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# Self-organization of Competence Development and the Role of Managers: Results of an Empirical Comparative Study

Martin Kröll, Ruhr-University of Bochum, Germany

*Abstract: Approaches to sustainable learning cultures are a focal point of the current scientific debate within the competence development research. Within this discussion, self-organization gains a key role in the configuration of competence development. However, the author is of the opinion, that the interaction of self- and external organization and the role allocation of competence development's participants accordingly should be focused. It is postulated that, since the coordination between self-organization and external organization is deficient, competence development activities often do not lead to the desired outcomes. Against this background, different forms of self- and external organization as well as different combinations of self and external organization were analyzed. An empirical study was undertaken in which a total of 109 companies were involved. The study investigated various expectations surrounding self-organization and external organization in large companies as opposed to small- and medium-sized enterprises (SME), together with the conditions under which self-organization and external organization occur in these companies. The empirical study comes to the conclusion that large enterprises emphasize the central role of human resources development (HRD) for the innovation capacity of an organization more than SME. There are also different ways of combining self- and external organization of competence development depending on the enterprise size. In contrast to the given assumption, it could not be identified that managers as human resources (HR) developer can improve the success of competence development.*

Keywords: Competency Development, Self-organization, External Organization, SME, Large Scaled Enterprises

## Research Question

**A**PPROACHES TO SUSTAINABLE learning cultures containing a shift from an emphasis of the view from teaching to learning towards a trend of self-organized, respectively self-dependent control of the learning process (Arnold & Lermen 2004, p. 71) are a focal point of the current scientific debate within competence development research. Self-organization refers to the extent the learners determine aims, contents, methods as well as learning surroundings (i.e. learning partner, time and place) of their competence development by themselves (Heyse 2003). Self-organization (for example, self-learning ability (Arnold & Lermen 2004, p. 9) plays a key role in the configuration of competence development in this discussion, particularly when dealing with the transformation of learning cultures. In this context, however, the author holds the opinion that the debate should focus more pointedly on the interaction of self- and external organization, as well as the associated allocation of roles among the affected participants which is significantly influenced by the learning culture.

The increasing focus on this field of research is due to a growing value of working-integrated and work-related learning in comparison to other learning forms for the support of the high-class management and the innovation management. A successful conversion of such measures requires an adequate arrangement of learning culture (Sonntag & Stegmaier, 2007). The central value of a corresponding learning culture is also stressed by attempts to learning organization, which combine competence development (KE) at individual with organizational level (Marsick & Watkins, 2003).

The role of the executives has considerably changed with respect to competence development activities during the last years. They are increasingly expected to take over the duties of a personnel developer (Tichy & Cardwell, 2004). The way they perceive these duties depends on their understanding of their role, e.g., do they experience themselves as a presenter and coach who supports the employees with their learning, as a feedback giver and/or as a creator of the enterprise's learning culture. In a determining manner executives influence the external-organization of individuals' competence development. This becomes clear not only, but particular when new learned competencies have to be transferred (Kauffeld, 2006).

Against the background of this trend the article postulates the thesis that reciprocal adjustment between self-organization and external organization and their connection with the different phases of competence development (demand analysis, preparation, realization, transfer and evaluation) offers enormous potential for improvement. Furthermore, these aspects constitute the main reasons for the identification of failed competence development. This is a kind of competence development which did not breed what it was planned for. The central question asks if there is a divergence between the proportion of external organization and self-organization in competence development depending on the organization's size and its main consequences.

The underlying assumption of this paper is that the coordination between self-organization and external organization is deficient and for this reason competence development activities do not lead to the desired outcomes. The investigation does not claim to address the question exhaustively. Instead, the focus is on the differences in learning culture in relation to the size of an enterprise. The various expectations surrounding self-organization and external organization in large companies as opposed to SME are considered, together with the conditions under which self-organization and external organization occur in these companies.

## **Theoretical Approaches as a Framework of Reference**

The scientific debate will draw on recent scientific findings from the learning culture research (Seufert & Euler, 2008; Friebe, 2005). Theoretical approaches examine questions such as the characteristics of learning cultures and the extent to which they influence job-related competence development, as well as the relationship between corporate cultures and learning cultures in addition to opportunities and constraints in the configuration of these two aspects. In the research on learning cultures it is unanimously agreed that, despite the increasing importance of self-organization, or indeed even due to it, the responsibility of executive managers is of growing and irreplaceable relevance. Next to the clarification of perceived roles among executives and employees, significant considerations include the methods and instruments which enable dialogue and agreement between the participants.

A broad theoretical foundation underpins the research hypotheses and their subsequent implementation. In addition to publications on learning culture, perspectives from the fol-

lowing fields of research are considered: new type of workforce (workforce entrepreneur, entrepreneurial employee; Pongartz & Voß, 2003; Wunderer, 2003), new definition of the role of executives (Kleinau, 2005; Wunderer, 2003), work-oriented learning (Sonntag & Stegmaier, 2007), self-organization of competence development (Erpenbeck & Rosenstiel, 2003; Diekmann et al., 2006), resource-oriented concepts of HR management (Ridder & Conrad, 2004; Freiling et al., 2006), dynamic capability approach (Winter, 2005; Winter, 2003; Zollo & Winter, 2002; Dosi, Nelson & Winter, 2002), organizational learning (Watkins & Marsick, 2003) and organizational culture (Landau, 2003; Sackmann, 2002).

### ***The Conception of Self-organization***

Self-organization of competence development gains importance within competence development research. One main reason is that the employees are engaged to act and think more and more in an entrepreneurial way (Wunderer, 2003; Pongartz & Voß, 2003). From the company's perspective it gets more and more complicated to appreciate the economical development in situ and to assess the demands of competence concretely (Erpenbeck & Rosenstiel, 2003).

Regarding competence development self-organization (according to Heyse, 2003, p. 577) means that the participants concerned should determine competence development's aims, direction, instruments for establishment, schedule, transfer of acquired competencies as well as the criteria which evaluate the outcome. On the other hand external organization concerns stakeholders who will not acquire competencies by themselves. Protagonists of external organization might be executives, members of the department or the organization's management as well as colleagues, vendors, customers of the organization or off-the-job training providers. Self-organization occurs – as a matter of course – in the working tasks, context and environment as well as the depending development of the organization. The research in learning culture points out that executives have a more and more growing, irreplaceable role in spite of, respectively even since, self-organization gains remarkable importance (Arnold & Schübler, 1998). Beneath the clearance of the understanding of the executives' roles the organizational members' methods and instruments which offer dialogue and adjustment between the members, play an important role for competence development.

