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Transparency and Transfer of Individual Competencies – A Concept of Integrative Competence Management[1]

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Abstract: The present state of research on competence management does not provide any suitable model that can be used in practice. Neither results from organizational nor from cognitive and social sciences meet the requirements for an application-oriented competence management completely as yet. An integrative competence management must be able to synchronise individual with organisational competencies. This linking is still neglected in research. A convenient solution has not been described yet. This article presents a model for an integrated competence management model, which gives approaches from both cognitive science and organizational science a practical framework of action

Key Words: Knowledge Management, Skill Management, Competence Management, Resource Based View, Competence Based View, Competence Profiling, Competence Transfer
Categories: A.1, H.1, H.1.1, H.3, H.3.1, H.3.3, H.4, H.4.1, I.2.4, I.2.6, K.4.3, K.6.1

1 Absence of an Integrated Competence Model

While discussions about the reconfiguration and new configuration of product and market strategies still predominated a few years ago, debate today increasingly revolves around the use of competence management to solve current business problems [Mildenberger 2002]. The use of management models and methods of competence management is now arousing optimism in all levels of management and in large parts of the research community. Competence management should bring the competencies in companies, which are now heavily differentiated and dispersed, under control and better use employees' skills. According to the prevailing opinion, with the help of competence management, it becomes possible to make external and internal basic conditions, which are becoming more and more complex and incalculable [Bach et al. 2000], better controllable and regulable in a company. The academic literature usually focuses on the topics of individual and organizational learning, the utilization and the transfer of employee competencies as well as the expansion and retention of a company's core competencies [Krüger and Homp 1997], [Romhardt 1998], [Probst et al. 2000], [Mildenberger 2002]. Considering the wide range of publications on and lively discussion about competence management, it is

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surprising that this has not yet crystallized neither into a *standardized terminology* of the terms and concepts used nor into a *comprehensive model* for competence management [Freiling 2001]. The diversity of terms and concepts is particularly pronounced at the nexuses of theoretical model development to practical implementation in a company or application in managerial practice [Mildenberger 2002]. For the most part, very abstract and inconcrete ideas about the use of competence management in a company predominate here. This "*academic jungle*" bewilders the practitioner and creates barriers to application-oriented use in companies [Mildenberger 2002].

The divided view of the foundations of competence management is one reason for its hitherto insufficient transfer to practice. On the one hand, competence management is viewed from the perspective of *cognitive science*; especially from the view of psychology and sociology [Gruber and Renkl 1997], [Hänggi 1998], [Erpenbeck and Heyse 1999a], [Erpenbeck and Heyse 1999b]. On the other hand, competence management is understood as a discipline of the *organizational sciences*, especially organizational development and strategic business administration. [Nonaka and Takeuchi 1997], [North 2002], [Bach et al. 2000], [Probst et al. 2000], [Freiling 2001], [Reinhart et al. 2002]. In this context, sociological and psychological application models mostly concentrate on developing competence classifications and describing individual and collective competence types [Hänggi 1998] as well as regulating learning processes among individuals [Erpenbeck and Heyse 1999a], [Erpenbeck and Heyse 1999b]. Organizational science models on the other hand mainly answer questions about the strategic organization and aggregation of competencies [Prahalad and Hamel 1994], [Freimuth 1997], [Probst et al. 2000], [Freiling 2001] as well as their distribution and orientation toward operational processes [Argyris and Schön 1996], [Bellmann et al. 2002], [Milberg and Schuh 2002], [Reinhart et al. 2002].

