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Learning in network – a 'third way' between school learning and workplace learning?

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Abstract

The aim of this paper is to analyze and discuss participation in network as a form of learning strategy. Network(s) can be considered as one context for learning parallel to training institutions and workplaces. Network represents a certain category of learning environment with its own characteristics. This learning environment will be examined, partly theoretically by introducing a concept of 'learning space' that attempts to capture factors in the environment that have influence on learning possibilities, and partly empirically by referring to an action research project aiming at improving the occupational health and safety work within 11 enterprises forming a network. It is suggested that network-based learning can be regarded as one type of learning lying somewhere between the two poles institutionalised continuing vocational training (cvt) and workplace learning.

Introduction

An improved interplay between education/cvt and work, between schools/training institutions and workplaces is considered important in order to create learning processes that are meaningful to the participants, in order to develop competencies which can support efficiency and development at the workplaces and secure a flexible, highly qualified and mobile workforce (Bottrup and Jørgensen 2004). A closer cooperation between the involved actors, employees, workplaces and schools, for example by forming mutual networks, can be one answer to this challenge. A supplementary initiative could be to try to establish a new learning environment that seeks to build bridges between school-based¹ and workplace-based² learning. This paper will investigate whether development-oriented network potentially can form such a learning environment or learning space.

School-based learning is often characterised as being theory-oriented, abstract, general, formal and rather difficult for participants to transform and use in other contexts. Workplace learning on the other hand is considered being practice-oriented, concrete, specific, informal, and possible to adopt and use immediately in everyday work. Although these stereotypes are rightfully being challenged (for example by Malcolm et al 2003), they point to some of the possible strengths and weaknesses in the two types of learning environments seen from the learners' perspective. But what about network? What characterises network-based learning? What are the strengths and weaknesses of network-based learning? What kind of learning environment does network form? Can network learning be a fruitful supplement to school-based as well as workplace learning? These are some of the questions that will be pursued in the paper.

In the first part of the paper, I will briefly present my approach to the concept of network. Furthermore, the concept of 'learning space' will be introduced. It is an analytical approach that aims at capturing the organisational, technical, political, social and cultural elements in the environment that affects the possibilities of learning, what can be learnt, how learning takes place, etc. The concept helps pointing to conditions that should be analysed in order to find out what learning processes can take place within a network.

¹ By school-based learning I refer mainly to learning in institutionalised CVT-settings.

² By workplace learning I refer mainly to learning that takes place when performing normal, routine tasks in the daily work, i.e. learning in daily work situations. This comprises some planned activities as for example peer training and introduction of new employees, but not learning that occurs in relation to extraordinary activities such as development projects and specific 'orchestrated' initiatives (see Bruno Clematide's paper for further explanation of this concept).

In the second part, network as a learning space and characteristics of network-based learning will be discussed based, among other things, on empirical experiences. Characteristics of network-based learning will be outlined and compared with school-based learning and workplace learning.

Network – what and why?

The concept of network has gained increasing interest during the past 10-15 years in discussions of economic and organisational development. Several different understandings and definitions of the concept are adopted depending on the context. Network is discussed as an organising principle when it comes to development of organisations, regions and even society as such (e.g. Castells 2000). This paper will concentrate on the first level, organisational development.

The purpose of participating in networks is to improve own performance as an organisation. In order to do so a group of people/representatives from organisations meet repeatedly over a period of time. Depending on the nature of the network, it can concentrate on different issues and ways of working, and the duration can vary. The intention here is not to go into details with a definition of the concept of the network – it might even be doubtful whether that is possible and meaningful – but in order to clarify my use of the concept I will distinguish between two different kinds of network, namely ‘business networks’ and ‘development networks’.

Business networks or production networks are typically concerned with optimisation of production and reduction of costs in order to become more efficient. They often comprise organisations from different levels in the supply/production chain and thus form a vertical network. They can be fairly formalised meaning that they are expected to lead to specific, described goals (e.g. x percent reduction of costs or complaints) and can involve written contracts between the participating organisations. Activities in business networks may lead to organisational development and learning but not necessarily and this is not the main goal.

