



# Learning conditions for non-formal and informal workplace learning

Learning  
conditions

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## Abstract

**Purpose** – The purpose of this research paper is to investigate the presence of learning conditions for non-formal and informal workplace learning in relation to the characteristics of the employee and the organisation he or she works for.

**Design/methodology/approach** – The questionnaire developed by Clauwaert and Van Bree on learning conditions was administered to 1,162 employees of 31 different organisations. An explorative factor analysis was performed to reduce the number of variables and to look for underlying constructs in the data. Second, a series of analyses of variance were calculated in order to be able to compare the factors in different kinds of groups of employees.

**Findings** – The authors concluded that for the five learning conditions that were identified in this research, different kinds of groups of employees have different chances for non-formal and informal learning. These learning conditions are “feedback and knowledge acquisition”, “new learning approach and communication tools”, “being coached”, “coaching others”, and “information acquisition”.

**Originality/value** – The value of this research is that it has shown that characteristics of the employee and his or her organisation have a relationship with the presence of learning conditions or chances for non-formal and informal workplace learning. Moreover, this research included all kinds of employees and not only those responsible for training and education in the organisation. This research focused on conceptions and perceptions of “regular” employees.

**Keywords** Workplace learning, Learning, Employees

**Paper type** Research paper

## 1. Introduction

Over the past few decades an unprecedented rapid change in society and working life has taken place causing the importance of continuous learning to increase both for individuals operating in the learning society and for organisations competing in international markets (Tynjälä, 2008). Whereas the concept of learning used to be traditionally linked to formal education, nowadays workplace learning has gained a lot of popularity, making this field of research wide-ranged and interdisciplinary (Tynjälä, 2008). Organisations need to be able to learn and act quickly to keep up with the rapidly changing economy in order to be able to compete with other organisations (Ellström, 2001). Another change is the flexibilisation of the labour market. Employees choose to learn when they feel the need for it. Last but not least, there is the financial aspect. Learning job related skills in the workplace costs noticeably less than formal training (Boud and Garrick, 1999). Eraut (1994) states that workplace learning is more



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efficient than formal training when it comes to learning job-related skills and obtaining knowledge, because these specific skills and knowledge are less appreciated in formal education and the learners frequently lack the necessary insight to put theory into practice. Formal learning on its own is not sufficient to anticipate the evolutions in society since it takes too long to set it up (Baert *et al.*, 2000).

Informal learning is described as an unplanned and implicit process with unpredictable results (Hager, 1998). This “every day” learning has a self-evident character and takes place in the daily working situation (Tjepkema, 2002; Van Biesen, 1989). It is never organised or intentional from the learner’s point of view (OECD, n.d.). It is seen as the development of the individual through interaction with others (Marsick and Watkins, 1990). Informal learning often happens spontaneously and unconsciously without any a priori stated objectives in terms of learning outcomes. According to Baert *et al.* (2000) informal learning is an important determinant for the professionalisation of employees and organisations.

Non-formal learning consists of all education that takes place outside of the school system (Schugurensky, 2000). In contrast to informal learning, this way of learning is rather organised and can have learning objectives (OECD, n.d.). It is a way of learning where not only the content is important but where there is also a strong emphasis on practical experience (Fordham, 1993). It creates an active learning environment that no traditional teacher can accomplish. New visions are created through the discussion of, and exposure to different values, norms and ideas (Tight, 1996). Non-formal learning is seen as an individual process where the individual learns out of his/her own will (Fordham, 1993) or as a by-product of more organised activities (OECD, n.d.).

## 2. Theoretical background: learning conditions

Organisations can facilitate non-formal and informal learning by means of culture, policy and specific procedures (Marsick and Watkins, 1990). Billett (2004) states that the workplace needs to provide an optimal context for the individual to develop and grow in his job. In order to create solidarity, it is important that the affordances of the organisation match the individual engagement of the employee (Billett, 2001). After all, “while the organisation of work sets the context and conditions for learning, it is still the reciprocal interaction between the individual and the workplace that determines learning” (Tynjälä, 2008, p. 12). Tjepkema (2002) defines these learning conditions as “characteristics of the organisation and the individual that enable or hinder learning from team members” (Tjepkema, 2002, p. 111).

Learning conditions are defined as conditions created in the social, material or informational environment and in the work environment itself by key figures and agents of the labour organisation, and by the employees themselves so that other employees can learn (Clauwaert and Van Bree, 2008). The emphasis lies on conditions, possibilities or occasions created to make workplace learning possible.

