The experience of adult learning professionals with workplaces as learning spaces

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This article uses participative photograph interviews and Dynamic Concept Analysis to study the how, what and why of learning in four types of workplaces by adult learning professionals. The research was carried out under the initiative of the research network Workplace Learning, which is part of the Asia-Europe Meeting (ASEM) Lifelong Learning Research Hub. The study aimed at increasing the awareness of the qualities of workplaces that either restrict or expand individual professional learning processes. Workplaces as learning spaces may facilitate the experience and achievement of personal and professional agency through different qualities of various places.

Keywords: adult learning professionals, informal learning, adult learning axioms, qualities of workplaces, learning spaces

Introduction

The professionalization of adult learning professionals such as teachers, trainers, coaches and counsellors is somewhat problematic across Europe. In many countries, professionalization does not occur either formally or systematically (Sava 2016). Therefore, the capabilities of adult learning professionals often grow through informal learning and professional development in, at and through work. This means that adult learning professionals may be learning on a daily basis from experiences they have in various spaces during their work. These 'workplaces as learning spaces' of adult learning professionals are the focus of this contribution.

The part played by informal learning and continuing development of the adult learning professional is well recognized but little understood. The same can be said for the notion of adult learning itself in, at and through professional work. Therefore, in this article the main question is: do adult learning professionals

experience workplaces as learning spaces and how, what and why are they learning 'informally' with respect to their work in these spaces. To address this question, the following theoretical aspects of the experience of adult learning professionals with learning at work are successively introduced: 1. the experience with learning in, at and through work of the adult learning professional, 2. workplaces as learning spaces, 3. from static to dynamic workplaces, 4. home as a workplace and learning space, 5. learning spaces on the move, 6. learning in a relational context, and 7. subjectivity and the emotional, motivational and biographical character of 'workplaces as learning spaces'.

In Europe, the notion of the 'adult learning professional' does not really exist (Bron & Jarvis 2008). However, there are many professionals who work with adults as clients to teach them personally, vocationally or otherwise. Considering the state of knowledge today, it is a difficult task to recognize adult educators² because they do not always identify themselves as such for various reasons related to the diversity of the background disciplines (Bron & Jarvis 2008). Although there are and there have been some initiatives in Europe at the academic level, the discipline of 'adult learning professional' is still in its infancy. This makes it of special interest to study the informal learning and continuing vocational development of adult learning professionals. Thus, this article will discuss the experience of adult learning professionals with workplace learning.

The phrase 'workplaces as learning spaces' means that work and the process of learning come together and are interdependent in the workplace. Kersh, Waite and Evans (2012) suggested that the experience with learning in the workplace is related to the perception of the space in which the learning takes place. In the literature, two opposing perceptions of the workplace as learning space are found. Typically, recent sociologists, particularly those using the theories of Foucault and Bourdieu, emphasize that workplaces are by definition not neutral, with each possessing an ideological character. At the least, this restricts individual learning and development opportunities in workplaces. In contrast, recent studies by Evans et al. (2006), Nonaka and Takeuchi (1995) and Livingstone (2002) showed that workplaces offer individuals the opportunity to learn and develop. This learning is called 'informal' because there is no formal curriculum and the learning, in essence, is not intended by somebody or in some way, but is the outcome of work-dependent learning processes in the context of the execution of actual labour (Ellström 2011).

Over the last decade, there has been a shift in what is considered a 'workplace'. This means that the workplace as one static place to work (or learn) has gradually changed such that work may now occur in various locations, in which learning for

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² 'Adult learning professionals' and 'adult educators' are used synonymously in this article to refer to all types of teachers, trainers, coaches and counsellors of adults (over the age of 26).

work may also take place. These may include, for example, a non-static office space at work or at home, or various other locations at which the work is done externally, 'touch down' places (Felstead & Jewson 2000) and virtual spaces (Kersh, Evans and Waite 2012). Felstead and Jewson (2000) give reasons for this generally recognized shift, namely technological developments and the further individualization and professionalization of work. Moreover, these authors suggest that in the long term the various workplaces have consequences with respect to the social and relational behavior between employees (and management) as well as the psychological disposition of the employees (Felstead & Jewson 2000). These consequences may also be responsible for the characteristics that restrict or expand (Engeström 2011) the workplaces as a learning space.

Home as a workplace has become increasingly important insofar as it is considered child friendly and future focused. Moreover, it is promoted in the media (Felstead & Jewson 2000). Nevertheless, the status of working from home does demand the requirement to combine the public and the private. Employees must regulate the borders between the household and the working world. This demands skills such as personal negotiation, self-discipline and self-reflection on one's work identity (Felstead & Jewson 2000). Our research is particularly interested in the learning for work opportunities at home because adult learning professionals often have part-time assignments and work at home quite regularly.

In 2012, Felstead and Jewson defined the notion of the workplace 'on the move'. More recently, professionals have become even more flexible and mobile, and are able to use all their travel and work time as efficiently and effectively as possible, as well as potentially learn in the process. The digitalization of work has created opportunities to work and learn virtually using various devices such as mobile phones, laptops or tablets, at almost any location.

