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**The Significance of Company Learning Cultures for
Developing Competency**

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ABSTRACT

The project “New Learning Cultures in Companies”¹, based on the concepts of developing competency, self-organized learning and learning cultures, accompanied five company projects for developing competency at the workplace for three years. Part of the project was conducting three surveys in the course of the three years. Each time, the participants were asked to answer the same questionnaire. In all three instances, the results revealed major differences in the companies’ learning culture concerning the degree of staff and bosses’ job satisfaction and how they saw themselves and how others saw them. Some of the companies offered special learning-relevant tasks and were more supportive in allowing the staff themselves to determine participation and working independently. All three times, the results showed a discrepancy in how the staff and the bosses perceived company staff-competency-developing conditions. Bosses generally tended to overestimate company conditions. A clearly defined learning culture was accompanied by greater staff job satisfaction, thus underscoring the importance of a supportive and nurturing learning culture.

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INTRODUCTION

The demands at the workplace are growing more and more varied as new technologies change the workplace. As a consequence, staff has to acquire new skills and develop new competencies. Not only do bosses and experts have to update their knowledge at shorter intervals but increasingly staff on the operative level do as well. Thus, individual learning needs are increasing and at the same time becoming more and more complex and specialized. Standardized and customized further training courses no longer suffice to meet these learning demands.

Many companies, therefore, are turning away from school-type qualifications in favor of gaining qualifications in the process of working. Planning, execution and control are increasingly being carried out at one single workplace, which requires greater staff involvement in planning and conducting the work process. However, a prerequisite is being able to learn at the workplace (Severing, 1999). Company learning culture is gaining a more significant role.

The project “New Learning Cultures in Companies” followed scientifically company projects dealing strategically with these changes in company further training. Studied in particular was the discrepancy between individual competency development and organizational competency development.

THEORETICAL CONCEPTS

This study is based on the following theoretical concepts: the construct of competency and its various facets, developing competency, self-organization of learning, the boss’s role in this changed environment and the significance of organizational learning culture.

Competencies and Developing Competency

In addition to corresponding professional qualifications, there is a growing need for staff to acquire a great variety of competencies in order to succeed in their careers and private lives. The consequence is a transformation from a knowledge society to a competency society (Erpenbeck & von Rosenstiel, 2003).

Various examples of the operationalization of competency constructs have been described in scientific journals (Pietrzyk, 2001). All of these constructs have in common that competency goes beyond cognition. Professional action competency is defined as the “integration of cognitive, emotional, motivational and social aspects of human action in a work situation” (Erpenbeck & Heyse, 1996, p. 19).

Kauffeld, Grote and Frieling (2000) consider professional competency as dispositions to act in a self-organized manner. The ability to organize oneself means that the individual sets own targets, tests plans and strategies regarding their implementation, and learns from this experience. Competency is proven ultimately in managing concrete action situations (Erpenbeck & Heyse, 1999).

The authors of this paper differentiate between four dimensions of competency: expertise, method, social skills and self-competency. Important for expertise competency is to be able to classify and assess with a specific purpose in mind, to identify and analyze problems and to develop solutions on one’s own. Method competency is generally understood to refer to strategies for applying knowledge, for example, communication, presentation and visualization techniques. Social competency refers to the correct assessment of one’s strengths and weaknesses, criticism and communication skills, empathy and openness to change. Self-competency refers to active planning and organizing, own-initiative, self-management, the willingness to accept challenges and own-responsibility.

At the heart of developing competency are self-organization skills. Competency is also an action resource. The learning results from developing competency include learning and further development of job-related skills as well as job-unrelated skills (e.g. cognitive strategies) including attitudes and values. Developing competency is also part of personality development, the interaction of personality and working (Pietrzyk, 2001). A central prerequisite of staff professional competency development is that the company offers and supports a corresponding company learning culture.

Self-organized Learning

The change in terminology from “further training to developing competency” reflects how modern further training is now understood: a further training delineated from Taylor’s concepts of demand-oriented respectively adaptation-oriented qualification (Erpenbeck & Heyse, 1996; Heyse & Erpenbeck, 1997).