Many researchers have investigated factors that could have an influence on workplace learning. These descriptive and explorative studies resulted in a variety of stimulating and obstructing conditions. In this study we focus on the stimulating conditions. Earlier research underpins the importance of several stimulating conditions. In Table I an overview is given of the learning conditions that were found to have a stimulating effect on workplace learning, a distinction was made between “context factors” and “learning factors”. Context factors refer to conditions

Context factors		Learning factors
<i>Communication and interaction</i>		Formal education (Collin)
Internal	External	Training (EDC)
Meeting (EDC)	Customer contacts (EDC)	<i>Feedback</i> (Ashton, Ellström, Eraut, Onstenk, Skule, Sterck)
Collegial consultation (EDC)	Working visits (EDC)	<i>Evaluation</i> (Collin, Elström)
Social work environment (Collin, Eraut, Onstenk)		<i>Reflection</i> on results (Ellström)
Interaction (Collin, Sterck)		Support for learning (Ashton, Eraut, Skule)
<i>Participation</i> (Collin)		Learning potential task (Ellström)
<i>Cooperation</i> (Collin, EDC)		Challenge and value of work (Eraut)
		Optimisation learning tools (Ellström)
Vast professional contacts (Skule)		Confidence (Eraut)
Job rotation/changing shifts (EDC)		Obligation (Eraut)
Possibility for change (Skule)		Research/documentation (EDC)
Daily work (EDC)		Access to knowledge and <i>information</i> (Ashton, Sterck)
Experience (Ashton)		
Responsibility of governing board (Skule)		Supervision/mentoring (EDC)
Question based policy (Skule)		<i>Coaching</i> (Ellström, Sterck)
Formalisation work processes (Ellström)		
Rewarding skills (Skule)		
Expectations role (Eraut)		Performance and progress (Eraut)

**Sources:** Ashton (2004); Collin (2002); Education Development Center (1998); Ellström (2001); Eraut (1994); Onstenk (1997); Skule (2004); Sterck (2004)

**Table I.**  
Learning conditions  
found in the literature

present in the context of the learner, whereas learning factors directly relate to the learning process.

The most important (general) stimulating learning conditions that were found in literature are communication and interaction (Collin, 2002; Education Development Center, 1998; Ellström, 2001; Eraut, 1994; Sterck, 2004), cooperation (Collin, 2002; Education Development Center, 1998), feedback (Ellström, 2001; Eraut, 1994; Skule, 2004; Sterck, 2004), evaluation (Collin, 2002; Ellström, 2001), participation (Collin, 2002; Ellström, 2001), reflection (Ellström, 2001), coaching (Ellström, 2001; Sterck, 2004) and information (Sterck, 2004).

### 3. The present study

This research is an extension of the research done by Clauwaert and Van Bree (2008). The purpose of their research was to find suitable indicators for non-formal and informal workplace learning to construct an instrument to map the non-formal and informal workplace learning in labour organisations. Based on literature they constructed a questionnaire that they presented to 126 human resource development (HRD) managers. These HRD managers indicated which learning conditions were actually present in the labour organisations. Clauwaert and Van Bree (2008) divided the learning conditions into six categories: work organisation, internal learning networks, external learning networks, individual learning coaching, individual work

coaching and information systems. In Table II you can find the learning conditions from literature (communication, interaction, cooperation, feedback, evaluation, participation, reflection, coaching and information) linked to the six categories of the learning conditions of Clauwaert and Van Bree (2008) and their specific items. They concluded that work consultation, internet, phone and trial periods were the most common learning conditions within labour organisations in Flanders.

In this study we want to learn more about the perceptions of employees regarding the learning conditions for non-formal and informal learning and which learning conditions are present according to the employees. Moreover, we are investigating whether differences exist between different kinds of groups of employees in regard to the presence of these learning conditions.

#### *Research questions*

In this research we want to investigate the relationship between the presence of learning conditions for non-formal and informal workplace learning and some of the employee's personal characteristics, professional characteristics and characteristics of the organisation he/she is working in (see Figure 1). We formulated the following research question to address this matter:

For which groups of employees, based on their personal, professional characteristics and the characteristics of the organisation, are certain learning conditions for non-formal and informal learning, present to a higher extent in their work context?

## **4. Method**

### *4.1. Participants*

The participants in this study were 1,162 employees from 31 different companies and professional organisations. The sample was spread for different aspects of their profile; gender, year of birth, education, function, seniority, type of organisation or company and the size of that organisation or company (see Table III).