With the 'community of practice' concept, Wenger (1998) emphasized that the social aspect of work may be an explicit factor that increases learning opportunities at work. He elaborates on the importance of cooperation in promoting the sharing of knowledge and experience in communities of practice. The opportunity to communicate about work-related individual thoughts and discuss one's own and others' experiences brings awareness and conscious reflection into the work situation. This internal discussion and social communication about work may play an important role in the cognitive dimension of learning (Baumeister & Masicampo 2010). In a relational collective context, the opportunity to be confronted with 'new knowledge' may be increased, but there is a question concerning whether the individual professionals feel the necessary amount of disjunction (Jarvis 2007) to accommodate or even transform their biographically developed knowledge, skills and experiences accordingly. The 'social' aspect as such may be too weak and needs

a 'relational' context, which means that the issues of work are value-driven and create engagement and involvement between individuals in the community.

Adult learning, particularly in workplaces, is not a simple issue. It is only quite recently that the issue has been considered worthy of a publication, with the first Handbook of Workplace Learning published in 2011 (Malloch, Cairns, Evans & O'Connor). The handbook problematizes and discusses various theories about the concepts of 'work', 'place' and 'learning', both separately and in various combinations. In summary, three histories of theories on workplace learning are presented, emerging from psychological, sociocultural or postmodern theoretical grounds (Hager 2011). In combination, these various bases reveal the complexity of learning in, at or through work. In the figure 1. below this complexity is conceptualized by Van Dellen and Heidekamp (2015), illustrating the psychological, sociocultural and postmodern aspects of learning for work in a framework with three layers. The central process layer of learning (individually) is depicted in the middle. This grows consciously or unconsciously out of 'the motivation to learn for doing the work in a better way' (Holton 2015).

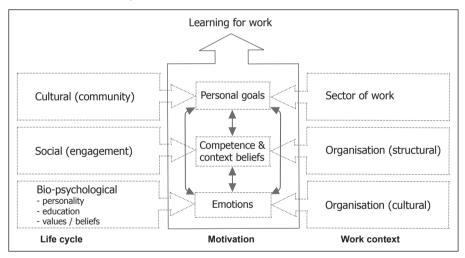


Figure 1: The "Learning for work" conceptual framework (Van Dellen & Heidekamp 2015)

The central process encompasses emotions (physical), beliefs about one's own ability to become competent and beliefs about the support from the context. Finally, personal goals for doing the work in a different and presumably better way (more efficient and effective?) belongs to the central evaluative motivation process

preceding adult learning for work. Thinking this framework through leads to three implicit axioms that are plausible in the case of adult learning for work.

The first axiom concerning the when, why and how of adult learning is that people exist as alternating conscious and unconscious, evolutionary, bio-psycho-social beings. In other words, each individual's existence occurs as multiple interactions between body, mind and social engagements with others. To put this another way, everyone thinks, feels and acts in constant dialogue with themselves and with their environment. This biological, psychological and social model of human beings is a humanist interpretation of subjectivity. This means that every human being shares this capacity with all others and, unlike all other animal species, they are or at least can be or become conscious of themselves as this kind of being. Thus, being human can be construed as if it were a personal learning responsibility of the individual in the various contexts with which they relate. As the philosopher, Peter Sloterdijk, stated even more compellingly: 'You have to change your life'.

The second axiom is borrowed from Jarvis (2009). It concerns the idea that, in a scientific-philosophical sense, the best option is to rely on a non-reductive monism to understand as well as to comprehend the individual's contextually based adult learning responsibility (Jarvis: 2009). In this respect, Jarvis quotes Maslin (2001) extensively when describing this monism:

It is non-reductive because it does not insist that mental properties are nothing over and above physical properties. On the contrary, it is willing to allow that mental properties are different in kind from physical properties, and not ontological[ly] reducible to them. It is clusters and series of these mental properties which constitute our psychological lives Property dualism dispenses with the dualism of substances and physical events, hence it is a form of monism. But these physical substances and events pose two different kinds of property, namely physical properties and, in addition, non-physical, mental properties (Maslin 2001: 163).

As an axiom this monism is quite plausible. It provides a humanistic model of how people 'are' in a fundamental universal sense, although many people may think of themselves differently, for example, in terms of a more naturalistic monism (such as that attributed at times to Nietzsche). However, this axiom is also important to the understanding of why, most of the time, people do not undergo significant learning. In this respect, you may hear them say that they 'feel' unable to be disciplined, or to fight against the disruption to learning caused by their own bodily sensations and emotions.

Recently, we have developed what might be a third axiom. Adult learning can be considered, on the one hand, as something that is very personal; while, on the other

hand, it might be regarded as something highly contextual and universal. This characteristic of adult learning suggests that, by definition, it should be considered in terms of an ambiguity concerning public and private interfaces, leading to the idea that adult learning is a transactional phenomenon between the two. The 'I' involved in adult learning is only half the story, there is also an 'Other' or even a greater degree of distance that could be called an 'Out(th)er(e)'. Thus, adult learning is not a matter of the engagement at one level or the other but of both occurring continuously and at once. For example, the expression 'I'm learning lifelong to feel free' states this clearly. It means: I am learning in order to feel myself free from myself and from the context that it could be considered that I should belong to. Thus, adult learning is something that, without a doubt, is situated in both a broader sociocultural context of other people and the specific circumstances of the individual. In this manner, in adult learning for work in particular, there is always something such as a claim to learn and this claim is never solely idiosyncratic.