### ***Individual and Organizational Competencies***

Competencies are interpreted as the ability to act in the sense of *Könnenhaben* (skill assets) - according to Ortmann (2010). *Könnenhaben* is always connected with the human or organizational body. One has to divide the competencies of the individual participants (Erpenbeck & v. Rosenstiel, 2007; Heyse et al., 2004) from the competencies of the collective participants (i. e. competencies of the organization, e. g. dynamic capabilities; Teece & Pisano & Shuen, 1997; Dosi, Nelson & Winter, 2002; Zollo & Winter, 2002). The organization's competencies have their own superior quality in comparison to the individual ones. The assumption that individual competencies are congruent with the collective ones is negated explicitly. The proportion of organizational assets and individual assets is structured hierarchically (Ortmann, 2010, p. 20) since the complete competencies of an organization includes factors which cannot be found on individuals' levels. Hence competence development instruments should

make clear firstly on which level should be implemented and secondly how it makes an impact on external and self-organizational processes.

Resources cause the organization's heterogeneity and should make it more competitive (Barney, 2001). Accordingly, competence development instruments should emphasize the development of competencies (Schroeder et al. 2002, Hatch/Dyer 2004) which are neither easy to copy nor to imitate. Last but not least, they have to be synchronized to the organization's needs specifically (Barney, 2001; Teece, Pisano & Shuen, 1997).

Nevertheless, it means more than having resources unique, imitable and useful to survive at the market. The fashion of resources' usage is crucial. It is nearly something like an art to handle and use resources in a creative and innovative way. It needs – beneath development and distribution – leverage of resources as well as diffusion, integration and renewal of resources (Doz, 1996; Ortmann, 2010). Here it is interesting to consider the proportions of external and self-organization in the different processes. It seems likely that the possibility to develop and usage of existing resources is depending on the organization's competencies. In order to enable learning at different levels, especially higher levels (beneath single-loop-learning, double- and deuterion-loop-learning) there has to be a dynamic capability, "... a learned and stabile pattern of collective activity through which the organization systematically generates and modifies its operating routines in pursuit of improved effectiveness" (Winter, 2002, p. 340). Another passage says: Capabilities "... combine knowledge, particularly in the form of individual skills and organizational routines, with the sorts of inputs recognized in the economic theory of production." Here Winter (2002, p. 40) interprets organizational routines as multi-person skills.

### ***Internal and External Learning***

Schroeder et al. (2002) postulate, that internal learning (Items: e.g. training to perform multiple tasks or useful suggestions are implemented) and external learning (e.g. it is under examination, to what extent customers and vendors can take part in these processes) result in unique processes and equipment and a higher performance of the organization (as measured by quality, time and costs). Hatch & Dyer (2004) supplied evidence that a special organization and control concerning employee selection, HRD and HR deployment lead to a significant improvement of learning processes (especially regarding learning-by-doing) as well as their velocity. Furthermore it has a positive impact on the organization's performance. That is how organizations can procure competitive advantages.

In addition to Hatch & Dyer (2004) it should become clear, what kind of processes go on inside the organization. Especially the relationship between the line managers and the organizational members who want to develop and use their competencies are focused. The knowledge which says that e. g. the acquired competencies' transfer is often a key problem as to the organizational definition of competence development activities is regarded. If the line manager should not permit the competencies' usage and if he did not offer scope of action for doing so, learning would not have any influence on the organization's development. Another reason for an examination of the interrelation of self and external organization is the finding that lacking acceptance of HR activities by involved members of the organization is a central challenge for supervisors. Why should an organization offer HR activities to its employees if they neither take an active part nor use these activities for their self organization of their development of competences?

### ***Shaping of Learning Culture***

Taking as a starting point the dimensions of the learning culture inventory (LCI), as sketched out notably by Sonntag et al. (2005), this study focuses on five specific aspects of learning culture:

1. Structural and formal frame conditions for learning in the company (e.g. the structure of organizations, remuneration and incentive systems, as well as working time regulations);
2. Strategic HRD (needs assessment, planning, realization, and evaluation, as well as the securing of transfer of HRD measures);
3. Formalization of competence development of employees;
4. Learning atmosphere and encouragement by colleagues; and
5. Learning-oriented managerial functions.

With reference to the dimensions of the learning culture inventory, Friebe (2005) concludes in her empirical study that skill-building tasks, a learning-oriented leadership style and external learning contacts positively influence job-related competence development, as perceived by the staff interviewed. Of less influence are the normative frame conditions of a learning-oriented corporate philosophy (for example, how learning is embedded in the corporate mission statement), strategic HRD and a strong learning environment. At the same time in the professional literature the executives are required to act as leaders of HRD for their personnel (Tichy & Cardwell, 2004; Meifert, 2006). These results and considerations are regarded as a starting point in considering the relationship between executives and members of the organization, and its influence on competence development. Approaches on decentralized HRD, which pronouncedly assign the roles of HRD leaders to executives, are of particular interest. This new perception of roles also suggests consequences for the allocation of tasks among the members of HR departments. In this regard it is important to ask if there are different interrelations between self and external organization (for example low self organization and high external organization or vice versa) and which of this forms is potentially more promising with regard to competitive advantages by means of development of competences. The distinction between SMIs and large companies was regarded as useful in this study because there are many differences between HR management and HRD in SMIs and large companies (Mugler, 2008).

### ***Hypotheses***

In the following the hypotheses of the study, which are based on the theoretical findings, are explained.

A particular learning culture should be bound to an improvement of the innovative capacity of organizations. Maria & Watkins (2003) emphasize that „the promise of continuous learning is innovation”. In the field of research on innovation management handling and accomplishment of resistance against innovations is an important point. For this reason it is inevitable that the company management attaches great importance to HRD compared to other activities in personnel management (Bergmann & Pohlandt, 2006). Hence the question arises if organizations attach different importance to HRD subject to their size of enterprise.

Based on the assumption that large companies have a higher degree of professionalization results the following hypothesis:

**Hypothesis 1:** Large companies attach more importance to HRD for the innovative capacity of their organization.

Sonntag et al. (2005, S. 194 ff.) emphasizes the characteristics of learning cultures of SMIs. There are various qualitative differences between SMIs and large companies. For instance, in most cases the company management of SMIs is also the owner of the organization. Therefore decisions are often made by the management and the employees do not have large latitudes. Furthermore most decisions concerning HRD are made by the management without an agreement of the organizational members. The supervisors mostly decide which HR activities are organized and who is allowed to take part in these activities.

**Hypothesis 2:** Large companies expect a higher degree of self organization and competence development of their members than SME.