Development networks, on the other hand, have as an explicit goal to support organisational development and learning and enhance use of existing knowledge within the participating organisations as well as the networks themselves. They are characterised by being horizontal, meaning that the participating organisations are on the same level in the production process or contribute with complementary knowledge (e.g. universities and production companies) and they are often informal. The paper will focus on such networks.

A network can be formed between individuals or between organisations. This paper is concerned with the latter category. When an organisation engages in a network it will be represented by individuals but these individuals will be replaceable. The individuals will represent the organisation and not (primarily) themselves. In accordance with this organisational perspective on network, it is *organisational development and learning* that is of main interest in the paper rather than individual learning and development processes - although the two categories are closely interrelated and therefore difficult to separate.

Network as a strategy for development of organisations can be considered as a reaction to traditional top-down and bottom-up approaches. Top-down strategies have proved too instrumental, too linear, not able to engage the people involved and not very flexible, nor regarding the content of changes, by focusing on ‘one right model’, neither the implementation process. Bottom-up strategies on the other hand often appear to be too dependent on specific individuals, too local, too

focused on solving ‘here and now’ problems, having too little support from management and thus too weak. A network strategy has in a Scandinavian context been seen as a compromise between the two former strategies, a new way of organising and initiating organisational development that comply with some of the weaknesses mentioned (Gustavsen et al 1997, Svensson et al 2001). Svensson et al consider the ideal network cooperation to be flexible, informal, engaging and combining local and regional/global perspectives. Goals can be defined along the way and methods can be continuously adapted and changed in line with the actual needs. At the same time, they point at possible risks or shortcomings in the network strategy: lack of results and government, too uncoordinated, goals that are unclear and lack of obligation. However, they consider network a strategy worth pursuing and studying further.

Another reason for focusing on network could be a growing notion of interdependency between different actors in development processes, both internal and external, and realising that external inspiration is necessary to be innovative and learn (Håkansson, 1990). Internal knowledge and experiences are not enough. At the same time, there is a need for local, adapted solutions to problems and themes raised. Forming network with relevant organisations might be a way of meeting these needs.

With these reflections on the concept of network, I will continue my investigation of development networks as learning spaces. First step is to introduce the concept of ‘learning space’.

The concept of Learning Space

The concept seeks to apprehend the learning possibilities within a certain organisational frame. Different elements in the culture, in the way the work and the social relations are organised, etc form what can be learnt and how in an organisation – these conditions form the learning space(s) of the organisation. The concept has originally been developed to describe workplace learning (Bottrup, 2001). In this paper however, I will try to use it on another kind of organisation, namely development network.

The concept of learning space³ is based on Argyris and Schön and their work with the definition of two ideal learning models pointing at routines and practice in organisations that affect learning (Argyris and Schön, 1996), and on Ellström's work with identifying factors which are important for the possibilities of carrying out qualified learning in the workplace, that is what he labels the non-passivating learning (Ellström, 1996). Furthermore, the concept is inspired by Lave and Wenger (1991, Wenger, 1998) and their concept of learning where learning is closely related to active participation in social practice. The concept of learning space therefore focus on different forms of social practice that exist in a workplace, and in which we as individuals take part. The social practice comprises the actual activities taking place and the interplay between the individuals as to the performance of work tasks, formal and informal negotiations of working conditions, being together with colleagues etc. The social life in an enterprise can be viewed as organized within three main areas, three fields representing three different meanings and rationales in relation to the social interactions and actions taking place in the workplace. These three fields form the main framework of the learning space, and together they comprise the activities actually taking place in the workplace. The three fields are: the production field, the policy field, and the informal social field.

³ A related approach, using the term ‘learning environment’, is described in Jørgensen & Warring 2001.

To perform the daily work tasks in the best possible way is of course the rationality and the meaning behind most of the practice in the workplace. On the other hand, to be part of a workplace is not only to perform the tasks. How much work you have to do, at which pay and under which conditions, are also to be negotiated. Concurrently with performing the tasks in the best possible way, there are interests that are to be handled and taking care of these represents another rationale. An example: as a domestic help, you are not only concerned about how to assist and help older people and other users, but you also have to observe working hours, try to avoid lift-related injuries and getting worn-out - and you have a life outside work to take care of as well. In addition, it is typically an important element of work to have good relations to your colleagues and hereby creating your own identity and be part of a community. To establish social contacts may also be a rationale behind the actual practice in the workplace.

