. Hence, there is an obvious opportunity to apply an interpretive approach, phenomenography, to exploring practicing project managers' ways of conceiving and experiencing their work, and thus to understanding their competence in accomplishing their work.

## 3. Method

### 3.1. Sample selection

The sample of this study consisted of 30 project managers selected from 12 construction firms in the UK. Driven by the intention of the research, namely, to explore project managers' conceptions of their work, certain sample selection criteria were set out in order to make sure the nature and content of the respondents' work are matched. For example, they were from construction firms that were

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