### *4.2. Instruments*

The questionnaire on learning conditions for non-formal and informal workplace learning was developed by Clauwaert and Van Bree (2008). The questionnaire was linguistically adapted so that it could be easily understood by all, considering the different profiles. This adaption was reviewed in a pre-test by a staff member, a clerk and a worker. In this research, four questions were added to gain more insight into the learning experiences of the employees (e.g. "I'm informed on developments in my work area"). Participants were asked to score statements on a five-point Likert scale ranging from 1 = "not agreed" to 5 = "agree". The questionnaire could be completed in a "web based survey" or "in writing".

### *4.3. Data analysis*

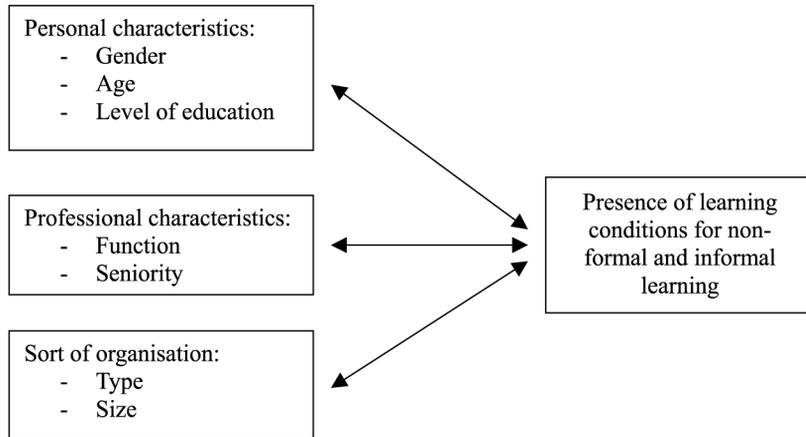
An explorative factor analysis was performed to reduce the number of variables and to look for underlying constructs in the data. Based on the current questionnaire, validity of the constructs and reliability of the scales were tested. First, we checked whether the data were suited for this kind of analysis. We calculated the determinant of the correlation matrix in order to rule out extreme correlations between different variables,

General learning conditions	Categories	Items
Communication, interaction, cooperation and participation	Work organisation	Consult other departments
		Results of inquiries
		Trade union meetings
		Internal job openings
		Job rotation
	Internal learning networks	Common breaks
		Work groups
		Intervision
		Debriefing
		Project teams
External learning networks	Self-directing teams	
	Common rooms	
	External colleagues	
	Visit other organisations	
	Demonstrations	
Feedback, evaluation, coaching and reflection	Individual learning coaching	Guest speakers
		Community of practice
		Personal development plan
		Job controls
		Walk along with colleague
		Contact person
		Coach
		Internship
		Buddy system
		Godfather/godmother
	Trial period	
	Individual work coaching	Mentor
		Complex assignments
		Feedback on functioning
		Coach
Functioning consultation		
Information	Information systems	Career consultation
		Knowledge of decisions
		Job aids
		Databases
		Newsletter
		Internet
		Work e-mail address
		Phone
		Library
		Log
		TV
		CD-ROMs
		Idea box
		Quality manual
		Reports, files
Radio		

**Table II.**  
Learning conditions,  
categories and items

Source: Clauwaert and Van Bree (2008)

Figure 1.  
Research question



following the assumption of factor analysis that correlations among variables should be moderate. This determinant equals 0.000, meaning that there were no extreme correlations. A Kaiser-Meyer-Olkin measure of sampling adequacy of 0.93 and a Bartlett's test of sphericity with a significance of  $p < 0.001$ , also confirm that these data is definitely suitable for factor analysis.

Second, a series of analyses of variance (ANOVA) were calculated. We compared the newly formed factors for different characteristics of the employee or the organisation in which the employee is working. An ANOVA was performed for several characteristics: gender, age, level of education, function within the organisation, seniority, type of organisation and size of the organisation. With these analyses we hope to find significant differences between employees with different characteristics, or employees working in different kinds of organisations.

## 5. Results

First, the results of the factor analysis and the interpretation of the factors are presented. Second, the results of the different analyses of variance are presented by characteristics of the employee or the organisation in which the employee works.

### 5.1. Factor analysis

The factor analysis starts with determining the number of factors. Since the average communality is lower than 0.6 ( $\bar{X} = 0.478$ ) and the number of participants is larger than 300 ( $n = 1162$ ), the scree plot is used to select the number of factors. Five factors were selected based on the scree plot criterium combined with the rule that every factor has to contribute at least 5 per cent of explained variance. Several items were not taken into account in the final analysis because they either did not score high on any factor or they scored high on multiple factors. In total 14 of the 59 items were not used for the final analysis. The deletion of these items led to an increase in the total amount of the explained variance.