The new discussion on self-organized learning in professional further training places the learner in the center. Prerequisites of learning self-organization are the learning autonomy of the actors (freedom of selection of learning methods, media and times), suitability of the physical learning environment (access to outside knowledge resources, no negative environmental conditions), the supportive behavior of bosses to learning as well as the learning competency of the actors. Self-organized learning takes place in a social context, that is a part of the work process of companies. Self-organized learning is, therefore, more integrated in companies' training programs, because it stresses the employee's own responsibility for acquiring qualifications.

Research in self-organized learning may be seen as a continuance of research conducted on the concept of "self-regulation" respectively of processes of self-regulated learning (e.g. Bandura, 1990; Schunk & Ertmer, 1999; Zimmerman & Schunk, 1989). Individuals who regulate their learning themselves are metacognitively, motivationally and behaviorally active organizers of their own learning process (Zimmerman, 1989). Another important element of this definition is the self-determined feedback loop during the learning process, which is cyclical. Moreover, defined targets and self-evaluation influence the concept of performance, experienced competency and self-regulative processes positively (Schunk & Ertmer, 1999). These concepts can be applied to independent learning and action at the work place.

The Changed Role of the Boss

Independent learning at the workplace changes the role of the boss: it is vital that he supports the new learning with his commitment. A prerequisite is that the boss allows and permits the staff to assume responsibility for their own further development. The boss has to give the staff corresponding leeway to act and decide, to follow the learning process with guidance and advice, to give feedback, and to allow errors as a way to learn. Finally, all this is only possible if learning is seen within the framework of the whole organization as a permanent, self-regulating and natural process (Dubs, 2000, p. 99).

There are different vantage points to this relationship: there is the patriarchal stance, where the boss feels he is responsible for his staff. From a modern perspective, the staff is viewed more as a partner, and the relationship is organized accordingly. This is reflected in the definition of the leadership style, traditionally differentiating between an authoritarian style

and a cooperative style (Tannenbaum & Schmidt, 1958). The leadership style is regarded as a stable pattern of boss behavior. Within the framework of the industrial psychological studies conducted by the Ohio school, the terms “initiation structure” and “consideration” were coined. Leadership styles were determined empirically on the basis of field surveys in business organizations (Staehle, 1999; von Rosenstiel, 2003; Northouse, 1997).

Due to their different roles and lifestyles, bosses' and staff's perception of company reality and the learning supportiveness of company working conditions cannot be the same.

However, as a result of current developments in companies, bosses have assumed more the role of a promoter of learning and staff self-organization.

The Role of the Learning Culture

The concept of learning and the learning organization stems from Peter Senge (1990) of the Massachusetts Institute of Technology (MIT) and the “Organizational Learning Center” according to which learning is the basis of any successful organization. The five central dimensions of a learning organization are mental models (e.g. a world vision), expertise (e.g. setting clear targets), thinking in systems (e.g. self-steering), development of a common vision (e.g. cohesion) and team learning (e.g. developing a dialog culture). Organization learning is closely linked with the experience stored in the organization and in the members of the organization (Argyris & Schön, 1978; Trice & Beyer, 1993). A company that does not take the competency of its staff into consideration does not exploit its resources and does, therefore, not adhere to the economic principle of dealing as economically as possible with scarce resources. Supporting participation and competency as well as raising company efficiency are desirable goals. The job of company organizational development is therefore to establish corresponding structures which permit “learning to learn”.

The learning culture has the same value as learning has in the company, the way the staff and the company learn and the degree of support in order to be able to develop a culture in the sense of a culture that is able to learn (Sonntag, 1996). The aim is to find descriptions of concrete learning cultures in the individual case. Thus, there is no such thing as a learning culture, but rather there are many learning cultures (Weinberg, 1999). A learning culture is a system in which common actions and experiences crystallize and formal and informal rules develop, which are subject to constant social control (Erpenbeck & Sauer, 2000). A learning culture in which participation is possible and staff development is supported has a positive effect on job satisfaction.