To summarize, these three axioms mean that in essence adult learning in workplaces should be considered as something psychological and sociocultural and, at the same time, should also be considered from a point of view of postmodern theory. This may sound somewhat odd, but is it? Psychological theory considers the 'what' that individuals are learning about to be 'things' (Hager 2011). In other words, they know what it is that they need to learn and they are able to learn it. However, in a sociocultural sense the 'what' comes from the actual situation, based on the context in a historical and cultural sense. The 'what' is 'known' through and by the collective context and leads individuals to learn in certain directions. Finally, postmodern theory tells us that the 'what' is not just something that is within the subject or completely separated from them, but exists through an actual ongoing interactive process, creates itself through time and lives by working with 'the actuality'. Thus, from a postmodern perspective this means that nothing is what it seems to be. The world is not something we are able to create at will. In fact, psychological, sociocultural and postmodern theories can be brought together, with each offering a specific understanding of the process of adult learning.

Data collection and analysis

To study learning in, at and through work, adult learning professionals were asked to participate in our research (the selection stopped with saturation). In the end eleven participants had a nodding acquaintance with one of the researchers and were as far as possible sampled through a combination of maximal variation and purposeful sampling. They were either employed or self-employed as a teacher, trainer, coach

or counsellor. The gender mix (8 female [F]; 3 male [M]) was typical for the occupational area. All of the participants were educated at a higher vocational or university level. Their functions were quite diverse, such as teacher, child doctor, special needs pedagogue, educational adviser, educational designer, grief counsellor and trainer. The ages of the participants ranged from 42 to 63, with work experience ranging from 4 to 21 years (one outlier had 40 years' experience).

The research was a case study mixed design with an explorative character. This explorative nature, however, was restricted by an empirical outcome that identified four workplaces that were approached as possible learning spaces. In this way, the identification of these four workplaces was theoretical as well as empirically grounded. The mixed design methodology consisted of a qualitative element, the participative photograph interview developed by Kolb (2008), and additionally a quantitative modelling part that used the Dynamic Concept Analysis (DCA) Model of Kontiainen (2002). Firstly, the experiences of the adult learning professionals with their own further personal and professional learning in various workplaces were collected through semi-structured interviews and visual aids (photographs). Secondly, using the DCA models, the researchers constructed the manner of learning of the adult learning professionals in various workplaces as learning spaces.

The research started with the semi-structured interview which had as input photographs taken by the participants. The interview questions concerned the following five topics: at first the generally experienced learning of the professional, and second their learning in four learning environments, namely 1. working at home, 2. working behind the desk at the official workplace, 3. working while teaching, coaching, etc. an adult, and 4. working on the move (as actually shown on the photographs).

For the analyses of the recognized characteristics of the 'informal learning' of the professionals in each recognized workplace, the DCA was used in a quite similar manner to the work done by Kontiainen (2002) and Evans, Kersh and Kontiainen (2004). Four categories of recognized characteristics were used: (a) the workplace as such, (b) the triggering workplace learning opportunities, (c) the atmosphere experienced (climate) and (d) the experienced learning outcomes. Within the four categories there are in total 10 concepts with 3 attributes each; for example, the first concept within the category of the atmosphere experienced concerns involvement which has the three attributes of 'high', 'medium' and 'low'. The following table presents an information matrix of the workplaces as learning spaces. In the Appendix I the relationships between the concepts and attributes are presented.

	Concepts		1	2	3 .	4	5	6	7	8	9	10
Row		Attributes	anb	anb	anb	anb	anb	anb	anb	anb	anb	anb
1	1.	1a good		а	а	а	a		а	a		
2	Material	1n neutral	Х	n	n	n	n		n	n		
3		1b bad	_ ^ _	b	b	b	b		b	b		
4	2.	2a large	a		а	b	а	а	а			
5	Sociability	2n medium	n	Χ	n	n	n	n	n			
6		2b small	b	^	b	a	b	b	b			
7	3.	3a high	а	а		a	а	а	an			
8	Ownership	3n medium	n	n	X	n	n	n	n			
9	•	3b small	b	b		b	b	b	b			
10	4.	4a high	а	а	a		а	a n	а			
11	Autonomy	4n medium	n	n	n	Χ	n	n	n			
12	•	4b low	b	b	b	^	b	n b	b			
13	5.	5a high	a	a	a	a n		а	a			
14	Involvement	5n medium	n	n	n	n	Х	n	n			
15		5b low	b	b	b	n b	^	b	b			
16	6.	6a active		а	a	a	а		a n		а	
17	Interaction	6n medium		n	n	n	n	Χ	а		n	
18		6b passive		b	b	b	b	^	b		b	
19	7.	7a positive	а	а	an	a	а	n				
20	Climate	7n neutral	n	n	n	n	n	a n	Χ			
21		7b negative	b	b	n b	b	b	b				
22	8.	8a high	а	an	а	a	а	а	n			a
23	Cognitive	8n medium	n	n	n	n	n	n	an	Χ		n
24		8b low	b	b	b	b	b	b	b	^		b
25	9.	9a high	b	а	а	а	a	а	n			
26	Affective	9n medium	n	n	n	n	n	n	an		X	
27		9b low	а	b	b	b	b	b	b		/ `	
28	10.	10 high		an	а	а	а	а	n	а		
29	Meta-cognitive	10 medium		n	n	n	n	n	an	n		Х
30		10 low		b	b	b	b	b	b	b		, ,
 A cell shows the relationship between two concepts 												
A row shows the attributes that have a Type-2 relation to the attribute in question												

Table 1: Information matrix of 'workplaces as learning spaces'

Defining concept relations, "as her, is a highly value-bounded procedure and depends on the own knowledge, experience and values of the researchers" (Kontiainen2002: 75). How statements are presented in a cell is that f.i. in cell 1/3 (above): The better the material, the higher the ownership. In the Appendix I all relationships of the matrix are given explicitly. An example of a non-linear relationship is cell 6/7.