The selected five factors of learning conditions explain 42.77 per cent of the variance. The first factor ( $\alpha = 0.90$ ) explains 12.93 per cent. The items that load clearly on this factor concern questions about "feedback" from others (work groups, proposing

Demographic information	Number of participants	Percentage
<i>Gender</i>		
Male	507	43.6
Female	655	56.4
<i>Year of birth</i>		
1940-1949	38	3.3
1950-1959	281	24.3
1960-1969	380	32.8
1970-1979	279	24.1
1980-1989	180	15.5
<i>Level of education</i>		
Master	359	31.2
Bachelor	505	43.9
Professional higher education	142	12.3
Secondary education	131	11.4
Elementary education	13	1.1
<i>Function</i>		
Workers	179	15.6
Clerks	881	74.3
Staff members	90	7.8
Other	26	2.3
<i>Seniority</i>		
< 5 years	358	30.9
5-10 years	238	20.5
> 10 years	560	48.3
<i>Type of organisation</i>		
Profit	392	33.8
Non-profit	395	34.1
Government	373	32.2
<i>Size of the organisation</i>		
< 20	106	9.2
20-49	123	10.6
50-199	342	29.5
200-500	249	21.5
> 500	338	29.2

**Table III.**  
Demographic information

ideas, debriefings, etc.) and “knowledge acquisition” (guests, speakers, results of inquiries, important decisions and assignments, etc.). The second factor ( $\alpha = 0.86$ ) contains the items concerning “new learning approaches” (learning experiences, permanent learning, complex assignments, etc.) and items concerning the availability of “communication tools” (internet, phone and work e-mail address). This factor accounts for 9.76 per cent of the explained variance. The third factor ( $\alpha = 0.82$ ) explains 7.92 per cent and addresses the items that involve “being coached” (contact person, buddy system, personal development plan, etc.). There is one different item among the others in this factor and that is the item concerning job rotation, however this item has the lowest loading for this factor. Factor four ( $\alpha = 0.78$ ) concerns

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“coaching other employees” and tools to do this (coaching external interns, interim and voluntary employees, log, quality manual, etc.). Of the variance, 6.80 per cent is explained by factor four. The final and fifth factor ( $\alpha = 0.71$ ) explains 5.30 per cent of the variance and includes some important items concerning “information acquisition” (library, CD-ROMs, community of practice and trade union meetings). You can find the coefficients of the items in Table IV. For interpretation purposes an overview of the factor items are given in Table V.

### 5.2. ANOVA

The different ANOVAs produced several significant differences concerning the learning factors for different groups of employees. Two learning conditions showed significant differences between the different genders. Males score significantly higher on “new learning approaches and communication tools” than females ( $F = 16.55$ ,  $p < 0.001$ ). Males also score significantly higher for “information acquisition” than females ( $F = 53.71$ ,  $p < 0.001$ ).

It was also investigated whether employees of different age groups have different opportunities for non-formal and informal learning. Significant differences were found for the three learning conditions. Employees born between 1970 and 1979 score the highest on the learning condition “feedback and knowledge acquisition”, the youngest employees, born between 1980 and 1989 score the lowest ( $F = 7.64$ ,  $p < 0.001$ ). There is also a significant difference when it comes to “being coached”, the lowest score is obtained by the oldest group, those born between 1940-1949, whilst the highest score is obtained by the youngest group ( $F = 7.24$ ,  $p < 0.001$ ). Finally, the oldest group of employees scores significantly higher on “information acquisition”, the employees born between 1970 and 1979 score the lowest ( $F = 7.89$ ,  $p < 0.001$ ).

Significant differences were found for employees with different levels of education for all learning conditions. The employees with a master’s degree score the highest on the learning conditions “feedback and knowledge acquisition” ( $F = 28.97$ ,  $p < 0.001$ ), “new learning approaches and communication tools” ( $F = 23.28$ ,  $p < 0.001$ ) and “information acquisition” ( $F = 25.62$ ,  $p < 0.001$ ). The lowest scores were obtained by the employees with an elementary degree. For the learning conditions “being coached” ( $F = 4.03$ ,  $p < 0.01$ ) and “coaching others” ( $F = 11.94$ ,  $p < 0.001$ ) employees with an elementary degree score the highest, employees with a master’s degree score the lowest. It is remarkable that for all learning conditions the differences between the groups gradually increase or decrease according to an increase or decrease in level of education.