It is postulated that employees should be entrepreneurial. According to the concept of the "Arbeitskraftunternehmer" (i.e. the entrepreneur of one's own labor power) by Pongartz & Voß (2003), employees are increasingly confronted with the demand for self-control, self-economization, and self-rationalization. Moreover self organization and self regulation becomes more important for an effective competence development (Derichs-Kunstmann et. al., 1998). Approaches, which emphasize the role of self organization for competence development, point out that this is the best way to achieve an enduring learning culture (see Friedrich & Mandl, 1997).

**Hypothesis 3:** The more pronounced the demand for self organization, the more likely the competence development leads to the desired result.

Industrial psychologists emphasize that the understanding of the functions of HR management differ from SMIs to large companies (Mugler, 2008). In large companies, managers have got greater responsibilities regarding to competence development as Sonntag et al. (2005, S.144) state. One reason for this difference may be the fact that large companies have recognized the negative consequences of a centralization of HRD. Furthermore the department for HR management often does not take part in the everyday life of large companies and is accordingly not involved in the requirements of the employees.

**Hypothesis 4:** The larger the company, the sooner the executives are expected to take on the role of a mentor.

Theoretical concepts emphasize the manager's role as to competence development, especially during the phase of transfer (Rouiller & Goldstein, 1993; Tracey et al., 1995). Efforts towards competence development which blind out the manager's role run the risk of failure respectively the risk of an undesired result of competence development.

**Hypothesis 5:** The more pronounced the expectation, that executives take on the role of a mentor, the more likely the competence development leads to the desired result.

Large companies analyze the demand of training more systematically and evaluate the success of training more often - so the results of an empirical survey (Kabst & Giardini, 2009, pp. 36). The development of competencies of SME in contrast is more reactive (Gonon & Stolz 2004, p. 10). The relationship in SME between managers and employees is different. The concrete relationship influences self- and external organization crucially.

**Hypothesis 6:** Both in SME and large-scale enterprises there are preferred combinations of self- and external organization.

If managers are not regarded to see themselves as a HR developer whereas the employees are confronted with high expectations towards self-organization as to competence development at the same time, then it is less likely that competence development leads to the desired result. Does this mean vice versa, that high external organization (managers see themselves as a HR developer) and low self-organization leads to a desired result of competence development?

**Hypothesis 7:** Depending on the certain combinations of self- and external organization the results of competence development may differ.

## Methodological Steps

### *Participants and Companies*

An empirical study was undertaken in which a total of 284 companies were approached by way of personal contact, from which 109 half-standardized questionnaires were evaluated. In terms of business size, the sample was composed as follows: 30.3% of the participant enterprises employed 50 – 249 staff, 23.9% employed 250 – 999 staff and 47.7% employed 1,000 or more staff. In terms of business sectors, the largest group of participating companies (47.7%) was located in industrial production, particularly the metal and electronics industry, and 30.3% in the service sector, in particular, retail. The other firms belonged to several different sectors. Non-profit organizations were not represented. The present sample is explorative and deals with companies in North-Rhine Westphalia (West Germany) with at least 50 Employees. By the exclusion of crafts enterprises and an alignment with the latest findings of the Federation of German Industry middle class panel and the Institute for Employment Research enterprise panel (Bellmann/Gewiese 2002) it can be assumed that the sample can point to certain tendencies.

Both panels analyze companies of different segments and sizes yearly concerning a lot of HR policy instruments and claim to draw a high representative sample. As in other surveys on corporate learning cultures (e.g. Sonntag et al., 2005 or Seufert & Euler, 2008), those responsible for matters of HRD were interviewed, e.g. heads of HR departments or HRD departments, or board members.

### *Data Analysis*

The half-standardized questionnaires were evaluated via quantitative statistics tests (Chi-squared ( $\chi^2$ ) tests, analysis of correlation (Spearman's Rho ( $\rho$ )), regression models and One-Way-Analyses of Variances (ANOVA)), which revealed significant differences between the learning cultures in SME and large firms. In order to examine the sizes of the effects observed there were different methods used assessing the effect size of the differences (Cramer's V, Eta-Square ( $\eta^2$ ), correlation coefficients ( $\rho$ ) can be regarded as an effect size by itself).

### ***Instruments / Questionnaires***

Prior to the survey, a pre-test was carried out on fifteen companies. The participants' understanding of the questions was checked, ensuring that all relevant points of the research material were addressed. To provide its reliability the questionnaire was given exemplarily to a number of different persons of the same organization responsible for personnel development. The results of the analysis show high inter-rater reliabilities. Special inconsistency checking questions were integrated in order to prove the reliability of the given answers. If the answer patterns showed obvious inconsistencies they were rejected. In an additional interview the validity of the questionnaire in terms of content and structure was evaluated with the help of selected experts.

### ***Items Concerning Management of Innovation***

In examining the role of HRD from the perspective of innovation management, the degree of innovation management was measured against the following factors: the share of product service, process and input changes in the previous five years, whether the innovative behavior of the company was satisfactory, distinctive or extreme, and the extent to which the focus on innovation could be increased.

### ***Items Concerning Self-organization***

In addition to the choice of measures for HRD against the company's size, which influences the opportunities and constraints of external organization and self-organization, the empirical research also analyzed the direct relationship between external and self-organization. Here it was examined to what extent HRD experts expected their staff to organize their competence development independently (Diekmann et al., 2006). Referring to the theoretical approach by London/ Smither on career-related continuous learning the following points were considered important with regard to self-organization of competence development: requirement assessment, preparation and realization of competence development, securing of transfer and evaluation of competence development (Sonntag & Stegmeier, 2007, S. 45 ff.). The self-organization index was measured by means of the following items:

Employees must assess their own competencies and competence potentials.
Every member of the organization decides largely autonomously about his or her development of competencies.
In addition to the competence development arrangements on offer, employees can independently select activities for competence development, which will also be supported by the company.
Every member of the organization decides, largely autonomously, on their own competence development and the deployment of their newly acquired skills.
Employees are responsible for their capability of applying their newly acquired skills.
The employees themselves are accountable if their competence development does not lead to the desired results (e.g. loss of free time or working time, not achieving career goals).

### ***Items Concerning External Organization***

Beside self organization during competence development the present study identified the degree of external organization. In this context, it was examined to what extent managers are expected to take on the role of a coach or leader of HRD, and whether differences occur in relation to company size. Questions particularly aimed at ascertaining whether managers performing such a role as HRD leader were evaluated and supported. Such proceeding aims at a structural understanding of managerial behavior and not primarily at an interactive one (Wunderer, 2003). To quantify this dimension the following items were considered:

Managers are involved in preparing the instruments of HRD.
All managers monitor whether members of the organization are undertaking competence development.
Managers verify the utility of the employees' competence development.
When managers are appraised, it is taken into account whether they systematically support their subordinates' HRD.
Managers deploy instruments of HRD with the aid of 'training units'.