Thus, the three fields illustrate that the practice and the activities in the workplace are governed by different rationales. In the following, I will present the three fields.

Production field

The primary activity in a workplace is to have the tasks performed. This social practice characterizes the production field. Within this field, services and products are made, and the field comprises all activities aiming at performing the tasks. Both activities listed in the job description and the more informal practice that is often necessary to make the work go on.

The determining rationale within the field is to do the work most efficiently and expediently, and to produce services and products in a profitable way. Producing the best possible services and products within certain financial conditions is the purpose of the activities.

The way, in which the production field is designed, is decisive for which learning possibilities you have in your work. Among the factors to pay attention to in relation to this field, are the following: Which tasks are to be performed and how are they organized? Autonomy in work? Social relations and possibilities of learning in the interaction with your colleagues? For example, it will have consequences for the domestic helper's possibilities to learn and have influence on own work how regulated her visits to the clients/users are. There is a great difference between a situation where the manager has prearranged what has to be done at the client's, and a situation where it is up to the domestic helper herself in cooperation with the client to decide what is needed. The latter situation furthers the possibilities of learning. According to Ellström (1996), the possibilities of learning in the workplace are increasing concurrently with the autonomy and the possibilities at disposal, e.g. in relation to choose tasks and methods, fix the pace of the work and control the work process.

The cooperation relations and social relations established in relation to the performing of the tasks also have consequences for the learning possibilities. Working in self-managed teams gives other learning possibilities than manager-controlled work. Group organization may strengthen the individual employee's insight in the overall planning and succession of the tasks, and provide possibility for the group members to exchange experience and advice.

Other factors of importance for the learning possibilities are the training routines in relation to the performing of the tasks. Do you have the possibility of asking somebody's advice and have feedback regarding the quality of your work? Is it possible to try out something in the daily work? If

you want to specify your learning space, you have to focus on these factors in relation to the production field.

The inspiration to examine this field has primarily been the industrial sociology (e.g. Kern & Schumann, 1984).

Policy field

Within this field, you will find the social practice and the social actions in relation to the specifying of wages and working conditions. Furthermore, this is the field for different interests in negotiations on working hours, wage, production and service output, working environment, future strategies for the workplace, the financial resources etc. Formally, these interests are handled through the shop steward system, the safety committees, works councils etc, and informally through the daily 'negotiations' concerning workload, breaks etc. Thus, policy is exercised not only within the formal forum, but to a high degree also informally in the everyday work practice.

The decisive rationale and the objective of the activities within this field is the handling of interests in relation to the whole work situation – in order to obtain most possible influence and control over your own work as an individual and as a collective. This field is therefore closely connected to questions of power and exertion of power. Thus, questions of power, policy, and influence are very important for the understanding of conditions and possibilities of learning and for learning processes as such.

Which factors determine the possibilities of learning and influence in relation to this field? Primarily, it is the practice and the rules established in the workplace. What is defined as policy, and how are policy and interests handled? This determines which issues and problems are handled openly, which are not.

Other factors that influence the learning possibilities, are how conflicts are handled, and to which degree the employees have access to information and fora where decisions are made. The results of negotiations, e.g. the actual policies, formal and informal agreements on personnel and training policies, working environment, wages, working hours etc do, of course, play an important part.

The social constitution theory – and the Labour Process theories – function as inspiration in relation to this field (Hildebrandt & Seltz, 1989, Pfeffer, 1981).

The informal social field

As mentioned, part of our activity in the workplace is also linked to the need of social contact and the wish to be part of a group where you are able to have joint understandings – primarily regarding the conditions at the workplace. We are part of a number of different formal and informal relations as basis for establishing such groups. Thus, the social practice within this field is related to the establishment of social relations, both positive and negative, and to be a part of the social community.

Within this informal social field, the objectives of the activities are less specific than the activities within the other two fields. As individuals, we do to a high degree have our own agenda based on our experience, background, and needs. It could be an agenda aiming at establishing social contacts

or getting a position within the community. The decisive rationale, the aim of our actions, can within this field be labelled establishing of identity and meaning in relation to the work.