All learning conditions resulted in significant differences for employees with different functions. The highest scores on “feedback and knowledge acquisition” ( $F = 67.34$ ,  $p < 0.001$ ), “new learning approaches and communication tools” ( $F = 22.12$ ,  $p < 0.001$ ), and “information acquisition” ( $F = 22.82$ ,  $p < 0.001$ ) are obtained by staff members, the lowest scores were obtained by the workers. Workers indicate more than staff members that they are “being coached” ( $F = 6.14$ ,  $p < 0.001$ ). Finally, workers score the highest on “coaching” others, the group with “other functions” scores the lowest ( $F = 3.97$ ,  $p < 0.01$ ).

The seniority of the employees gives significant differences for all learning conditions, except “new learning approaches and communication tools”. The highest score on “feedback and knowledge acquisition” ( $F = 4.37$ ,  $p < 0.05$ ), “coaching others”

		Component				
		1	2	3	4	5
Work groups	q_1	0.627				
Propose ideas	q_2	0.586				
External colleagues	q_3	0.635				
Work consultation	q_4	0.591				
Personal development plan	q_5			0.441		
Intervision	q_6	0.630				
Debriefings	q_7	0.477				
Project teams	q_8	0.658				
Visit other organisations	q_9	0.489				
Job controls	q_10	0.564				
Feedback	q_12	0.515				
Walk along with colleague	q_13			0.451		
Contact person	q_14			0.531		
To have a coach	q_17			0.615		
Guest speakers	q_19	0.613				
Results inquiries	q_20	0.517				
Knowledge of important decisions and assignments	q_21	0.480				
Buddy system	q_22			0.478		
Godfather/godmother	q_23			0.679		
Trial period	q_24			0.655		
Community of practice	q_25					0.519
To have a mentor	q_26			0.666		
Complex assignments	q_29		0.519			
Work independently	q_30		0.492			
Trade union meetings	q_33					0.484
Coach voluntary employees	q_34				0.646	
Coach interim employees	q_35				0.562	
Coach external interns	q_36				0.630	
Internet	q_40		0.544			
Work e-mail address	q_41		0.486			
Phone	q_42		0.534			
Library	q_44					0.467
Log	q_45				0.508	
TV	q_46				0.484	
CD-ROMs	q_47					0.497
Quality manual	q_49				0.427	
Reports on points for improvement	q_50	0.495				
Radio	q_51				0.567	
Job rotation	q_52			0.425		
Common space	q_54		0.427			
Permanent learning	q_55		0.499			
Sufficient information	q_56		0.637			
Knowledge of new developments	q_57		0.665			
Knowledge for new working situations	q_58		0.683			
Capable of giving information about his work	q_59		0.581			

**Notes:** Extraction method: principal component analysis; Rotation method: Varimax with Kaiser Normalization; Rotation converged in eight iterations; all values under 0.4 are suppressed

**Table IV.**  
Coefficients matrix  
explorative factor  
analysis: rotated  
component matrix

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<i>Factor 1: Feedback and knowledge acquisition (explained variance 12.93 per cent, <math>\alpha = 0.90</math>)</i>		
q_1	I have the chance to participate in work groups (purpose: solving production and labour problems through discussion)	Work groups
q_2	I have the chance to propose my ideas on different occasions or forums	Propose ideas
q_3	I have the chance to meet colleagues from another organisation in the same working area by participating in conferences, workshops and lectures.	External colleagues
q_4	I have the opportunity to participate in a work consultation (consultation where tasks are divided, a planning is made . . .)	Work consultation
q_6	I have the chance to participate in intervision moments (where different employees give their opinions and visions, share their experiences and approaches around a specific case)	Intervision
q_7	I have the opportunity to look back at certain critical events or incidents and to discuss them during a debriefing	Debriefings
q_8	I have the chance to participate in project teams existing out of employees from different departments to work around a specific theme	Project teams
q_9	I have the opportunity to visit other organizations	Visit other organizations
q_10	I have the chance to look into the results of job controls, audits, inspections and visitations.	Job controls
q_12	I have the chance to ask for feedback about my own functioning from my colleagues, supervisors, inferiors as well as clients. (= 360° feedback, confront and make aware how people function within the organisation in the eyes of others. Making their strengths and weaknesses visible, in order to collect explicit information about his or her functioning from relevant others)	Feedback
q_19	I have the chance to attend lectures of guest speakers from outside the organisations	Guest speakers
q_20	I have the opportunity to look into and discuss the results of satisfaction- and quality inquiries from clients, patients, . . .	Results inquiries
q_21	I have knowledge of important decisions and assignments formulated by the supervisors/management	Knowledge of important decisions and assignments
q_50	I have the chance to look into reports and files of finished projects and trainings that contain points for improvement	Reports on points for improvement
<i>Factor 2: New learning approaches and communication tools (explained variance 9.76 per cent, <math>\alpha = 0.86</math>)</i>		
q_29	I get complex assignments appointed (assignments that challenge me, but are not too difficult)	Complex assignments
q_30	I have the opportunity to work independently.	Work independently
q_40	I can access internet and e-learning packages	Internet
q_41	I have the chance to create an own work-email address	Work e-mail address
q_42	I can use and be reached by phone	Phone
q_54	I have the opportunity to meet colleagues in a common space (office, meeting room, . . .)	Common space
q_55	I learn permanently within the organisation I work	Permanent learning
q_56	I possess sufficient information so that I can help and advice colleagues with their technical questions	Sufficient information
q_57	I have knowledge of new developments in my working area	Knowledge of new developments
q_58	I have knowledge that I can apply in new working situations	Knowledge for new working situations
q_59	I consider myself capable of giving information about this work in a comprehensive way to external persons	Capable of giving information about his work