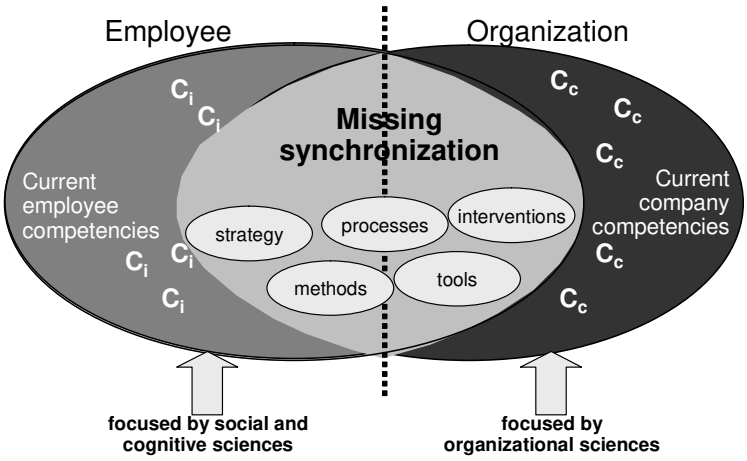

Figure 1: Missing synchronization between individual and organizational competence

The self-referential relation, which every discipline adopts for itself, results in there being only few interfaces for interdisciplinary exchange. In direct consequence, this leads to "*blind spots*" in the modeling of approaches to integrative competence management. Since the cognitive sciences and organizational sciences are strongly demarcated from one another a common "*world view*" is lacking for a homogeneous understanding of competence management. For the most part, the models from the organizational sciences overlook the specific properties, classifications and transfer problems of individual competencies while the models from psychology and sociology do not pay enough attention to business and process concerns. Existing models follow either the one or the other point of view, however never an integrative approach.

2 Model of Integrative Competence Management

2.1 Objectives and Differentiation of Terms

This paper presents a comprehensive *model for integrative competence management.* Integrative competence management has the task of describing employee competencies, making them transparent and guaranteeing the transfer, utilization and development of the competencies in the organizational competence base. Integrative competence management controls competence adaptation by providing methods and models to synchronize personal employee objectives with strategic corporate objectives. This concept has to all intents and purposes link business with learning processes.

Detailed theoretical exploration of all basic terms and concepts, on which competence management is based, is consciously refrained from.[2] Since this model is mainly oriented toward the practitioner, only a few working terms have been introduced solely for reasons of clarity in order to avoid an unclear presentation of the model**:**

- *Competence*: A person's competence basically describes a relation between requirements placed on a person/group or self-created requirements and these persons' skills and potentials to be able to meet these requirements. Competencies are concretized at the moment knowledge is applied and become measurable in the achieved result of the actions.
- *Competence Portfolio*: A person's competence portfolio describes the totality of all abilities and skills an individual possesses to fulfill a task assigned to him/her. The competence portfolio can be subdivided into professional, methodological and social competence.
- *Competence Adaptation*: Competence adaptation is the coordination and development of the individual employee competencies with respect to the competencies needed by a company.

[2] A comprehensive presentation of the terminology applied in competence management can be found in [Hänggi 1998], [Freiling 2001].

2.2 Phases of the Implementation Model

Competence management can be implemented in a company following a procedural model developed by these authors and tested in practice. The model is based on the basic idea that employees themselves can control, adapt and develop their individual competence portfolios and a company can control, adapt and develop its aggregated organizational competence portfolio. A synchronization of both interests is inherent in this model. Implementation of the model should be easily comprehensible for non-scientific users and adaptable to conditions specific to a company. The modular design of the model will put practitioners in the position to adapt the model to their own conditions. The approach can be subdivided into the phases *identification*, *validation* and *transfer*.