The analysis of the data started with the transcription of the recorded interviews. Following this, each interview was entered as a hermeneutic unit into the Atlas.ti program. The researchers also discussed and filled in a DCA evaluation form for each of the workplaces using these units. In each instance, the Noticing, Collecting and Thinking (NCT) model (Boeije 2014) for analysing data (Figure 2) was constantly kept in mind.

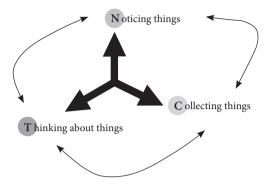


Figure 2: The NCT model

Results

The learning experienced by the adult learning professionals in general

Almost each and every adult learning professional admitted that he or she considered 'learning' to mean '(continuing) development' or 'change/growth'. For example:

"Learning means to me that in principal your development continues" (AB).

"It's important to do your work in a good manner, so you have to keep learning" (JB).

"... learning is never something static as I feel it and it never happens in the moment itself" (JL).

"... as I see it something changed in you, in your behavior, knowledge" (NvdS).

At the same time, two participants said they:

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- "... look back at an experience" (RA)
- "... often I think what went well and what can be done better?" (NO).

Finally, two adult learning professionals mentioned the role of the compulsion to learn:

"You can't learn if you think it is compulsory" (JL).

"Somebody can't push me to learn in a certain setting" (BO).

Concerning the context of learning, the adult learning professionals' responses indicated that most of them are able to learn in any possible context, as well as in relation to or in interaction with colleagues. An example of the first is:

"I may have an insight while riding my bike" (NO).

A quote demonstrating the second:

"So it is: when sharing thoughts, I may learn even more" (BA).

Three participants add that significant 'others' can be seen as models, masters or coaches.

"And that person has been and still is a sort of master for me" (MD).

"I think that I learn most from one of my coaches" (NvdS).

"Modelling is very important for me, I think, but it depends on the content that has to be learned" (LJ).

The drivers of learning experienced by the adult learning professionals show a continuum across the participants. Learning starts with a sort of personal quest for competence. Two professionals formulated their drive as:

"Learning to me is essential ... this may sound heavy but it's my oxygen" (LO).

"... I come closer to my inner source" (MD).

Some participants suggest there is a professional need to keep up and improve their performance constantly:

"I find it important to stay competent in my work and so I need to learn always" (JB).

"Learning means to me that in principal I'm developing further forever" (AB).

"... increasing knowledge and skills" (BR).

The continuum ends with drivers that are problematically situated in the actuality of the workplace:

"... there is a situation [in which] I'm working with a co-trainer who I experience as awkward" (MD).

"I do have educational questions which I can't answer" (BA).

"... meanwhile I'm thinking about an assignment I have to do ..." (LO).

The final topic from the general part of the interview was the actual learning and outcomes that adult learning professionals experience and recognize as such. This topic was somewhat more difficult to discuss because it is not completely accepted or considered 'normal' for older adults to admit that they have learned something, especially when the learning is not formal nor materialized or conceptualized as knowledge-based. Or, to formulate this differently, for adults it may be quite difficult to admit that they lack the knowledge, instead defending their own meaning or 'the me' against the meaning of others (tacit, embodied or experienced knowledge). Thus, to start with, the participants' answers show that they usually connect learning with what may be called professional theory and knowledge (ultimately fitting with prior knowledge). For some reason, they overlook personal knowledge (Polanyi) as an outcome of their learning experience. However, at the same time, a majority of the participants mentioned the experience of feelings or emotions in relation to learning. These feelings range from happiness to anger and from excitement to helplessness. All of the 11 participants mentioned this sort of experience; that is, one that matters in an existential manner:

"My behavior has changed, that's only possible when I have learned..." (BA).

".... because I was able to be amazed ... I became so happy about my discovery ..." (IH).

Learning experiences in the four recognized workplaces as learning places

Table 2 below summarizes the results from the interviews concerning the number of characteristics mentioned in relation to the 'moment of learning' experienced by the professionals and actually photographed. In addition to the plausible ownership, the identification ("This picture shows who I feel myself to be" MD) and functional characteristics of the home as a place to work (and learn), the experience of quietness and focus are also listed as characteristics of the home by some professionals and as characteristics that are rarely experienced in other workplaces.

"At home I have much more quietness" (LO).

"I was on my own. I had a clear focus" (NO).

Despite this quietness and focus, as in the other workplaces, the professionals may be faced with obstacles or strategy choices in relation to learning moments in the home. At their desk at work and while giving a lecture or providing training, the interaction with others (social) seems to be the significant characteristic in the moment of learning.

"... in which workplace [do] I learn most? In the moment we have a cup of coffee together. Because then in an informal way there is much under discussion. And often this may go quite deep, lacking the pressure of an agenda" (RA).

At the same time, the participants mention occasions in which interaction negatively influences the drive to learn. This may be connected with the relative high number of obstacles and strategies to regulate learning while interacting (Table 2).

Topic	Characteristic (Code)	Home place	Desk at work	Lecture or training room	'On the move' ³
	Spatial	5	5	7	2
	Identification	8	0	0	0
<u>ا</u>	'Safe'	5	0	0	0
Ë	Ownership	8	0	0	0
<u>le</u> 9	At hand (materials)	4	1	0	1
Moment of learning	Quietness	6	0	1	1
	Focus	5	1	1	1
	Interaction (social)	0	10	11	3
	Regulating (obstacles)	5	8	5	4
	Regulating (strategy)	7	3	3	1
	Functionality	8	2	0	0

Table 2: Characteristics of the workplaces as learning spaces mentioned in relation to the 'moment of learning'

Both the obstacles and the necessity of a strategy were not described in any exact sense but through a feeling or problem that came up in the work situation. This feeling or problem occurred at the desk, as well as in the lecture or training environment, and was almost always connected with another person, while at home, the regulation of the obstacle or strategy usually concerned a technical or content-related learning aspect. However, a few times at home family matters also had to be regulated.