The following hypotheses were set up:

1. Companies have different learning cultures and different conditions for staff to develop competency. They differ in what they offer as learning relevant tasks, in appreciating staff working on their own and possibilities for staff participation and development.
2. Measures taken to increase developing competency contributes to improving perceived conditions for developing competency.
3. Bosses and staff perceive staff competency development differently.
4. A distinct learning culture in which transparency and participation are important factors correlates positively with job satisfaction.

Procedure

The five companies participating in the study came from the metal processing (A and E), plastic processing (C), automation (D) and retailing (B) sectors. The number of employees ranged from 165 (A), 185 (E), 480 (C), 4,700 (D) to 10,788 (B). Companies A and D were part of global-operating companies. Company E has been in a critical economic phase for a number of years; company C experienced major economic setbacks during the course of the project. The business of the other companies ranged from stable to very good. Company B has been growing steadily since its foundation forty years ago. Company D was distinguished by having high proportion of qualified staff, whereas company A employed 75% own-trained respectively unskilled staff 50% of which were foreigners. Company B employed predominantly female staff, and company A predominantly male.

The measures for developing competency in the individual companies: the aim of company A's project "Working and Learning Together" was to develop bosses' and employees' competency (e.g. team-oriented action). Whereas company B's project "Working-process-integrated Staff Development" focussed on the company's goals. Company C's project related to developing employees' and bosses' competency in the company in general (e.g. introduction of a target agreement system). Company D started a modular program for developing technical competency and company E a three-year program for continued development of organizational and staff competency.

The starting situation in the companies was determined by means of a questionnaire asking about company profile, company culture and the current situation; interviews with project

leaders and with selected bosses. Progress was tracked during the following three years by means of three surveys asking how supportive to learning working conditions were from the staff's viewpoint and the bosses' viewpoint.

The same questionnaire was completed out three times: in 2001 (t1) the first time (N=467) establishing the "status quo", in 2002 (t2) the second time (N=202), and in 2003 (t3) the last time (N=196). The second time in 2002 included a control group (N=130) who were not involved in the competency developing measures in order to be able to determine the relationship between progress in competency and the measures undertaken in the company. The results of the first two surveys are presently available (Spieß, Geldermann, Hofmann, & Woschée, 2003, 2004).

Instruments

For our questionnaire, we drew on the Richter and Wardanjan questionnaire (2000) on learning-relevant features of a task (FLMA) and the Wardanjan, Richter and Uhlemann questionnaire (2000) on learning on the job. The questionnaire on learning-relevant features of a task (FLMA) is based on that self-organized learning is always a question of the learning environment. Tasks promote learning if they are complete actions concerned with target setting processes, strategy planning, preliminary preparation and follow-up, execution and control of the activity. The questionnaire comprises three sections: action leeway (12 items), versatility (7 items) and transparency (5 items). In addition to this, there is an overall scale of all the items.

Wardanjan, Richter and Uhlemann (2000) studied organizational learning promotion using a questionnaire on learning on the job (LIDA). In addition to the concrete features of the task, learning is influenced by company conditions. The LIDA questionnaire was divided into four sections: participation possibilities (4 items), time conditions (3 items), appreciation of working independently and social climate (4 items) and development possibilities. In addition to this, there is an overall scale of all the items.

Beside the central instruments for determining learning culture, our questionnaire contained additional scales on supporting learning on the job (10 items), self-assessment of professional competency (17 items) and job satisfaction (7 items).

The supportive to learning on the job scale is based on the Wardanjan, Richter and Uhlemann questionnaire (2000) (examples: If there is a need, we receive training; there are manuals and books at my disposal, which I can consult if I do not know something).

Job satisfaction was determined using a short version of the Neuberger and Allerbeck job description questionnaire (ABB) (1978). The scale comprises seven items where the interviewees should assess how satisfied they were with their colleagues, their bosses, their job, working conditions, the organization and management, their prospects and their pay.