## **Results**

Firstly the analysis of differences concerning the organizations' sizes (4.1) regarding management of innovation, objectives and instrument of HRD. In 4.2 external and self-organization are analyzed, as well as their combination. In part 4.3 influencing factors and requirements of successful competence development are explored.

### **Differences between SME and Large Enterprises**

#### ***Innovational Management***

Regarding innovative behavior, 80% of large companies value HRD highly, compared to only 51.5% of SME ( $\rho=,237^*$ ,  $p<,014$ ) (see Table 1). In contrast, SME regard personnel selection as particularly important in respect of innovation management ( $\rho=-,168^+$ ,  $p<,088$ ): 60.6% of the scrutinized SME assign high value to personnel selection, which is the case in only 44% of large companies. The correlation between these two aspects and the size of the companies prove to be significant. The special emphasis on recruitment in SME is striking ( $\rho=-,200^*$ ,  $p<,038$ ).

**Table 1: Innovation Management and the Role of Personnel Management-related Instruments**

	Personnel Advertising	Recruitment	Personnel Planning	Personnel Selection*	Personnel Deployment	Appraisal	Remuneration	HR Development**(1)	Redundancy
50 – 249 Employees	6,1%	54,5%	24,2%	60,6%	51,5%	18,2%	18,2%	51,5%	6,1%
250 – 999 Employees	12,0%	24,0%	12,0%	68,0%	40,0%	24,0%	28,0%	84,0%	0,0%
1,000 + Employees	6,0%	34,0%	34,0%	44,0%	50,0%	36,0%	10,0%	80,0%	6,0%

Question: which of the above are the three most important personnel management activities from the perspective of your company's innovation management? (\* $\alpha = 0,05$ ; \*\*  $\alpha = 0,01$ ; (1)  $\chi^2_{(12)}=13,359^*$ ,  $p < 0,038$ )

While large companies depend on HRD and the support of their employees for this, SME aim to achieve innovation through the recruitment and selection of new recruits. Thus large companies' HR activities are focused on innovation in the internal market and SME's personnel activities on innovation in the external labour market.

### **Goals of HRD**

As competence development does not lead to its desired result in 60% of cases, independent of company size, the question arises which goals are pursued by HRD and whether they vary with company size. Due to the specifics of the interrogation of experts, the findings captured in this empirical study relate only to external organization.

Clearly the objectives pursued by staff through competence development may not match those of external organization, and should be considered in a further debate. The differentiation of the various goals of HRD draws on the taxonomy of competencies by Erpenbeck & Rosentiel (2003). From the perspective of the promotion of companies' innovative performance, great significance is ascribed to the scanned goals (Bergmann & Pohlandt, 2006). Goals of HRD diverge significantly in relation to the size of the company. Whilst SME regard as highly important the motivation of the members of the organization, the promotion of technical competencies, and the upgrade of organizational and methodical competencies, large organizations markedly seek to strengthen social competences of their staff through instruments of HRD much more often than SME (see Table 2).

**Table 2: Goals of HRD**

	<b>50 - 249 Employees</b>	<b>250 – 999 Employees</b>	<b>1,000 + Employees</b>
Staff motivation	70,4%	47,4%	51,5%
Updating technical expertise	56,0%	63,2%	39,4%
Promoting organizational and methodical competences	28,0%	15,8%	36,4%
Promoting social competences** ( $\rho=,323^{**}$ , $p<,001$ )	4,0%	35,0%	38,2%
Investment in future talent	30,8%	40,0%	37,5%
Question: What are the two most important goals of HRD in your company? (* $\alpha = 0, 01$ )			

### ***Significance and Frequencies of Occurrence of HRD Activities***

Next the question was addressed whether enterprises will choose different means of HRD relative to enterprise size and whether they will ascribe different levels of importance to the different forms of HRD with regard to competence development in the company. Recent scientific debate has increasingly focused on forms of HRD closely related to working position such as job enlargement, job enrichment, or job rotation and their respective effects on competence development among staff members (Sonntag & Stegmaier, 2007). At the same time, however, off-the-job forms of further training must not be neglected. Since employees increasingly face the necessity for frequent job changes due to broader economic changes, particular significance is given to the incorporation and training of new employees.

First of all it needs to be pointed out that the forms of HRD, which vary relative to company size, are implemented to differing extents: Thus, the interviewed SME draw on off-the-job training more often than large scale enterprises. Considering alternative instruments of HRD such as quality circles, horizontal and vertical job enrichment, job rotation, but also on-the-job training, however, SME act with more reserve than large-scale companies. SME acknowledge external training measures to be of outstanding relevance. Large companies by contrast prefer job enrichment for developing competencies internally. The findings as to the rankings (Table 3) can be found in the frequency of use of the HRD instruments, too (Table 4).

**Table 3: Ranking of HRD Instruments**

	<b>50 - 249 Employees</b>	<b>250 – 999 Employees</b>	<b>1,000 + Employees</b>
Training of new staff* ( $\chi^2_4=12,965$ , $p<,011$ , Cramers-V=,251)	86,7%	58,3%	53,1%
External further training	46,6%	16,7%	26,5%
on-the-job training + ( $\chi^2_4=8,368$ , $p<,079$ , Cramers-V=,202)	53,3%	65,0%	59,2%
Quality circle	0,0%	8,3%	10,2%
Horizontal and vertical job enrichment*( $\chi^2_4=7,509$ , $p<,023$ , Cramers-V=,270)	10,0%	8,3%	30,6%
job-rotation	3,3%	16,7%	12,2%
Question: What are the two most important instruments of HRD for the construction of competencies in the company? (* $\alpha = 0, 01$ ; ** $\alpha= 0,05$ ;*** $\alpha = 0,05$ )			

**Table 4: Frequency of use of HRD Instruments**

	<b>50 - 249 Employees</b>	<b>250 – 999 Employees</b>	<b>1,000+ Employees</b>
Training of new staff <sup>+</sup> ( $F_{2,107}=2,540$ , $p<,084$ )	M = 3,5 SD = ,762	M = 3,62 SD = ,637	M = 3,8 SD = ,452
associated a posteriori sub-group-comparison ( <i>post-hoc-Scheffé-corresponding</i> )	Cf. to 250-999 ( $p<,769$ ) <b>Cf. to &gt;1000 +</b> ( $p<,094$ )	Cf. to <249 ( $p<,769$ ) Cf. to >1000 ( $p<,451$ )	<b>Cf. to &lt;249 +</b> ( $p<,094$ ) Cf. to 250-999 ( $p<,451$ )
External further training	M = 2,56 SD = ,669	M = 2,50 SD = ,583	M = 2,72 SD = ,784
on-the-job training* ( $F_{2,105}=4,403$ , $p<,015$ )	M=2,97 SD=1,062	M = 3,31 SD = ,679	M = 3,48 SD = ,544
associated a posteriori sub-group-comparison ( <i>post-hoc-Scheffé- corresponding</i> )	Cf. to 250-999 ( $p<,247$ ) <b>Cf. to &gt;1000*</b> ( $p<,015$ )	Cf. to <249 ( $p<,247$ ) Cf. to >1000 ( $p<,647$ )	<b>Vgl. zu &lt;249*</b> ( $p<,015$ ) Cf. to 250-999 ( $p<,647$ )