*(continued)*

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**Table V.**  
Overview factor items  
and abbreviations of the  
items

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<i>Factor 3: Being coached (explained variance 7.92 per cent, <math>\alpha = 0.82</math>)</i>		
q_5	I am being assisted with drawing up and following up a personal development plan. (A personal development plan can be seen as a contract in which the employee and the supervisor engage themselves to accomplish certain results and development activities. It is an instrument to harmonise the demands, desires and ambitions of the individual employee and the organisation)	Personal development plan
q_13	I have the chance to walk along with a colleague at the start of their career	Walk along with colleague
q_14	I have the chance to ask advice from a contact person (back office or expert)	Contact person
q_17	I can have a coach	To have a coach
q_22	I have the opportunity to ask questions to a person who also followed the training: buddy system.	Buddy system
q_23	As a new employer I have/had the chance to be supported by a godfather or godmother	Godfather/godmother
q_24	I have the opportunity to do a trial period in which I am accompanied	Trial period
q_26	I have the opportunity to have a mentor (experienced person with the same function)	To have a mentor
q_52	I have to opportunity to participate in a system of job rotation (changing tasks, using new and different materials and equipment, changing functions and roles)	Jobrotation
<i>Factor 4: Coaching others employees (explained variance 6.80 per cent, <math>\alpha = 0.78</math>)</i>		
q_34	I have the chance to coach voluntary employees	Coach voluntary employees
q_35	I have the chance to coach interim employees	Coach interim employees
q_36	I have to chance to coach external trainees	Coach external interns
q_45	I have the chance to use a log (daily report with points for improvement)	Log
q_46	I have the chance to use a TV within the organisation	TV
q_49	I have knowledge of a quality manual	Quality manual
q_51	There is a radio within the organisation that everybody can listen to	Radio
<i>Factor 5: Information acquisition (explained variance 5.30 per cent, <math>\alpha = 0.71</math>)</i>		
q_25	I have the opportunity to join a learning or knowledge network (community of practice)	Community of practice
q_33	I have the opportunity to attend trade union meetings	Trade union meetings
q_44	I have the chance to spend time in a library or an information centre (with self study packages) within the organisation	Library
q_47	I can access CD-ROMs with basic information about the working area	CD-ROMs

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Table V.

( $F = 4.50, p < 0.05$ ) and “information acquisition” ( $F = 3.07, p < 0.05$ ) was obtained by the employees with more than ten years of seniority, the lowest score was obtained by the employees with less than five years of seniority. The employees with less than five years of seniority score the highest on “being coached”, whilst the employees with more than ten years of seniority score the lowest ( $F = 10.74, p < 0.001$ ).

All learning conditions resulted in significant differences between the types of organisations. The learning conditions “feedback and knowledge acquisition” ( $F = 32.23, p < 0.001$ ), and “coaching others” ( $F = 14.81, p < 0.001$ ) occur mostly

in the non-profit organisations and occur least in the profit organisations. For “new learning approaches and communication tools” ( $F = 9.70, p < 0.001$ ) and “being coached” ( $F = 18.21, p < 0.001$ ), the results are inverse, the highest score is for the profit organisations and the lowest score is for the non-profit organisations. Employees working for the government score the highest on “information acquisition”, the lowest score is obtained by employees working in non-profit organisations ( $F = 6.04, p < 0.01$ ).