³ One adult learning professional did not take a picture of a learning moment 'on the move' in this study. The category 'on the move' was actually (in the photographs) somewhat different from the definition of Felstead and Jewson (2012) and not so 'mobile' (travelling). It usually concerned other workplaces in the vicinity of the desk at work.

Topic	Characteristic (Code)	Home place	Desk at work	Lecture or training room	'On the move' ⁴
Outcomes	Learning Well-being Functioning Trust in colleagues Social control	9 9 4 0 -2 ⁵	4 +6 -3 +1 -2 1 4	+1 -3 +8 -2 4 1 -2	1 5 0 4 -1

Table 3: Outcomes mentioned for the workplaces as learning spaces

Table 3 presents the outcome characteristics mentioned in relation to the photographed moments of learning. Almost every professional recognized learning and well-being at home. Home is experienced as 'pleasant', coded as well-being.

"It is full of atmosphere and I am sensitive to it, that's why I like to sit here" (AB).

"Yes, I like to do it once in a while, because it's more efficient and effective" (BA).

"It is different. Here (desk picture) it's more in volume and here (home) it's more in depth" (JL).

Learning in the other workplaces is mentioned by significantly fewer participants. Nevertheless, well-being is mentioned in relation to photographs taken at the desk at work and in the lecture or training environment by almost all participants. However, in some instances these workplaces were said to negatively influence well-being. Functioning, trust in colleagues and social control as outcomes, differentiate between the workplaces as learning spaces. They were relatively less recognized by participants.

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One adult learning professional did not take a picture of a learning moment 'on the move' in this study. The category 'on the move' was actually (in the photographs) somewhat different from the definition of Felstead and Jewson (2012) and not so 'mobile' (travelling). It usually concerned other workplaces in the vicinity of the desk at work.

⁵ This outcomes topic was only mentioned in a negative sense. Other topics were mentioned as positive or negative by different participants (see for example, well-being, 'desk at work').

Figure 2 below presents the scores of the participants on the interview questions on how engaged and autonomous they felt in the specific workplace (based on a photograph) on a scale from 1-10. Some participants made additional comments after answering these questions. In relation to home engagement:

"This is my chair, my table, my materials" (IH).

"I can be my natural X" (BA).

In relation to autonomy at home:

"I feel free and I can do and allow what I want" (RA).

This differs significantly with engagement in relation to the desk at work: "...it isn't a personal place" (BR).

In relation to autonomy at the desk:

"We were very restricted in how to use the furniture" (MD).

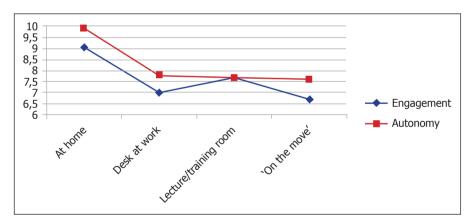


Figure 3: Engagement with and autonomy in each of the workplaces as learning spaces (8 missing values replaced by the mean)

This is more or less the same with regard to the two other workplaces. Engagement and autonomy both depend on the opportunities to use the lecture/training space and the 'on the move' place as freely as possible, in the sense of functionality and the direction of ownership:

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"The space may be bigger, so you can do more dynamic things" (JL).

Or: ".... It concerns the learning space and the people. The people create the learning space in all cases" (IH).

Finally, in the interviews in relation to the workplaces, the participants were asked to describe the learning outcomes they saw. These responses were coded as cognitive, affective and meta-cognitive.

Topic	Characteristic (Code)	Home place	Desk at work	Lecture/ training room	'On the move' ⁶
	Cognitive	7	7	4	2
ng nes	Affective	1	2	7	7
Learning outcomes	Meta-cognitive	4	2	0	2

Table 4: Learning outcomes of the workplaces as learning spaces

The majority of learning outcomes at home and at the desk at work were coded as 'cognitive', meaning that the participants mention that they do gain knowledge and learn theory in these workplaces.

"So I read and I reach a moment of: that could be the case ..." (JB).

Or at the desk at work:

"And he gave me feedback on that and I learned from it" (NO).

"... I ... have learned that the rules are like that and I accepted it in the situation" (JL).

⁶ One adult learning professional did not take a picture of a learning moment 'on the move' in this study. The category 'on the move' was actually (in the photographs) somewhat different from the definition of Felstead and Jewson (2012) and not so 'mobile' (travelling). It usually concerned other workplaces in the vicinity of the desk at work.

In the lecture/training space and 'on the move', contrary learning outcomes, coded as 'affective' were in the majority. Through interaction with other people the participants mentioned a change in their attitude.

"Whereas I think at this moment I should not do what they [do], I should not ... it is something I interpret, so that I have learned" (NvdS).

"That I should talk differently" (BR).

"I learned that to pay attention to feelings, emotions and the pace of my voice can also be very important" (NO).

Finally, now and then meta-cognitive outcomes were mentioned, in particular in relation to the home.

"I have learned, searched, found. How I could do that?" (NO).

"What am I going to do, how should I do it?" (LO).