The questionnaire for the bosses contained the FLMA and the LIDA scales. However, all the items were revised so that the bosses could assess how supportive to learning staff working conditions were. (Example: Staff cannot set their own pace; staff are always to able learn something new on the job). In addition to this, the questionnaire for bosses included the self-assessment of job competency scale.

RESULTS

Table 1 and 2 show the descriptive statistics, the intercorrelation and the reliability of all the scales for the second time survey was conducted. The values range from 1 (does not apply) to 4 (applies fully).

Please insert Table 1

Please insert Table 2

The first hypothesis was validated: there were significant differences in the perception of the learning conditions of the individual companies (Table 3a and 3b).

Please insert Table 3a

Please insert Table 3b

It turned out that company B rated highest in the LIDA and FLMA scales in all three surveys, whereas companies A and C remained in the lower range.

The second hypothesis, however, could not be validated: both the LIDA and FLMA scales indicated no significant differences in the three surveys. Only company A showed significant improvement in the perception of the learning conditions.

The third hypothesis was confirmed (Table 4): the results showed significant differences in how the staff and the bosses see themselves and how others see them with regard to the LIDA and FLMA scales as well as the subscales for transparency participation and development possibilities, action leeway and working independently in all three surveys.

Please insert Table 4

Bosses always perceived these characteristics of the working environment more positively than the staff.

The fourth hypothesis was validated as well (Table 5): there is a positive correlation between learning culture and job satisfaction. This applies particularly to the control group although the FLMA correlated less high here.

Please insert Table 5

DISCUSSION

The significant differences in the perception of the learning conditions in the individual companies is related to the different company histories and the resulting different learning cultures. Company B, which always ranked first, was distinguished from the beginning by well-qualified staff and a marked staff-oriented company culture (e.g., creativity seminars), whereas company A employed predominantly unskilled staff. The differences may be due to the different business sectors or gender (company B had predominantly female employees, whereas company A predominantly male employees).

The second assumption that the measures initiated by the companies would lead to significant changes in the perception of learning conditions was not validated by the overall survey. However, this can also be seen relationally: company B had a relatively high standard to

begin with, whereas in company A, the intervention had a much more significant positive effect. It may well be that the period of intervention in the other four companies was too short.

The significant differences in the staff's and bosses' perspectives occur in those items where leadership or leadership style play a role, e.g., in feedback or in participation possibilities. Bosses are important moderators in the competency developing process and in promoting learning-relevant job features. Competency development may be impeded, if bosses systematically underestimate, for example, their staff's abilities or overestimate their learning possibilities. It is vital that bosses share their knowledge with their staff in order to ensure transparency and motivation.

The positive relationship between the learning culture and job satisfaction indicates the significance of a company's learning culture that permits conditions for self-organized and responsible action at the workplace. However, changing a learning culture is a long process. A learning culture that promotes staff competency is not only important for job satisfaction but also is a central vehicle for a company's success on the market, which only qualified and motivated staff are able to ensure.

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Table 1
 Intercorrelation and reliability of all employed scales with staff in the second survey

Scale	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1 FLMA – overall	<u>86</u>													
2 action leeway and completeness	91	<u>79</u>												
3 versatility	77	51	<u>70</u>											
4 transparency	78	61	47	<u>60</u>										
5 LIDA – overall	68	62	46	63	<u>91</u>									
6 participation possibilities	59	53	41	54	88	<u>81</u>								
7 time conditions	51	46	32	51	72	49	<u>68</u>							
8 appreciation of working independently and social climate	59	51	37	64	83	60	57	<u>71</u>						
9 development possibilities	58	55	43	43	88	76	47	62	<u>79</u>					
10 supportive to learning on the job	61	57	44	51	79	73	54	59	74	<u>85</u>				
11 job satisfaction	61	55	41	56	86	72	64	75	76	71	<u>86</u>			
12 social competency	45	37	31	49	41	32	29	44	33	40	39	<u>57</u>		
13 method competency	29	20	35	20	16	07	18	15	13	16	09	34	<u>76</u>	
14 expertise	33	23	36	26	17	07	24	25	07	08	17	34	67	<u>80</u>

Note. $N = 152$. The reliability (Cronbach's α) is entered in the diagonals. The decimal points have been omitted.