Concerning the size of the organisation all learning conditions give a significant difference. There is no unidirectional tendency however, “Feedback and knowledge acquisition” was the highest for employees in an organisation with 200-500 employees, and the lowest score for employees in an organisation of more than 500 people ( $F = 8.71, p < 0.001$ ). The highest score for “new learning approaches and communication tools” is obtained by employees in an organisation with less than 20 people, the lowest score is obtained by employees in an organisation with 200-500 people ( $F = 24.91, p < 0.001$ ). “Being coached” also had the highest score for the smallest organisation, but the lowest score is obtained by the largest organisation, those with more than 500 employees ( $F = 11.42, p < 0.001$ ). “Coaching others” has the highest score for employees in an organisation with 200-500 people, the lowest score is in the largest organisations ( $F = 9.85, p < 0.001$ ). Finally, the learning condition “information acquisition” gets the highest score in organisations with 50-200 employees and the lowest score in organisations with 20-50 people ( $F = 3.89, p < 0.01$ ).

## 6. Conclusion and discussion

We can conclude that for the five learning conditions that were identified by our research, different kinds of groups of employees have different chances for non-formal and informal learning. For every characteristic that we investigated, several significant differences were found. For the learning condition “being coached” we found some very clear differences. Generally, young employees who just started working in small non-profit organisations with an elementary degree would have more access to the learning condition “being coached” than other employees.

Another remarkable finding is the fact that when we look at the differences between the different levels of education we can see that the differences between the groups increase or decrease gradually according to an increase or decrease in level of education.

For the characteristic size of the organisation no unidirectional difference was found for the learning conditions. The results for the types of organisations are clearer. The employees in profit organisations have more access to the learning conditions “being coached”, and “new learning approach and communication tools”. The employees in a non-profit organisation have more access to the learning conditions “feedback and knowledge acquisition”, and “coaching others”. The employees working for the government have the most access to the learning condition “information acquisition”. It is remarkable that employees in profit organisations have the most access to “being coached”, whilst employees in non-profit organisations have the most access to the learning condition “coaching others”. A more in-depth research on coaching in labour organisations might explain this apparent contradiction.

Employees with different functions are exposed to different learning conditions. It is remarkable that clerks are always situated between the staff members and the workers. Staff members have the most chances for “feedback and knowledge

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acquisition”, “new learning approaches and communication tools”, and “information acquisition”, while workers have the least access to these learning conditions. Workers have the most access to the learning conditions “being coached” and “coaching others”. Different functions require different skills and it is logical that these different skills are addressed in different ways. However, one might wonder if for example a top manager would not benefit from being coached? This research focused on the learning conditions that are present in the labour organisations, further research could investigate the needs of the employees.

There is not a lot of former research that focuses on learning conditions for non-formal and informal learning; moreover no research compared the learning conditions for different kinds of groups of employees. Therefore it is not possible to compare the results of this research with other research. Further research is needed to verify the factor structure and the differences that were found between the groups of employees.

Since all organisations participated on a voluntary basis, it is possible that these organisations do not reflect the “average” organisation regarding non-formal and informal learning. Another limitation is that the number of participants was not equal for all groups. The lower response of staff members can be attributed to the fact that they are simply less represented within labour organisations. Future research could be carried out with a larger number of staff members or with equal groups for the characteristics that are examined in the research.

This research has focused on the presence of learning conditions; however it is important to learn more about the learning effects of these conditions in order to gain more insight into the concept of workplace learning. Future research that focuses on these learning effects is needed.

## 7. Implications for practice

For practitioners and training departments, it is important to realize that in order to improve workplace learning, supporting the condition of “feedback and knowledge acquisition” contributes the most. This means that creating occasions for feedback, such as working in teams, debriefings or peer feedback are essential for employees, so do possibilities to acquire knowledge (knowledge of results of inquiries, of important decisions, of assignments, of new skills, etc.).

Further, it might be good to realize that learning conditions increase with a higher level of education of employees. As a consequence the former guideline will be more important for the low educated workers. Moreover, workers have also less access to learning conditions such as new learning approaches (e.g. permanent learning and complex assignments), communication tools (e.g. phone, internet and common space) and information acquisition (e.g. library and community of practice).

