

Competency Orientation within Companies: The Challenge of Different Requirements

Andreas Schmidt (aschmidt@fzi.de)

FZI Research Center for Information Technologies, Germany

Christine Kunzmann (contact@christine-kunzmann.de)

Kompetenzorientierte Personalentwicklung, Germany

Introduction

Competency-oriented approaches are gaining ground in human resource development. Competencies have turned out to be an appropriate and practical tool for various tasks related to human capital. Particularly, it offers companies the potential to coordinate with other stakeholders and their interests, i.e., the empowerment of the individual for her own competence development (mostly associated with employability), and the coordination with the market, which includes the job market as such as well as the educational institutions (see fig. 1).



Figure 1: The competency interoperability triangle

Challenges of the notion of “competency”

To realize this potential, we need to realize the complexities associated with interoperable competency definitions:

- Competencies are no “natural” entities, but **cultural abstractions**. The cultural influences particularly include professional culture, corporate culture, among others. This makes it particularly hard to come up with a universal competency model, but also poses challenges to mapping competencies between different cultural contexts.

- Competency definitions are **implicitly contextualized**; they are rooted in their original context, and many assumptions are not made explicit, and are extraordinarily hard to make explicit. A certain degree of ambiguity will always remain.
- Competency definitions are **purpose-driven conceptualizations**, i.e., they are modeled with a particular purpose in mind. As a consequence, we have to take into account the specifics of the different use cases and how they affect the way of modeling competencies.
- Finally, and probably most challenging of all, competencies are **time-dependent conceptualizations**, and they need to evolve in a timely way in order to stay relevant and useful. This has been one of the major lessons learnt from competence management approaches (see [Braun, Kunzmann & Schmidt 2010] and [Schmidt & Kunzmann 2007]) where outdated competence catalogs were seen as the most important barrier. Evolution, however, is particularly hard to tackle in combination with interoperability.

The Professional Learning Ontology

In a first step, we have tried to bring together the different approaches to dealing with competence, knowledge, and learning in companies using an ontology-based methodology [Schmidt & Kunzmann 2007]), which resulted in the Professional Learning Ontology, a top-level ontology defining the most important notions and their relationships. It also includes fundamental relationships between competencies. Apart from the generalization relationship (for context-specific concretization), particularly the part-of relationship was identified as very important for practical use.

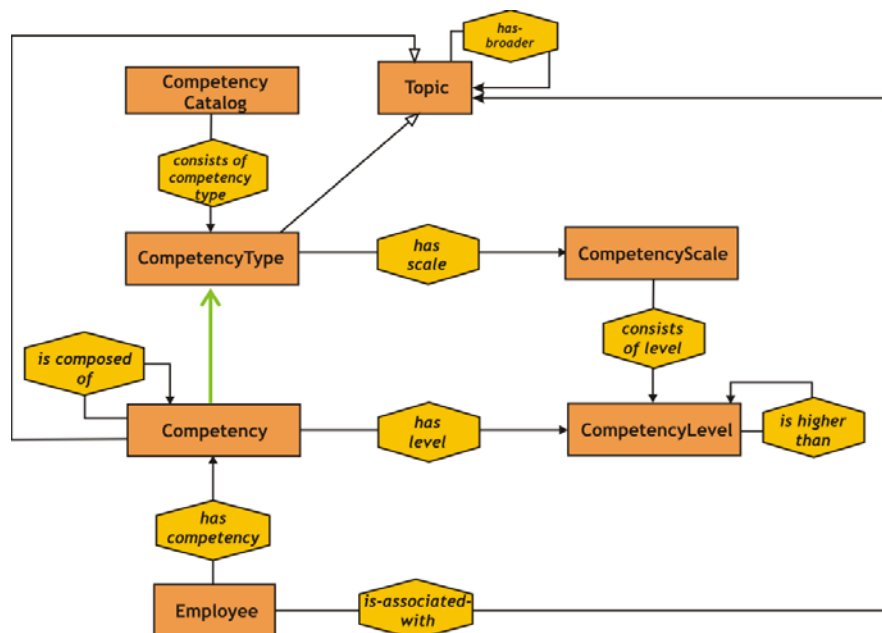


Fig. 2. Core part of the Professional Learning Ontology.

Use Cases for Competency-Oriented within Companies

In [Braun, Kunzmann & Schmidt 2010], we have analyzed the most frequent use cases for competency orientation, and found out (see table) their different requirements and particularly their required level of formality and “strength” of the notion of competency used. They range from “people finding” where “interest” and “experience” and the appropriate notions up to “potential” in career planning and talent management and aggregated “organizational competencies” in the case of strategic competence management.

Use case	Requirements	Notions
People finding Finding help on a problem Community formation	Timely inclusion of emerging topics	Interest Experience
Team staffing Application selection Matching requirement and actual profiles	Sufficiently level of detail in combination with relationships for similarity measures	Experience Competency Potential
Training planning Human resource development Identifying development needs and selecting measures	Sufficient level of detail, corresponding to the granularity of measures	Competency Learning outcomes
Learning on demand support Suggesting learning opportunities within the work process	Fine grained descriptions of what is relevant for a certain situation	Topics Competency
Reward schemes Career planning	Very reliable measurements through key performance indicators Lower level of detail	Competency (Potential)
Aligning employee competence development with corporate strategies	Small set of stable competences	Aggregated competence

Major conclusion from these findings was a fundamental change to the ontology-based modeling approach, which is now followed within the MATURE IP (<http://mature-ip.eu>): we have to understand competence modeling

- as a **continuous** process (i.e., many, not few revisions)
- with **different levels of formality** co-existing at the same time (for emerging topics, we cannot come up with a formal competency definition, still we need it to be relevant)
- and as a **social process** in which we need the **participation of many** to come to stable, generally accepted competence definitions

The Challenge of Evolution

As a summary, the main challenge we see for competency interoperability lies in the dynamic nature of the notion of competency as a social construct. The main questions that need to be answered are:

- How do we define a framework in which evolution can take place and still have the possibility of some form of interoperability? How can semantic relationships (like “refines”, “is-subset-of”, “supersedes”) help as part of such a framework?
- How do we account for the different and emerging requirements of competency-oriented use cases? How can we support smooth transitions between those use cases so that the promise of a “common currency” for human capital can become reality?

References

[Braun, Kunzmann & Schmidt 2010] Simone Braun, Christine Kunzmann, Andreas Schmidt: People Tagging & Ontology Maturing: Towards Collaborative Competence Management. In: David Randall and Pascal Salembier (eds.): From CSCW to Web2.0: European Developments in Collaborative Design. Selected Papers from COOP08 (Computer Supported Cooperative Work), Springer, 2010

[Schmidt & Kunzmann 2007] Andreas Schmidt, Christine Kunzmann: Sustainable Competency-Oriented Human Resource Development with Ontology-Based Competency Catalogs. In: Miriam Cunningham and Paul Cunningham (eds.): Expanding the Knowledge Economy: Issues, Applications, Case Studies. Proceedings of E-Challenges 2007, IOS Press, 2007



<http://creativecommons.org/licenses/by-sa/3.0/de/>