The factors influencing the learning possibilities in relation to this field are the norms, values, and cultures, which exist at the workplace regarding the way in which to interact in the workplace. Especially it is important what is understood as training and learning in the workplace, and the attitudes in relation to participation in learning activities. It may vary between different groups and subcultures in the workplace and may therefore cause more or less obvious clashes. If, for instance the colleagues show contempt if you find it exiting and meaningful to attend courses, to participate in committees, reorganisation and development projects or other such activities, it may influence your benefit from these activities and reduce the wish to participate in such activities. Furthermore, you may loose all desire to participate in future activities. The learning possibilities may be limited if you as a relatively new employee are met by experienced colleagues with very fixed ideas of how to manage different situations or how to perform the tasks in the right way. This does not leave room for you being yourself, being curious or try out new ideas.

All the manners in the workplace, the way we relate to each other influence what we learn. It is important how we talk to each other, and whether you as an individual are allowed to be a part of the community. Some workplaces find it difficult to train and maintain new employees, because the 'old' employees are not inclined to share their knowledge with the new employees and make them part of the community.

In the definition of this field, I draw on theories about workplace cultures and organisational cultures (Lysgaard 1967, Schein 1992 og Alvesson 1993).

Points regarding the concept learning space

The three fields described above constitute together the learning space. The fields are mutually dependent, but they do not determine each other. Changes in work organisation, i.e. within the production field, may influence the informal social relations and the negotiated working conditions within the policy field, but you cannot define the exact impact and how it happens. Therefore, changes within one field do not necessarily lead to changes in the learning space as such. For example, a new work organisation based on teams may lead to broader jobs and increased autonomy, but may at the same time be accompanied by extended control. Thus, changes can be contradictory and point in different directions.

The three fields exist concurrently in the workplace, and there is a certain overlap between them. In the workplace, it is therefore not possible to find a clearly defined and limited production field, policy field, or informal social field. The learning space is an analytic category that may help us understand the mechanisms and conditions, which influence the learning possibilities in the workplace.

The historical perspective is important in order to understand the existing learning space. It is essential to know the experience of the workplace or the network and its history in order to understand the actual learning possibilities. A learning space may at first glance seem rather small and limited, e.g. if it is marked by narrow work tasks and a lack of openness to new ways of doing things. However, the employees may regard this learning space as broader if it has actual during a period been extended – if you as an employee has experienced that it is flexible.

If you are going to describe a learning space, you ought not only to pinpoint a few elements, but you have to look at the conditions in the workplace as a process, something that develops over time.

Development networks as learning space

The term ‘development networks’ hosts a variety of different network constructions, different sizes, goals, participants, ways of working, etc. Thus, they form partly different settings for learning. Despite these differences, I will try to point to characteristics of development networks as arenas for learning and network-based learning on a general level. Although the concrete networks differ in many respects, like workplaces and training institutions do, all of the three– networks, schools, and workplaces - can be regarded as specific systems or ‘ideal types’ with certain logics and attributes that constitute them as learning arenas and learning spaces. In the following part of the paper characteristics of network-based learning and learning opportunities within development networks, i.e. development networks as learning space, will be outlined and compared with workplace learning and school-based learning.

In doing so I will draw on experiences from the project ‘The learning occupational health and safety organisation’, LOHSO (Bottrup et al 2002, Hasle & Jensen 2003, Hvenegaard et al 2004). The project comprised 11 companies who volunteered to develop their internal health and safety organisation into an effective and integrated part of the organisation. The companies are medium to large organisations from both the public and the private sector. Each company appointed a safety manager and a safety representative as the facilitators for the projects. The companies worked with their own specific projects within the overall theme. Furthermore, the facilitators formed a network that met for a number of seminars. The researchers introduced at the seminars theories about learning and organisational development, and the representatives from the companies shared experiences about the progress of their projects. The researchers also followed the projects in the enterprises and gave feedback to the representatives, but were not involved in implementation of the projects as such.

The network activities had a twofold objective: Partly to strengthen the participants’ opportunities to learn from the researchers and one another, and thereby function as change agents (Cummings and Worley, 2001) in their own workplace, and partly, in terms of research, to investigate the possibilities of creating learning processes in this type of network.

