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## Chapter I

# Competencies and Organizational Learning: A Conceptual Framework

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## Abstract

Organizational learning can be considered as systemic behaviour oriented to acquire capacities for dealing with the needs and challenges of organizations in competitive environments. This entails that there must be some measurable and flexible concept that drives the acquisition of those capacities. Competencies understood as the workplace capabilities of individuals or groups can be used as one of the approaches for managing such capacityacquisition behaviour. Even though competency is not a new concept, the management of competencies through information technology (IT) for improved effectiveness and efficiency poses a number of significant challenges that still require much research to come up with general-purpose and reliable solutions in the information systems discipline. This chapter delineates the main concepts for a competency-based framework in the context of organizations and enumerates some requirements for which definitive and commonly accepted solutions are still not available.

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## **Introduction and Background**

Competencies as related to learning and work performance have received a great deal of attention in the last years. This has resulted in a plethora of papers and reports on how competencies should be defined or assessed, including some papers that deal with their representation in a computational form. But the literature on the topic is fragmentary in what concerns the concept of competency, since definitions are in many cases taken for granted, and, in other cases, the studies focus on a single aspect of competencies. This makes it difficult for newcomers to have a clear understanding on the main issues that need to be dealt with when approaching competency-based systems. That lack of a systematic way of dealing with competencies calls for a clear statement of the requirements that are significant for studies and future research on the topic.

This chapter attempts to provide a checklist, or roadmap, for such requirements. To do so, we will start with a concrete definition for the term competency, and then we will proceed to describe the main requirements in a synthetic way, hoping that the resulting collection of aspects is valuable as a skeleton for the clarification and comparison of the concrete approach each author or system is providing in what regards to competencies.

The notion of competency is linked to the concept of human performance, which according to the model of Rummel (Rothwell & Kazanas, 1992) encompasses several elements: (a) the work situation is the origin of the requirement for action that puts the competency into play, (b) the individual's required attributes (knowledge, skills, attitudes) in order to be able to act in the work situation, (c) the response, which is the action itself, and (d) the consequences or outcomes, which are the results of the action and which determine if the standard performance has been met. Finally, individuals usually receive some kind of feedback depending on the success or failure of their action.

Since competency is related to human capacity, it is clear that *learning* is a process that eventually results in improving competency. In straightforward terms, then, learning activities can be arranged, scheduled, carried out, and evaluated with the aim of helping employees to acquire some required competencies for concrete work situations. This link is a first important assumption in competency approaches to e-learning in organizational settings, which in turn leads to a first requirement for them.

*Requirement* #1. Competency-based approaches to organizational learning require an explicit model for linking competency definitions to learning activity objectives.

Even though this first requirement may seem obvious, it entails a number of related requirements that are described in what follows and that do not have a straightforward solution. The first one is the formal definition of competencies, that is, the aspects of competencies that should be considered. Knowledge, skills, and attitudes are often mentioned as examples of such aspects or contributing elements. However, there is not a single definition accepted, and the approaches will be different depending on the granularity and level of detail considered. This leads to a second requirement.

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