Modelling the learning of the group of professionals in the various workplaces

We built models of the learning moments for each of the recognized workplaces as learning spaces. The models are elaborated in a similar manner to the work of Kontiainen (2002). These models were not made for each individual participant but are an integrated summary of what all the respondents together showed us about each 'workplace as a learning space'. In fact, the four spaces revealed a sort of continuum which illustrates quite different learning opportunities in each space. Figure 4 shows the configuration of the home place as learning space.

Home as workplace

a) The workplace (material, sociability)

The material at home needed by the professional to work and learn with is mentioned as having a good quality (1a). The model shows that the material is at home related with the concepts ownership (3a), autonomy (4a), involvement (5a) and climate (7a). The material is also positively linked with the cognitive learning outcome (8a) and negatively linked with an affective learning outcome (9b). The not available sociability at home (2b) relates with the affective (9b) as well as metacognitive (10b) outcome.

b) The triggering workplace learning concepts (ownership, autonomy)

The ownership (3a) as well as the autonomy (4a) at home are high. Both concepts are related with material (1a), climate (7a) and involvement (5a) indicated by the cells. Finally the learning outcome is mainly cognitive (8a).

c) The experienced atmosphere (involvement, interaction, climate)

Although being at home there is some median interaction (with colleagues?). This concept is linked with a climate (7a) as well as with autonomy (4a). But this relation is not linear and there is not a connection between these both concepts. But climate (7a) is related with material at hand (1a), ownership (3a) and involvement (5a).

d) Experienced learning outcomes (cognitive, affective, meta-cognitive)

At home the sociability (2b) connects with the affective (9b) and meta-cognitive (10b) learning. outcomes. The ownership (3a), autonomy (4a) and involvement (5a) are the keys to the cognitive learning outcome (8a).

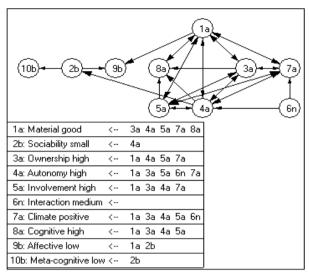


Figure 4: The workplace as learning space at home

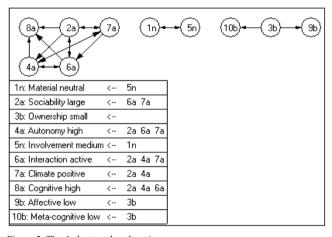


Figure 5: The desk at work as learning space

Desk at work

a) The workplace (material, sociability)

The model shows that at the ordinary workplace the material is neutral (1n) and accordingly the involvement is medium (5n). The large sociability (2a) relates to high interaction (6a) and positive climate (7a).

b) The triggering workplace learning concepts (ownership, autonomy)

The ownership of this workplace is small (3b). Autonomy (4a) is large and due to sociability (2a), interaction (6a) and climate (7a).

c) The experienced atmosphere (involvement, interaction, climate)

At the ordinary workplace involvement (5n) is medium and only in one direction linked with material (1n). The professionals are in interaction (6a). There is a relation with autonomy (4a) and climate (7a). While the climate is due to sociability (2a) and autonomy (4a) at the work desk as well.

d) Experienced learning outcomes (cognitive, affective, meta-cognitive)

The cognitive (8a) learning outcome is related to sociability (2a), autonomy (4a) and interaction (6a). The low affective (9b) and meta-cognitive (10b) outcome is due to the small ownership (5n) of the desk at the workplace.

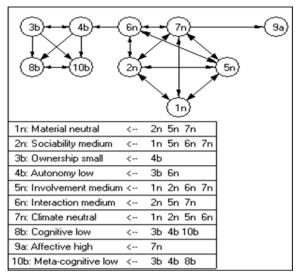


Figure 6: The lecture/training place as learning space

The lecture/training place

a) The workplace (material, sociability)

The material and the sociability in the lecture or training place are neutral (1n) respectively medium (2n). The neutral material (1n) comes from the neutral sociability (2n), the medium involvement (5n) and the neutral climate (7n). While the neutral sociability (2a) is due to the same concepts and additionally to the neutral interaction (6n).

b) The triggering workplace learning concepts (ownership, autonomy)

The ownership of this workplace is small (3b) and related with autonomy (4b). At the same time autonomy relates with ownership and also with neutral interaction (6n).

c) The experienced atmosphere (involvement, interaction, climate)

The three concepts within experienced atmosphere are interrelated (two-sided) with each other. In the primary process workplace of the adult learning professionals sociability (2n) influences in addition each of these concepts as well. Only involvement (5n) and climate (7n) are due to material (1n).

d) Experienced learning outcomes (cognitive, affective, meta-cognitive)

The low cognitive (8b) learning outcome is due to small ownership (3b), autonomy (4b) and low meta-cognitive (10b). The high affective (9a) to a neutral climate. And the low meta-cognitive (10b) outcome to the small ownership (3b), autonomy (4b) and cognitive (8b). Finally, cognitive and meta-cognitive learning outcomes are interrelated.

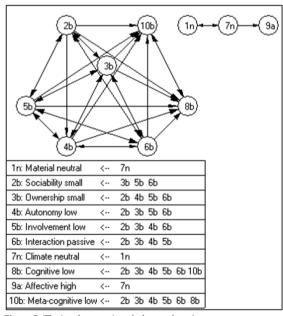


Figure 7: The 'on the move' workplace as learning space

Workplace 'on the move'

The various 'on the move' workplaces show a relative simple configuration of concepts (figure 7.). The concepts of sociability (2b), ownership (3b), autonomy (4b), involvement (5b) and interaction (6b) are almost completely (see figure 7.) mutually interdependent. At the same time they show a relation with low cognitive (8b) and meta-cognitive (10b) learning outcomes. The latest are also interrelated (two-sided). Finally, an affective (9a) high outcome comes from a neutral climate (7n) which interrelates with neutral material (1n).