Quality circle* ( $F_{2;106}=4,487, p<,014$ )	M = 1,52 SD = ,626	M = 2,00 SD = ,938	M = 2,00 SD = ,728
associated a posteriori sub- group-comparison ( <i>post-hoc-Scheffé- corres- ponding</i> )	<b>Cf. to 250-999 +</b> ( $p<,061$ ) <b>Cf. to &gt;1000*</b> ( $p<,023$ )	<b>Cf. to &lt;249 +</b> ( $p<,061$ ) Cf. to >1000 ( $p<1,000$ )	<b>Cf. to &lt;249*</b> ( $p<,023$ ) Cf. to 250-999 ( $p<1,000$ )
horizontal and vertical job enrichment *** ( $F_{2;103}=9,581, p<,000$ )	M = 1,82 SD = ,531	M = 2,21 SD = ,710	M = 2,49 SD = ,674
associated a posteriori sub- group-comparison ( <i>post-hoc-Scheffé- corres- ponding</i> )	<b>Cf. to 250-999 +</b> ( $p<,092$ ) <b>Cf. to &gt;1000**</b> ( $p<,000$ )	<b>Cf. to &lt;249 +</b> ( $p<,092$ ) Cf. to >1000 ( $p<,211$ )	<b>Cf. to &lt;249**</b> ( $p<,000$ ) Cf. to 250-999 ( $p<,211$ )
job-rotation** ( $F_{2;107}=9,662, p<,000$ )	M = 1,44 SD = ,619	M = 2,04 SD = ,774	M = 2,13 SD = ,733
associated a posteriori sub- group-comparison ( <i>post-hoc-Scheffé- corres- ponding</i> )	<b>Cf. to 250-999</b> ( $p<,008$ ) <b>Cf. to &gt;1000*</b> ( $p<,001$ )	<b>Cf. to &lt;249</b> ( $p<,008$ ) Cf. to >1000 ( $p<,883$ )	<b>Cf. to &lt;249*</b> ( $p<,026$ ) Cf. to 250-999 ( $p<,883$ )
Please quote, how often you use the instruments of HRD (never=0, if required=1, often=2, always=3), M=Mean, SD=Standard deviation ( <sup>+</sup> $\alpha = ,10$ ; * $\alpha = ,05$ ; ** $\alpha = ,01$ )			

Schroeder et al. (2002) emphasize that the usage of certain instruments for deployment plays an important role towards the promotion of organizational learning. That is why the significance of instruments concerning deployment was asked in the questionnaire. SME expect more than larger enterprises that the job holder should fit the job requirements. Here they bet on external organization (Table 5). Larger enterprises in contrast attach importance to target agreement. They emphasize the dialogue between self-organization and external organization. This importance can be found in the frequencies of the usage of the corresponding deployment instruments (Table 6). SME favor external organization, concerning both the instruments of HRD and deployment.

**Table 5: Significance of Instruments of Deployment**

	<b>50 - 249 Employees</b>	<b>250 – 999 Employees</b>	<b>1,000+ Employees</b>
operative level jobs	26,7%	13,6%	11,4%
management level jobs	20,0%	9,1%	17,8%
operative group work jobs	19,4%	36,4%	24,4%
management group work jobs	23,3%	18,2%	22,7%

time-fixed task assignments (e.g. via projects)	23,3%	13,6%	39,1%
non time-fixed task assignments <sup>+</sup> ( $\chi^2_4=8,198, p<,085$ )	6,7%	13,0%	6,7%
job layout considers the competencies of the organizational member	25,8	18,2%	13,6%
job holders should fit the job require- ments firstly* ( $\chi^2_4=11,715, p<,020$ )	23,3%	22,7%	4,5%
target agreements by dialogue <sup>+</sup> ( $\chi^2_4=9,305, p<,054$ )	28,1%	40,9%	60,0%
target-setting by managers	10,0%	21,7%	6,8%
Question: what are the two most important instruments of HRD for the construction of competencies in the company? ( <sup>+</sup> $\alpha=,10$ ; * $\alpha=,05$ ; ** $\alpha=,01$ )			

**Table 6: Frequency of use of Deployment Instruments**

	<b>50 - 249 Employees</b>	<b>250 – 999 Employees</b>	<b>1,000+ Employees</b>
operative level jobs	M=2,63 SD=,928	M=2,50 SD=,978	M=2,90 SD=,905
management level jobs	M=2,67 SD=,959	M=2,88 SD=,537	M=2,94 SD=,919
operative group work jobs	M=2,60 SD=,932	M=2,96 SD=,690	M=2,81 SD=,798
management group work jobs	M=2,30 SD=,877	M=2,40 SD=,764	M=2,44 SD=,823
time-fixed task assignments (e.g. via projects)	M=2,55 SD=,810	M=2,48 SD=,586	M=2,60 SD=,639
non time-fixed task assignments <sup>+</sup> ( $\chi^2_4=8,198, p<,085$ )	M=2,77 SD=,884	M=2,88 SD=,781	M=2,81 SD=,842
job layout considers the competen- cies of the organizational member	M=2,81 SD=,821	M=2,64 SD=,860	M=2,46 SD=1,010
job holders should fit the job require- ments firstly * ( $F_{2,99}=3,079, p<,050$ )	M=3,10 SD=,803	M=3,20 SD=,645	M=2,74 SD=,920

associated a posteriori subgroup-comparison ( <i>post-hoc-Scheffé-corresponding</i> )	Cf. to 250-999 ( <i>p</i> <,905) Cf. to >1000 ( <i>p</i> <,189)	Cf. to <249 ( <i>p</i> <,905) <b>Cf. to &gt;1000</b> + ( <i>p</i> <,089)	Cf. to <249 ( <i>p</i> <,189) <b>Cf. to 250-999</b> + ( <i>p</i> <,089)
target agreements by dialogue * ( $F_{2,103}=3,961$ , <i>p</i> <,022)	M=2,94 SD=,716	M=3,12 SD=,833	M=3,41 SD=,734
associated a posteriori subgroup-comparison ( <i>post-hoc-Scheffé-corresponding</i> )	Cf. to 250-999 ( <i>p</i> <,663) <b>Cf. to &gt;1000*</b> ( <i>p</i> <,026)	Cf. to <249 ( <i>p</i> <,663) Cf. to >1000 ( <i>p</i> <,301)	<b>Cf. to &lt;249*</b> ( <i>p</i> <,026) Cf. to 250-999 ( <i>p</i> <,301)
target-setting by managers	M=2,78 SD=,870	M=2,28 SD=,891	M=2,65 SD=1,052
Please quote, how often you use the instruments of deployment (never=0, if required=1, often=2, always=3), M=Mean, SD=Standard deviation ( <sup>+</sup> $\alpha$ =,10; * $\alpha$ =,05; ** $\alpha$ =,01)			