Content and organisation of work – the production field

When dealing with network, the main issues to focus on within the production field are goals and contents of the network, how they are defined, how the network activities are organised, and collaborative relations.

Contents, goals, ways of working, etc vary between different development networks and all of these elements influence what can be learnt and how it can happen within the single network. Dyer and Nobeoka (2000) points out that networks that are highly interconnected and formalised, meaning that they have specific goals, fairly tight time-schedules, perhaps have written agreements concerning the network and thus are closely monitored and regulated, are best suited for diffusion of existing knowledge. They form a learning space that promotes single-loop learning (Argyris and

Schön, 1996) while exploration of new knowledge and double-loop learning will be more difficult in this environment.

When it comes to development networks, elements such as goals and how to reach them are often quite diffuse and not very precisely defined in beforehand. It is part of the task to work with these issues. Themes and goals are objects of negotiation among the participants, and these negotiations continue throughout the lifetime of the network. Even though not all participants necessarily have the same access and legitimacy to these negotiations (this point will be discussed further later on), participation in these processes can in itself be a key learning process. E.g. Schön (1987) underlines the importance of and the learning potentials in using time investigating and clarifying problems that one should later be engaged in solving. According to Argyris and Schön (1996), learning actually takes place when individuals are confronted with unexpected events and start investigating them on behalf of the organisation. Learning occurs during the process of analysing the problem, finding solutions and actually 'produce' these solutions. Therefore defining themes is a crucial element in learning processes, especially if 'development-oriented learning' is the aim (as opposed to 'adaptation-oriented learning', Ellström 2001). Hence, network settings can open opportunities for double-loop and development-oriented learning.

The goals of the LOHSO-network were broad and not very specific. Even though the network where in many terms more regulated than other (similar) development networks, a lot of, mostly informal, negotiations where taking place regarding which discussions, experiences and possible products to put on the agenda and give priority to. Improving the health and safety work within the participating enterprises was the overall goal but there were several suggestions to what was the main problem and which kind of solutions should be sought within this theme. Moreover, simply finding out that problems could be viewed differently and that one general 'solution' probably was not possible and meaningful to obtain, was new to many of the participants and thus an important part of the learning processes taking place in the network. Being confronted with other perspectives, other angles on specific issues in health and safety work, made it possible for the participants to reflect on their own understandings and practice, e.g. by being mirrored by/in the others. However, this process was very difficult and even painful for many of the participants. During the project, some improved their ability to define problems and view them from different positions by participating in negotiations and discussions – they started a process of development-oriented learning. But self-reflection and ability to critically investigate own conceptions was still a very hard discipline to master for most of the participants. Although we as researchers continuously tried to present new and sometimes critical angles and presented methods that should strengthen participants' work with the change of perspective, these elements turned out to be very difficult to work with.

Development networks are often concerned with problems and themes that the participants can easily relate to. Participating organisations have typically volunteered to take part in the network activities and shown interest in the overall theme. If the actual individuals representing the organisations are familiar with and agree to the overall theme, using time dealing with these issues will then seem meaningful and relevant to the participants, and involvement in specifying the ways of working, the coordinating principles of the network, can strengthen this feeling. This means that important factors in creating motivation for learning among the participants in networks are taken into account (Illeris 2002).

Ellström argues that the chances of making development-oriented learning processes happen, increase if the learners are free to choose their own way of approaching a problem or a work task, if they are able to pick the methods they themselves find most suitable. As mentioned above, participants in networks often take part in defining such methods. The initiators typically define the overall frame for the network, but the concrete ways of working will be settled by the participants. This helps making development-oriented learning possible within networks but of course cannot guarantee that such learning processes will take place.

Compared to networks, content, goals and organisation of work and learning in workplaces and schools are typically more well-defined and harder to challenge. In formalized cvt the goals normally are defined beforehand by the cvt-providers, by formal curricula, while learning at work is often situated, without explicit goals, it is unspoken. (Intended learning at work can have explicit goals but they are not always obvious to the employees.) These factors can make the learning spaces of schools and workplaces felt more secure and easier to operate in because you do not have to invent the rules of conduct before you start your work. On the other hand, this fact may reduce the motivation for and engagement in learning processes.