Conclusion and discussion

In this contribution we have attempted to describe and analyse various 'workplaces as learning spaces' of adult learning professionals. When does the daily work of these professionals come together with the process of learning? Can we understand the necessary informal learning and continuing development of adult learning professionals? And, finally, how, what and why do they experience 'learning' in different workplaces and is this learning related to their perception of the space in which the learning takes place (Kersh, Waite & Evans 2012)? Our analysis, using the participative photograph interview developed by Kolb (2008) as well as the Dynamic Concept Analysis model of Kontiainen (2002), shows that learning through work for adult learning professionals seems to be a relative peculiar thing. Even stronger: learning may be not 'a conscious acting as such' but happens to them now and then and they call it 'development' or 'growth'. So, informal learning may be something that has not a distinguished goal. Or it may not come from a personal urgency. Overall the adult learning professionals photographed four places in which they recognized that learning may be in some instance interdependent with work. These places are: at home, at a desk at work, in a lecture or training room and 'on the move' (different from the first three). In each of these places the adult learning professionals experience somewhat distinctive characteristics (concepts) as learning opportunities. At home ownership, autonomy, involvement, climate are positively involved with learning cognitively (most knowledge and sometimes skills). While learning for affective outcomes at the same time is low despite the good material and the additionally low sociability. At the work desk the cognitive outcome may be high through high sociability, interaction and autonomy. Here, the affective outcome is low because of low ownership. Next, the lecture annex training room show a complete different configuration. Here, there is the opportunity for high affective outcomes via a neutral climate which interrelates with also neutral material.

sociability, involvement and interaction. Moreover the low cognitive and meta-cognitive outcomes in the lecture/training room are interrelated with low ownership and autonomy. Finally, also in the 'on the move' places cognitive and meta-cognitive outcomes are low because all concepts are contributing negatively to this non-existing learning. The affective outcome is on the move low also through a neutral climate which then interrelates with neutral material.

It appears that now and then the adult learning professional develop reasonably unconscious in the context of the execution of actual labour at each of the four workplaces. They indicate and recognize cognitive outcomes of the learning at home and at the desk at work. Moreover in the lecture/training room and on the move affective outcomes are recognized. At home the development seems to be directed at the 'what' of learning or clearly explicit knowledge, while at the work desk the how of doing things may be the focus because interaction plays a role of importance. In the lecture/training room as well as 'on the move' informal learning considering an affective high outcome depends on the actual experienced climate only!

However, this seemingly informal learning and professional development of the adult learning professionals isn't very strongly and convincingly recognized by our participants. They admitted that taking the photographs at moments of learning wasn't simple and moreover each of the recognized learning outcomes mentioned in the prior paragraph (in the four workplaces) was mentioned by 7 out of 11 participants. In this research, the workplace learning of adult learning professionals was treated as a holistic phenomenon. The learning does not take place simply 'informally', as an alternative to all the learning that does take place in formal and non-formal conditions. The personal and professional learning of adults throughout the course of their life is actually a quest for opportunities and moments that have an existential significance, are seemingly necessary and, in essence, free from compulsion, as well as safe in the sense of allowing one to be or become the person one means or wants to be. Accordingly, as has been shown the four different workplaces have different characteristic that restrict or expand the opportunity for such learning.

The implications of these findings are quite significant theoretically as well as practically. Many theoreticians indicate that informal learning is a welcome aspect of work-related learning. However, is it important for the learners themselves, when it is nothing more than unconscious adaptation? Personal development within workplaces as learning spaces seems to demand an awareness and an element of personal choice for a process of real transformation to begin, sometimes this is due to the context but it always concerns the well-being and health of the adult learning professional. With respect to the context, it may even mean that the contract with the context ends.

The participative photograph interview offers a tool for approaching experienced learning opportunities of adult professionals that otherwise would not become a topic of research. Nevertheless the subjects of the study expressed their difficulties with catching the learning moments. Learning, particular informal is a phenomenon that does not show itself. So subjects and researchers have to admit the difficulties they had with the interpretation of the pictures respectively the accompanying hermeneutic interview transcriptions.

There is a striking difference between the outcomes of the introductory and general part of the interview and the following photograph part of the interview. In the general part of the interview the adult learning professionals give the impression that they may learn constantly, in each and every situation and that they learn a lot. However, this optimistic vision doesn't show up in the photographs interview part. This difference may illustrate that 'being a learning person' is considered to be a good thing and socially desirable. These subjective thoughts about learning doesn't show up that much in the photographs at all. Again, in the general part of the interviews the participants have also been clear on the why they learn. They learn constantly because they think 1. they do, 2. they have changed, 3 it's been urgent to do so, 4. they learn from significant others, 5. they develop, 6. they reflect etc. Learning seems to be interpretation (Foucault, 1977). Learning is not experienced by the participants as such. Like that, the meta-cognitive learning outcome has not been mentioned to often with respect to the photographs, the participants don't mention that thinking through topics may be an important aspect of their learning. Learning they think just happens. This is quite odd, in particular because the participants are adult learning professionals. Working with adult learners they should have experienced the complexity and ambiguity of learning. They didn't. To us this is the most astonishing outcome of our research.