## Self- and External Organization

### Self Organization

The empirical study reveals that there is no significant interdependence between self-organization of competence development and company size. The extent of expectations towards employees in the direction of a dissolution of boundaries of competence development as stated in Pongartz & Voß (2003) is limited (see Table 7). In view of the wide distribution of results for self-organization, it is clear that SME tend toward the extremes rather more than large companies of over 1,000 employees. It is most likely that a very high or very low level of self-organization will be expected in a company of fewer than 1,000 employees. A medium level of self-organization is most readily expected in companies of over 1,000 employees.

**Table 7: Index of Self-organization in Relation to Company Size**

	50 - 249 Employees	250 – 999 Employees	1,000+ Employees
Low self-organization	12,5%	18,8%	7,1%
Medium self-organization	50,0%	50,0%	75,0%
High self-organization	37,5%	31,3%	17,9%

### External Organization

The results of the empirical study on external organizations allow the following conclusions: Whilst in 94.7% of large companies, managers are regarded as coaches and supported accordingly; this is much less frequently the case in SME. Only 56.5% of companies with 50 to 249 employees allocate the role of HRD coaches to their managers in any way, shape or

form. It is clear from these results that there is a striking divergence in the perception of managers' roles from the viewpoint of experts in HRD in the largest and smallest companies ( $\chi^2_{(2)}=13,036$ ,  $p<,01$ , Cramers-V=,401) (see Table 8). In large enterprises manager's regard themselves more often as coaches/HR developers (Mann-Whitney-U-Test,  $U_{79}=275$ ,  $p<,000$ ).

**Table 8: Managers as Coaches/Leaders of HRD**

	<b>50 - 249 Employees</b>	<b>250 – 999 Employees</b>	<b>1,000+ Employees</b>
Managers as coaches	56,5%	70,0 %	94,7 %
Managers not as coaches	43,5%	30,0 %	5,3%

It is worth noting in the discussion that managers of SME are often only given the task of checking the practical effect of competence development. Only in 44.4 % of cases will SME managers be appraised according to whether they support their subordinates' competence development, or be given managerial training to enable them to use HRD systems more competently. By contrast, in big companies this figure is 78.0% ( $\chi^2_{(2)}=17,542^{**}$ ,  $p<,000$ , Cramers-V=,417) (Appraisal) and 84.1% ( $\chi^2_{(2)}=8,273^*$ ,  $p<,016$ , Cramers-V=,305) (Training).

### ***Combination between Self- and External Organization***

Based on the findings regarding self- and external organization, it was examined which combinations of the two forms are favored by large companies and SME, respectively, and whether there are different patterns. It was found that, in regarding the interplay between external and self-organization in SME and large companies, different combinations are discernible. Of the interviewed large companies of more than 1,000 employees, over 70% displayed the following combination: a moderate level of self-organization is demanded of the employees while the executive managers are expected to view themselves as leaders/coaches of HRD (see Table 9). In SME, such a clear preference for one combination of self- and external organization could not be detected. Here a greater range of variation without any clear pattern appears.

**Table 9: Combination of Self-organization and External Organization in Different-sized Companies**

<b>Size of the Company</b>	<b>50 to 249 Employees (SMEs) (Valid Data =20)</b>		<b>250 – 999 Employees (Valid Data =15)</b>		<b>Over 1,000 Employees (Valid Data =26)</b>	
	<b>Managers not as Coaches</b>	<b>Managers as Coaches</b>	<b>Managers not as Coaches</b>	<b>Managers as Coaches</b>	<b>Managers not as Coaches</b>	<b>Managers as Coaches</b>
Low self-organization	5,0%	10,0%	0 %	20,0 %	0 %	7,7 %

Medium self-organization	10,0%	35,0%	13,3 %	40,0 %	7,7 %	73,1 %
High self-organization	30,0%	10,0%	6,7 %	20,0 %	0 %	11,5 %

It might be examined in a further study whether the two characteristics (1) “high self-organization” and (2) “executives do not act as coaches” correspond (as is the case with 30% of SME). At any rate, this combination carries a high risk of undesirable results of competence development from the companies’ perspective.

### **Influencing Factors and Requirements of Successful Competence Development**

59, 5% of the large businesses, as well as 64,3 % of the SME complain that competence development does not lead to the desired results. Remarkably, regardless of the goals pursued by HRD, it fails to produce the desired results all the same. Apparently then, the various goals are met equally well or equally poor with the instruments used. The need to improve competence development is therefore independent of the size of the company. How this problem is dealt with and how HRD is managed, however, does depend decisively on the size of the company. Against this finding, it could be argued that for its verification an objective measurement of competences would have to be conducted at different points in time.

First of all it should be noted here that an exact measurement of changes in competence brought about by HRD activities is rather difficult, due to the heterogeneity of target groups and their different learning preconditions as well as to the different measures taken in HRD such as job enlargement, job enrichment or job rotation. Moreover, even if such measurement could be carried out accurately, still the fact would be neglected that HRD activities do not solely aim at changing competences but also at motivating the employees (by the use of HRD instruments) or at investing in the junior staff (by dint of appropriate measures). From the perspective laid out in this article, a more viable insight can be drawn from addressing the question how the responsible HRD experts in enterprises interpret those occurrences and coherences that are relevant for competence development. It is assumed that the particular interpretation determines the subsequent action. That is why the responsible persons for HRD were asked to what extent competency development leads to the desired results.

Approaches that advocate an increased self-organization of competence development give the impression of the desired goals becoming more readily achievable. This thesis, however, could not positively be proven in this study. The majority of companies which do not claim that competence development does not bring the desired result require of their personnel low or medium self-organization. Hence these companies do not take a high risks as for internal competence development. At the same time, the empirical study suggests the following assumption: The higher the expectation towards self-organization, the more often competence development does not lead to the desired outcome (Mann-Whitney-U-Test:  $U_{64}=344$ ,  $p<,028$ ) ( $\chi^2_2=5,760^+$ ,  $p<,056$ , Cramers-V= $,300$ ) (see Table 10).