Table 2
 Intercorrelation and reliability of all employed scales with staff in the second survey

Scale	1	2	3	4	5	6	7	8	9	10	11	12
1 FLMA – overall	<u>88</u>											
2 action leeway and completeness	93	<u>81</u>										
3 versatility	83	62	<u>76</u>									
4 transparency	74	63	44	<u>59</u>								
5 LIDA – overall	61	57	42	59	<u>84</u>							
6 participation possibilities	38	34	22	46	80	<u>64</u>						
7 time conditions	46	50	27	33	62	25	<u>55</u>					
8 appreciation of working independently and social climate	70	68	50	58	81	55	47	<u>84</u>				
9 development possibilities	35	27	29	43	82	59	36	45	<u>56</u>			
10 social competency	38	37	24	39	46	44	16	30	47	<u>71</u>		
11 method competency	43	42	32	35	40	28	33	24	37	63	<u>73</u>	
12 expertise	10	13	-07	24	21	34	01	08	20	40	46	<u>60</u>

Note. $N = 50$. The reliability (Cronbach's α) is entered in the diagonals. The decimal points have been omitted.

Table 3a
Company Rankings According to the LIDA Average

Ranking	Co.	T1		Co.	T2		Co.	T3	
		M	SD		M	SD		M	SD
1	B	3.20	.41	B	3.11	.41	B	3.08	.45
2	D	2.98	.36	D	2.92	.42	D	2.96	.40
3	E	2.51	.42	C	2.58	.41	A	2.56	.39
4	A	2.50	.44	E	2.53	.53	E	2.52	.44
5	C	2.38	.39	A	2.47	.45	C	2.47	.43
F		78.42***			25.33***			18.35***	

*** $p < .001$

Table 3b
Company Rankings According to the FLMA Average

Ranking	Co.	T1		Co.	T2		Co.	T3	
		M	SD		M	SD		M	SD
1	B	3.21	.36	D	3.18	.33	B	3.22	.37
2	D	3.20	.41	B	3.13	.34	D	3.13	.22
3	E	3.04	.33	E	2.97	.37	E	3.01	.38
4	C	2.85	.35	C	2.93	.34	A	2.91	.36
5	A	2.82	.33	A	2.78	.35	C	2.91	.34
F		20.94***			9.86***			6.54***	

*** $p < .001$

Table 4
Differences in perspective on how staff working conditions promote learning

Scale	Surveys							
	T1 (381)		T2 (152)		T3 (143)		Control Group (130)	
	M	SD	M	SD	M	SD	M	SD
FLMA – overall	3.06	.38	3.01	.39	3.02	.37	2.99	.32
action leeway and completeness	3.04	.45	3.00	.44	3.02	.42	2.97	.36
versatility	2.98	.46	2.97	.48	2.96	.44	2.97	.44
transparency	3.20	.45	3.11	.49	3.11	.45	3.07	.44
LIDA – overall	2.82 ^a	.55	2.75	.56	2.66 ^a	.48	2.82	.46
participation possibilities	2.60	.71	2.50	.70	2.37	.63	2.61	.59
time conditions	2.68	.67	2.70	.64	2.65	.57	2.69	.60
appreciation of working inde- pendently and social climate	3.19	.54	3.13	.59	3.07	.53	3.20	.48
development possibilities	2.77 ^a	.75	2.63	.74	2.52 ^{ab}	.70	2.77 ^b	.65

Note. Lines: Values with the same letter differ significantly, $p < .05$.

Table 5
Correlation of Job Satisfaction and Learning Culture

	T1	T2	T3	Control Group
FLMA	.60**	.61**	.66**	.47**
LIDA	.82**	.86**	.85**	.81**

** $p < .01$