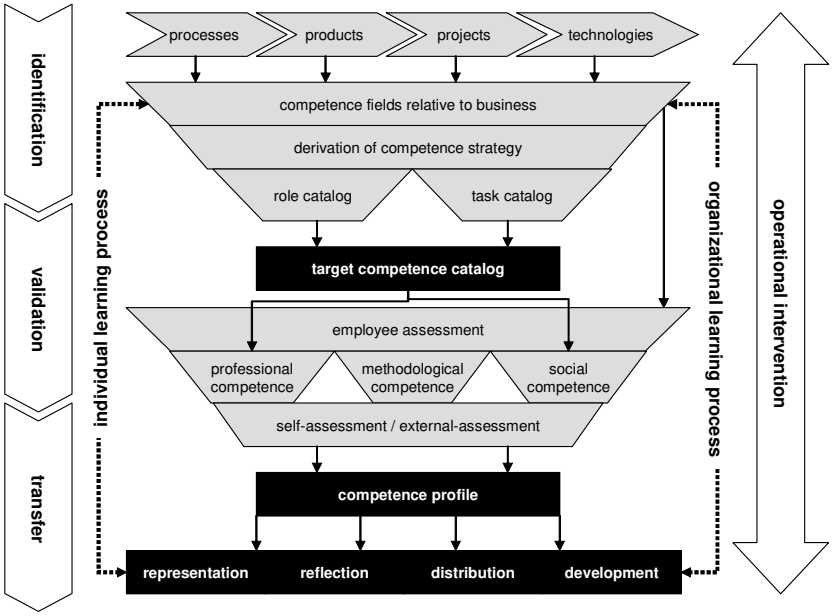

Figure 2: Model of integrative competence management

2.2.1 Identification Phase

Beginning with the *analysis*, the fields of business, which exist in the company and are strategically important, and the corporate competencies connected with them are systematically studied and identified, e.g. by using systemic competence monitoring methods [Schreyögg and Kliesch 2003]. Selected value-adding processes, business processes, products, services, projects and technologies are studied with respect to competence fields relevant for business. Building upon these findings, a strategic target course is determined for corporate competence management by setting up a overall "goal", e.g. reorganization of corporate competences, increasing of product

competence value etc. The results of the analysis are used for the *derivation* of individual competencies relevant for employees' organization-dependent tasks. This is realized by the deduction of different standard competence profiles, each with an unique set of individual competences necessary for an specific role in an company. The roles are defined organization-independent. Along with the field of work predefined by the organizational structure, persons in a company are integrated in particular roles (e.g. strategist, creative type, networker, etc.). Specific professional, methodological and social competencies are necessary in order to be able to fill a role. The distinctive feature here is that one person can assume several roles. Independent of function and hierarchy, an unambiguous target competence profile is formulated for every role, each of which is separated into professional, methodological and social components. This proceeding is called "competence drill-down", because every single role-dependent competence is itemized into its single professional, methodological and social parts. The competence roles with its single competence parts are pooled in a target competence catalogue. In addition to this, a job-dependent competence catalogue, similarly to traditional job profiles with predefined job- and task-related competences, is defined. It is called "task catalogue". Task and role related competencies are aggregated and structured in a *competence catalog,* according to the predefined core competences of the company.

2.2.2 Validation Phase

In the *validation phase*, the actual competencies of the employees are ascertained using the target competence catalog. This inquiry can be done either by use of analog or digital techniques and methods, e.g. by questionnaires, online polls etc. In the process, companies can concentrate on strategically important groups of employees (e.g. research and development, IT staff). The level of competence, i.e. the development of individual competencies is registered on a predetermined scale of expertise and thus made *measurable*. For a scale, assessment according to the three-stage expertise model "Initiate– Master– Expert" is recommended. The greater the degree of differentiation, the better competencies can be evaluated. In order to achieve a differentiated *evaluation*, an *assessment* of the competence domains can be performed additionally. A distinction can be made between "theoretical" and "practical" competence. The competence domain expresses to what extent the particular individual competence exhibits a practical relation. This practical relation is also designated as "practical expertise". In workshops with groups of employees, in individual conversations with the superior and/or through employee self-assessment, the competence profiles are checked for their *validity* and, if necessary, changed. The result is an overview of who, where in the company, has what competencies individually (employee → competence profile) or in totality (group → competence map). Support in reflection on and analysis of the results is provided here by various *visualization techniques*, which reproduce the data pool in compressed form and make decisions easier. In particular the "competence wheel" developed by these authors has proven itself, in which the competencies are extracted and visualized from the outside to the inside in the three stages Initiate–Master–Expert [North and Reinhardt (a)].

2.2.3 Transfer Phase

Building upon the transparency of the competence pool, the *competence transfer* between employees can be developed very precisely, depending on demand for and supply of competence in a company. Isolated competence pools are transparent throughout the organization and can be *networked*. At the same time, appropriate technical solutions support dynamic and periodic *updating* and *distribution* of the competence information. A "tracking" of the networking patterns between employees can diagnose the learning and transfer patterns throughout the organization. Employed as a control instrument, management can use the results of the pattern of competence development as the basis for improving competence management and specific adaptation of the networking concept. By augmenting the model with a performance indicator system adapted to a company, ongoing controlling and active development of the competence pool becomes possible.