This result might be explained as follows: With regard to competence development, staff members have only limited self-organizational competence, and therefore fail to meet expectations towards such self-organization when those are too high. Another explanation might be that a high level of self-organization might lead to fear on the side of the management, of employees predominantly pursuing personal aims and regarding the company's aims as being of secondary importance.

**Table 10: Index of Self-organization and the Results of Competence Development**

	<b>Competence Development does not Lead to the Desired Outcome</b>	<b>Competence Development Leads to the Desired Outcome</b>
Low self-organization	10,0%	16,7%
Medium self-organization	55,0%	75,0%
High self-organization	35,0%	8,3%

Scientific research on the role of managers (Friebe, 2005) comes to the conclusion that competence development will more readily produce the desired effects when managers are assigned the role of HRD leader. Surprisingly, this thesis could not be verified by the present study (see Table 11).

**Table 11: Managers as Coaches and the Success of Competence Development**

	<b>Competence Development does not Lead to the Desired Outcome</b>	<b>Competence Development Leads to the Desired Outcome</b>
Managers as coaches	38,9%	41,1%
Managers not as coaches	61,1%	58,9%

## Discussion

The results of the present empiric study can be interpreted as follows:

SME prefer to “buy” the competencies required for innovation while large companies strive to build up the required competencies internally. Since the internally built up competencies are more complicated to copy or imitate it seems likely that competencies in large enterprises offer them more competitive advantages, provided that competencies products or services, which are created by using this competencies, are regarded as valuable in the customer's eyes. In light of the interaction between external organization and self-organization of competence development, this result signifies that, if large companies regard HRD as a task more worthy of promoting than do SME, they are also more likely to provide personnel, temporal and financial resources for external organization of HRD.

With regard to a company's innovative capability the interviewed SME give less importance to HRD than large scale enterprises and instead concentrate on recruiting and selecting staff. Hence, and unsurprisingly so, they regard the training of new employees as the central HRD

means to build up competencies in their companies. In the course of this, the motivation of employees is by means of HRD activities the pronounced aim. By contrast, the interviewed large scale companies regard HRD as the central staff-related remit to ensure a company's innovative capability. In comparison to SME, they highly appreciate job enrichment to build up competencies in their companies. Furthermore, they conspicuously pursue the aim of promoting social competencies.

Do the findings concerning the application of HR-development outlined so far make for the conclusion that self- and external organization will be performed differently relative to company size? The level of external organization is generally greater in respect of the training of new staff than in the case of vertical and horizontal job enrichment. The latter is commonly tailored to the specific competencies of particular staff members, while the activities of the former allow for higher standardization. The implementation and the success of those HRD measures preferred by large companies are to a greater extent based on self-organization and self-organizational competence than are alternative measures.

Although there were few significant differences between SME and large companies in terms of their expectations towards their employees' pursuit of self-organization, external organization of competence development is conducted in a different manner in SME and large companies, respectively. In this respect, it should be noted that less effort is made by SME to implement external organization of competence development than by larger companies. This insight raises the question which forms and degree of self-organization "fit" to which form of external organization, depending on the involvement of management.

In view of this paper's central question, the following points must be stressed: There is a significant correlation between (a) the index of self-organization and (b) the item "Competence development leads to the desired outcome" as well as a correlation between (c) company size and (d) the expectation towards managers to see themselves as HRD leaders. At the same time, however, a correlation between (a) the index of self-organization and (c) company size could not be shown; nor could be found evidence for a correlation between (d) the demand of managers to perform HRD-related tasks and (b) the item "Competence development leads to the desired outcome". This result suggests the conclusion, that expecting managers to increasingly perform HRD activities does not suffice to ensure competence development will produce the desired effects. An explanation might be that managers have yet to meet the expectations directed at them as for HRD efforts. Such interpretation is also confirmed by the findings of the study by Diesner/ Seufert/ Euler 2008, which involved 90 experts responsible for staff matters in their companies. The study concluded that the interviewed experts saw the issue of managers-as-HRD leaders as highly important, yet tended to assess the level of realization as relatively moderate. The empirical study did not however test for the degree to which manager's act in accordance with these expectations.

At first glance this result is inconsistent with the findings of Friebe (2005), according to whose employee survey learning-oriented leadership positively affects staff's occupational competence development. However, the aim of this empirical study was not to explore to what extent managers' behavior supports their staff's training from the perspective of the staff; the aim was rather to ascertain from the perspective of the experts in the companies what was expected of managers with regard to their role as coaches and to what extent this form of external organization is supported by the companies.

At the same time it becomes apparent that employee attitude surveys such as that by Friebe (2005) and interviews with experts, as in the case of this study, relating to the dimensions

of learning culture and their influence on competence development can lead to different findings. In consulting employees, one should bear in mind that a substantial number of employees are unwilling to participate in training programs, which is also expressed in their training behavior. According to a study of Bolder et al. (1994, p.27) in which 1.529 employed or employment-oriented people in Germany participated, over 40% of the 18- to 60-year-old employees had never undertaken occupational training. However, Friebe (2005) does not categorize the staff according to whether or not they participate in further training - it is possible that a large proportion of the staff interviewed by Friebe (2005) have no experience in further training.

In the context of another empirical study (Kröll & Gaffron, 2009) it was found, that particularly organizations with few innovations expect managers to take the role of HR managers. Organizations with more innovations do not show this pattern of results. How can we account for these findings? Organizations with many innovations oft have flat hierarchies (Witt & Witt, 2008). Managers are part of this hierarchy and should not change their position in this organizational structure by gaining new qualifications because this would degrade the flat organizational hierarchy. For this reason innovative organizations do not expect their managers to become HR managers. Furthermore it could be proved that innovative organizations do not choice some special form of verifying the efficiency of their HR activities mostly (e. g. by means of benefit-costs analysis), which would be part of external organization of competence development.

It should also be considered that when executive manager adopt the role of leader/coach of HRD, this can have differing effects on various phases of competence development. While the involvement of the executive manager during the transfer phase has a positive impact (cf. Rouiller & Goldstein, 1993; Tracey et al., 1995), involvement in the periods of demand analysis and the selection of competence development methods may produce undesired effects. For instance, executives might misjudge their employees' potentials, or they may not choose the appropriate competence development measures. Moreover, it is crucial whether managers display competencies to fulfill afore-mentioned tasks, and if so, of which particular type those competencies are.

In terms of the opening hypotheses, the findings can be summarized as follows:

1. The empirical study comes to the conclusion that large enterprises emphasize the central role of HRD for the innovation capacity of an organization more than SME. The first hypothesis could not be falsified.
2. The thesis, that large companies expect of their members a higher degree of self-organization of competence development than SME do, could not be verified.
3. The same applies to the thesis, that the more pronouncedly the demands for self-organization, the sooner will competence development produce the desired result. Rather, the empirical study suggests that at a certain degree of expected self-organization, a significant correlation emerges that in fact works in the opposite direction.
4. On the other hand, the study does corroborate the assumption that the bigger the company, the sooner managers are expected to act as HRD coaches.
5. At the same time it could not be found proof for the assumption that the more pronounced the expectation towards managers to perform HRD related functions, the higher the probability of competence development producing the desired result.