Finally, this mixed-design research is explorative in nature and therefore generalization of the results is not possible. Further limitations of the study are the low number of participants and the selection of them as well. Nevertheless, the paper provides one example and a demonstration of how the DCA method could be used to analyze learning processes in different workplace settings. The graphical presentations provide a visible illustration of how, what, and why learning and development may take place in these various settings. The photographs served as input in this respect. The photographs on their own hardly 'show' what the participants lay in to it through the interviews.

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APPENDIX I Statements of Relationship between Concepts of Adult learning

- in brackets are the variables which are considered not to have a linear relation to the concept or attribute in question
- * indicates a trend towards a relation as stated

1. Material

- 1/2 The higher the sociability, the more use of material
- 1/3 The greater the ownership, the more of material
- 1/4 The higher the autonomy, the more use of material
- 1/5 The more the involvement, the more use of material
- 1/6- (Interaction)
- 1/7 The more positive the situation, the more use of material
- 1/8 The more cognitive outcome, the more use of material
- 1/9- (Affective outcome)
- 1/10- (Meta-cognitive outcome)

2. Sociability

- 2/1 The more use of material, the higher the sociability
- 2/3 The greater the ownership, the higher the sociability
- 2/4 The higher the autonomy, the higher the sociability
- 2/5 The more the involvement, the higher the sociability
- 2/6 The more active the interaction, the higher the sociability
- 2/7 The more positive the situation, the higher the sociability
- 2/8- (Cognitive outcome)
- 2/9- (Affective outcome)
- 2/10- (Meta-cognitive outcome)

3. Ownership

- 3/1 The more use of material, the greater the ownership
- 3/2 The higher the sociability, the greater the ownership
- 3/4 The higher the autonomy, the greater the ownership
- 3/5 The more the involvement, the greater the ownership
- 3/6 The more active the interaction, the greater the ownership
- 3/7* The more positive the situation, the greater the ownership
- 3/8- (Cognitive outcome)
- 3/9- (Affective outcome)
- 3/10- (Meta-cognitive outcome)

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4. Auto	onomy						
4/1	The more use of material, the higher the autonomy						
4/2	The higher the sociability, the higher the autonomy						
4/3	The greater the ownership, the higher the autonomy						
4/5	The more the involvement, the higher the autonomy						
4/6*	The more active the interaction, the higher the autonomy						
4/7	The more positive the situation, the higher the autonomy						
4/8-	(Cognitive outcome)						
4/9-	(Affective outcome)						
4/10-	(Meta-cognitive outcome)						
5. Invo	lvement						
5/1	The more use of material, the more the involvement						
5/	The higher the sociability, the more the involvement						
5/3	The greater the ownership, the more the involvement						
5/4*	The higher the autonomy, the more the involvement						
5/6	The more active the interaction, the more the involvement						
5/7	The more positive the situation, the more the involvement						
5/8-	(Cognitive outcome)						
5/9-	(Affective outcome)						
5/10-	(Meta-cognitive outcome)						
6. Inter	raction						
6/1	(Material)						
6/2	The higher the sociability, the more active the interaction						
6/3	The greater the ownership, the more active the interaction						
6/4	The higher the autonomy, the more active the interaction						
6/5	The more the involvement, the more active the interaction						
6/7-	A non-linear relationship with climate						
6/8-	(Cognitive outcome)						
6/9	The higher the affective outcome, the more active the interaction						
6/10-	(Meta-cognitive outcome)						
7. Clin							
7/1	The more use of material, the more positive the situation						
7/2	The higher the sociability, the more positive the situation						
7/3*	The greater the ownership, the more positive the situation						
7/4	The higher the autonomy, the more positive the situation						
7/5	The more the involvement, the more positive the situation						
7/6-	A non-linear relationship/Interaction						

- 7/8- (Cognitive outcome)
- 7/9- (Affective outcome)
- 7/10- (Meta-cognitive outcome)

8. Cognitive

- 8/1 The more use of material, the higher the cognitive outcome
- 8/2- A nonlinear relationship/ Sociability,
- 8/3 The greater the ownership, the higher the cognitive outcome
- The higher the autonomy, the higher the cognitive outcome
- 8/5 The more the involvement, the higher the cognitive outcome
- 8/6 The more active the interaction, the higher the cognitive outcome
- 8/7- A non-linear relationship/ Climate
- 8/9- (Affective outcome)
- 8/10 The higher the meta-cognitive outcome, the higher the cognitive outcome

9 Affective

- 9/1 The lower use of material, the more affective outcome
- 9/2 The higher the sociability, the more affective outcome
- 9/3 The greater the ownership, the more affective outcome
- 9/4 The higher the autonomy, the more affective outcome
- 9/5 The more the involvement, the more affective outcome
- 9/6 The more active the interaction, the more affective outcome
- 9/7- A non-linear relationship/Climate
- 9/8- (Cognitive outcome)
- 9/10- (Meta-cognitive outcome)

10. Meta-cognitive

- 10/1- (Material)
- 10/2- A non-linear relationship/Sociability
- 10/3 The greater the ownership, the higher the meta-cognitive outcome.
- 10/4 The higher the autonomy, the higher the meta-cognitive outcome.
- 10/5 The more the involvement, the higher the meta-cognitive outcome.
- 10/6 The more active the interaction, the higher the meta-cognitive outcome,
- 10/7- A non-linear relationship/Climate
- 10/8 The higher cognitive outcome, the higher the meta-cognitive outcome,
- 10/9- (Affective)