Finally, for the different types of organisations, it might be useful to focus also on the learning conditions for employees they usually do not stress: for profit organisations this means also focusing on “feedback and knowledge acquisition” and “coaching others” (e.g. coach interns, interim employees and voluntary employees). For non-profit organisations this means focussing on “being coached” (e.g. personal development plan and buddy system) and “new learning approach and communication tools” (e.g. permanent learning, knowledge of new developments and work e-mail address).

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**References**

- Ashton, D.N. (2004), "The impact of organizational structure and practices on learning in the workplace", *International Journal of Training and Development*, Vol. 8 No. 1, pp. 43-53.
- Baert, H., De Witte, K. and Sterck, G. (2000), *Vorming, training en opleiding. Handboek voor een kwaliteitsvol VTO-beleid in welzijnsvoorzieningen, (Instruction, Training and Education (ITE)). Handbook for a High Quality ITE-policy in Welfare Services*, Garant, Leuven.
- Billett, S. (2001), "Learning through work: workplace affordances and individual engagement", *Journal of Workplace Learning*, Vol. 13 No. 5, pp. 209-14.
- Billett, S. (2004), "Learning through work: workplace participatory practices", in Rainbird, H., Fuller, A. and Munro, A. (Eds), *Workplace Learning in Context*, Routledge, London, pp. 109-25.
- Boud, D. and Garrick, J. (1999), *Understanding Learning at Work*, Routledge, London.
- Clauwaert, I. and Van Bree, L. (2008), "Werkplekleren: naar een cartografie van condities voor formeel en non-formeel werkplekleren. Onderzoeksrapport Steunpunt Werk en Sociale Economie", ("Workplace learning: towards a cartography of conditions for informal and non-formal workplace learning. Research report support point work and social economy"), unpublished manuscript.
- Collin, K. (2002), "Development engineers' conceptions of learning at work", *Studies in Continuing Education*, Vol. 24 No. 2, pp. 133-52.
- Education Development Center (1998), *The Teaching Firm: Where Productive Work and Learning Converge*, Education Development Center, Newton, MA.
- Ellström, P. (2001), "Integrating learning and work: problems and prospects", *Human Resource Development Quarterly*, Vol. 12 No. 4, pp. 421-35.
- Eraut, M. (1994), *Developing Professional Knowledge and Competence*, Farmer Press, London.
- Fordham, P. (1993), *Informal, Non-Formal and Formal Education Programmes*, YMCA, London.
- Hager, P. (1998), "Understanding workplace learning: general perspectives", in Boud, D. (Ed.), *Current Issues and New Agendas in Workplace Learning*, NCVER, Springfield, VA, pp. 30-42.
- Marsick, V. and Watkins, K. (1990), *Informal and Incidental Learning at the Workplace*, Routledge, London.
- Onstenk, J. (1997), *Lerend leren werken. Brede vakbekwaamheid in de integratie van leren, werken en innoveren (Learning Learn Working. Broad Professional Skill in the Integration of Learning, Working and Innovating)*, Eburon, Delft.
- Organisation for Economic Co-operation and Development (OECD) (n.d.), "Recognition of non-formal and informal learning", available at: [www.oecd.org/document/25/0,3343,en\\_2649\\_39263238\\_37136921\\_1\\_1\\_1\\_37455,00.html](http://www.oecd.org/document/25/0,3343,en_2649_39263238_37136921_1_1_1_37455,00.html) (accessed 9 January 2009).
- Schugurensky, D. (2000), "The forms of informal learning: towards a conceptualization of the field", unpublished doctoral dissertation, University of Toronto, Toronto.
- Skule, S. (2004), "Learning conditions at work: a framework to understand and assess informal learning in the workplace", *International Journal of Training and Development*, Vol. 8 No. 1, pp. 8-20.
- Sterck, G. (2004), "Leerbeleid en leerpatronen in kennisintensieve arbeidsorganisaties: concepten en praktijken", ("Learning policy and learning patterns in knowledge intensive labour organisations: concepts and practices"), unpublished doctoral dissertation, Katholieke Universiteit Leuven, Leuven.
- Tight, M. (1996), *Key Concepts in Adult Education and Training*, Routledge, London.

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- Tynjälä, P. (2008), "Perspectives into learning at the workplace", *Educational Research Review*, Vol. 3 No. 2, pp. 130-54.
- Tjepkema, S. (2002), *The Learning Infrastructure of Self Managing Work Teams*, Twente University Press, Enschede.
- Van Biesen, F. (1989), "Alledaagse leren in arbeidsorganisatie (Every day learning in labour organisations)", *Ontwerp*, Vol. 1 No. 1, pp. 4-11.

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