6. Furthermore, only in the interviewed large companies a preference for a specific combination of self and external organization was discernible. That did not hold true for the interviewed SME.
7. The results obtained by the empirical study do not suffice to make a definite statement on whether certain combinations of self- and external organization more readily entail a competence development that produces the desired outcome. To clarify that particular point, further research is necessary.

The conditions and constraints of HRD differ from SMEs to large companies. If an organization wants to achieve its aims of HRD, these differences must be considered by the persons responsible for the organization of external and internal learning. In solving the problem of why competence development does not lead to the desired results, both employees and managers play a key role. A company's support of its employees' learning cannot simply be reduced to managers passively granting employees the freedom to undertake their own learning. Much more effective is for managers to play an active part in all the processes involved in competence development. Managers should for instance know how to shape working conditions so that they can function as learning opportunities. For this they require a minimum level of didactical competence. However it is worth bearing in mind that micro-management of employees would defeat the object of self-organization. What is necessary is an interplay of self- and external organization with the different forms and activities going well together and, in the sense of an iterative process, interlink and interlock.

## **Conclusions and Suggestions for Further Research**

The results obtained do not shed clear light on the question regarding the impact of managers acting as coaches. It is for this reason that a differentiated examination of the issue is a top priority. In this process, it should be studied whether external organization is geared towards setting guidelines or, rather, aims at enabling a dialogue between the affected and involved parties. From the author's point of view the last-mentioned alternative turns out to be more advantageous. However, it requires certain management abilities. Holcomb et al. (2009) have attached importance to managerial abilities with regard to the generation of competitive advantages. They mentioned that "managers are an important source of value creation" and emphasized the fact that "managers and resources jointly determine firm success".

In order that the interaction between self-organization and external organization leads to the desired effects in the competence development's point of view, it is of vital importance that the self-regulation competence of organizational members is developed. Besides, trainings are one possibility which must be complemented, nevertheless, with other measures. Ideally development and removal of self-regulation competence should be developed and enhanced on-the-job (training on-the-job), with suitable feedback instruments, for example. However, learning in communities proves to be a starting point, too, whose impact will increase in future (Carell, 2009). In this regard it seems advantageous that learners should gain knowledge about instruments which help them to estimate the benefits of competence development activities previously as well as to evaluate the results of these activities afterwards. Endowed with this knowledge they should avoid trainings that do not focus on the transfer of learned competences into their daily work.

It is obvious, that managers play an important role during training-on-the-job activities. In this regard the establishment of a corresponding feedback culture turns out to be helpful. In connection with the introduction of feedback mechanisms there often insists the risk, that they are used primarily to legitimate actions in the respective organization and that the learning potentials are not used sufficiently. Therefore it should be considered to conceive the feedback the way that it supports the actors in organizing their competence development independently. In this context it makes sense to use feedback instruments which are geared to approaches of quality management. Suitable feedback activities are guided by the fact that the relevant activities of the actors have a use for internal and external customers of an organization or organizational unity. In some cases it is necessary to simulate the use of products or services for potential customers.

Organizational members can use feedback findings as an orientation for their self-organization as well as their competence development. The employees should learn something about their potencies, so that they can enhance their skills without ignoring their weaknesses. The potencies of the organizational members are regarded as starting point for the self- and external organization of competence development. They form the basis to produce above-average achievements. Unfortunately, the considerations and activities of competence development in the past dealt only with the weaknesses of the organizational members. One reason may lie in the fact that it is easier to point out weaknesses than to identify strengths. In doing so such feedback instruments should also be developed for the executives supporting them with respect to their role as personnel developer. The instruments should give them the possibility to grow into this role. The form of such feedback activities to coordinate self- and external organization can be variable in the different phases of competence development. According to specific phases of competence development, e.g. need analysis, competence acquirement and transfer into daily businesses as well as evaluation of competence development, a sophisticated coordination between self- and external organization seems to be useful.

In addition the interaction of self- and external organization is also different with regard to several human resource development instruments. This applies particularly for instruments of communities of practice, which are considered to play an important role in knowledge and innovation management (Geryhadze, 2003).

The development of suitable feedback instruments could be a new aim for the personnel department. However, the relevant feedback culture has to be taken into account. Not least is to be paid attention to the fact that the characteristics of suitable feedback mechanisms are different for the matching of self-organization and external organization in the different phases of the competence development. The arrangement of the instruments should respect the respective feedback culture of the enterprise.

Future research activities should deal with the following research questions: What are managers' own conceptions of their role as coach/leader of HRD? Can various types of managers be differentiated? To what extent do executives stick to their roles as coaches of HRD, especially when informal and incidental learning in the company (Marsick & Watkins, 2001) must be enhanced? To what extent is this role compatible with other roles? Clearly, managers simultaneously fulfill other roles, for example, as efficiency and change managers or coordinators of teams (Kleinau, 2005). To live up to their role (see also Mintzberg, 2009, conceptional consideration) actors at medium management level are asked to take into account differing expectations by various stakeholders. Failing to fulfil all those expectations at the same time, they are presented with the challenge of having to prioritize some expectations

over others, i.e. they have to answer the question “who or what really counts”. Decisive for their strategy of action is, whether actors see the stakeholders’ expectations as a scope for design or as a threat and constraint (Crilly & Sloan, 2008). The differing expectations lead to conflicts, such as intra-sender conflicts and inter-sender conflicts, role conflicts, role ambiguity and role overload (Wunderer, 2003). How managers deal with these conflicts is a decisive indicator as to how well they do justice to their new function as coach of HRD. Of great value would be an explicit survey of managers.

Further research is needed into the relationship between self- and external organization. Central questions include: Do employees even want executives to meddle in their competence development? And if so, how do they feel executives should go about it? How can the interaction between self-organization and external organization be structured through clarification and definition of the participants’ role perception? When do deficits in the co-ordination between self- and external organization lead to unsuccessful competence development? To what extent does the company-specific learning culture influence the interplay between self- and external organization?

Acknowledging the fact that competence development is critical for a company’s innovative ability, while roughly 60% of such activities indeed fail to produce the desired outcome, the questions raised here are indisputably pressing.

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**About the Author**

*Dr. Martin Kröll*

Study: University of Cologne - Economical Sciences, Diploma; PhD: University of Cologne  
- Department for Economical Sciences.

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