2.3 Goals of the Model

2.3.1 Representation and Reflection

With respect to the competence pool, the model presented serves to improve the *representation* and connected with this the greater *reflection potential*. Employees as well as management have the possibility to obtain a systematic overview of the competence pools and initiate operative interventions for adaptation. Competence deficits and competence strengths can be identified and improvement measures initiated. The employees themselves can assess what level of competence they possess in comparison to other colleagues. This relieves fears and makes development opportunities better assessable. A simple but effective low-tech version would be the usage of yellow pages to represent and reflect competence information. Employees can create their own competence profiles, including classic resume information, job-descriptions, but additionally job-independent and dependent competences drilled-down to single competence information. By publishing this profiles company-wide, employees are presented as experts in specific competence fields. Colleagues now have the chance to access the expert while problem-solving. Furthermore, management can aggregate, reflect and analyse competence profiles to draw conclusions from. In best case, representation and reflection methods are integrated in a sophisticated management information system. Once, conditions for permanent updating and support processes are defined, results can permanently be balanced and synchronized with companies' strategic competences. Thus, creation and integration of job-independent and competence-based qualification plans would be possible.

2.3.2 Distribution and Development

The fragmented competence pool can be more quickly *distributed* and used in a company. When there are appropriate basic conditions, a competence marketplace can be produced. In problem solving processes, employees can more quickly establish contact and exchange knowledge. Networks can be produced and new knowledge is *developed* jointly in communities of interest (project teams, research groups, etc.). On the basis of the model, strategic personnel development concepts can be designed and integrated. Career and development plans become more transparent and can be

purposefully tailored to employee competence profiles (e.g. differentiation between the development of skilled workers and executives). The overall result is a model of competence distribution and development throughout the organization, which takes into account and fosters both organizational and individual learning processes.

2.4 Operational Interventions

In order to ensure system integrity in a company, the operational basic conditions must be adapted. Only so can ongoing *monitoring* and *upgrading* of the system be guaranteed. The following operational interventions have to be taken account of:

- *Strategic Interventions, i.e. formulation and integration of a competence strategy in the corporate strategy, support by top management and possible provision of a budget and resources;*
- *Cultural Interventions, i.e. creation of acceptance among employees and management through a communication and motivation concept (possibly incentive concept), that runs concomitant to the competence system;*
- *Interventions in Project Management and Business Processes, i.e. integration of competence transfer processes in the existing business and value adding processes as well as in project management;*
- *Spatial Interventions, i.e. provision of access to and utilization of the competence system at the workplace for all employees,*
- *Temporal Interventions, i.e. employees and management must make time resources available for the maintenance, control and updating of the competence system;*
- *Personnel Prerequisites, i.e. allocation of clear responsibilities for clarifying questions when rating and maintaining the competence system;*
- *Technical Prerequisites, i.e. when implementation throughout a company is taking place, provision of a suitable software solution for storing, distributing, visualizing and evaluating;*
- *Legal Prerequisites, i.e. formulation of a company agreement, involvement of the works council and personnel department as well as development of a data protection concept.*

These "*adjusting screws*" can be used to develop the model very precisely and adapt it to basic conditions individual to a company. Hence the model only constitutes a framework, which must be specifically developed for concrete fields of activity and organizations.

3 Conclusion

The model presented unifies elements of various approaches to competence management and gives them a practical framework of action. It can be applied both to the control and the development of the actual competence pool and to the determination of target competencies. The procedure contains an evaluation framework for the classification and self-rating of competencies as well as a procedural model for individual rating and an implementation model for organization. Hence the model constitutes the foundation for the synchronization of individual and organizational competence. It creates a framework for the future development of integrative competence management. The challenge for a future research in

competence management will be to augment such a model with applicative methods, to ensure a practical benefit.

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