When it comes to collaborate relations in networks and the roles of the participants, these things do also differ from the situation in cvt and in workplace learning. In institutionalized learning, a teacher or another type of expert is appointed and is expected to be in charge of and responsible for learning processes. At work the learners are experts themselves and shift roles between being a learner and a 'tutor', but who are holding which roles are not always explicit. In networks, the participants are both learners and experts on their own experience that they bring in. In some sessions, an external expert can be involved to stimulate the discussion of specific issues. Roles are rather explicit, especially if a facilitator helps continuously to clarify them, and by shifting roles, network participants train their ability to change perspective and look at own practice in new ways. Furthermore, being the expert on some topics and put in a position where one is expected to explain own practice to others, and sometimes even act as a kind of teacher, make the participants take responsibility for activities in the network. This can strengthen their possibilities of engaging in development-oriented learning.

It lies in the nature of development networks that experience from the participants is brought into the joint network sessions. Discussing these experiences is actually a central part of the work that goes on in the network. Therefore it is simply a necessity that the participants are able to tell about their experience from work and from the enterprises they come from. That is why verbalisation of own experience is crucial for successful development networks. Without the spoken expression of work experience, which is often unspoken in the daily work, network-based learning simply cannot take place.

Experiences from the LOHSO-network show that telling the stories, in other words the verbalisation of experience, has not turned out to be very difficult. If the sessions are taking place in an atmosphere of mutual respect and trust, the participating safety managers and safety representatives are quite good at telling stories from their own workplace. The direct or near transfer (Oates et al 2002) of what could be called tools or concrete procedures seemed also to be rather easy. If somebody for example told a story about a specific tool they used in their health and safety work, the others were able rather easily to conclude that this specific tool would be a very useful one in their own enterprise.

In contrast, it turns out to be much more difficult for the participants to recognize certain patterns in the totality of the individual stories. That means that insights on a more general level were extremely difficult to gain. Consequently, it was difficult to adapt insights of this level to their own workplace. Transformation (Oates et al 2002) instead of simple transfer was asked for but difficult to reach. Participants might have been able to retell the others' experience, but to relate the stories to own experience, and basically to learn from the others was rather unsuccessful. Other Scandinavian analyses of similar networks point to the same difficulties (Gustavsen et al 2001, Svensson et al 2001, 2003, Björn et al 2002).

Another aspect of the content and objectives of network activities that affects learning possibilities is the 'distance' to everyday work situations and problems here. Learning theories stresses that a certain distance to the physical environment of the workplace and to the specific ways of conceptualising problems, can increase the ability to engage in double-loop learning. Being too close, whether physically or mentally, to everyday conditions and understandings makes it more difficult to obtain new knowledge and perceptions of work related issues. On the other hand being too distant from themes discussed and placed in environments that are unfamiliar, can make it difficult to learn anything at all. New environments can make you insecure and create barriers to learning.

In formalized cvt settings it is often very difficult for the learners to build mental bridges between what is taught at school and work situations in the enterprise they are working at. In workplace learning this problem does not exist so to speak because the learning situations typically are working situations.

It is the other way around with the possibilities of reaching a certain distance to own work situations, to take a step back, which often is a necessity when double-loop learning or development-oriented learning is intended. When learning is linked to daily work situations, it is not easy to perform this mental step, while a certain distance lies in the nature of institutionalised cvt.

Taking care of interests – the policy field

What can be learnt within a network is also affected by what we could call the political culture of the network. Compared to school and workplace settings, relations of and exertion of power are more vague and unclear in networks. Who are to have control and influence? Who possess the legitimacy to insist on their agenda and have the means to fulfil it? These matters are not necessarily clarified, formalised and obvious when a network is started. It is not clear whether 'sanctions' can be implemented if certain rules and goals are not pursued, what kind of sanctions could be adopted, and who might be the ones to do it. Formal as well as informal power structures will often need to be constructed and clarified in a development network. However, this does not mean that network form a sort of 'powerless' environment where no power is exerted. More or less formal indications like rank, which enterprise one represents, etc as well as informal, e.g. group-dynamic factors will still affect network as learning environment, but as a participant you have certain possibilities of influencing decisions and relations because they are usually not settled beforehand.

This can create an environment where the floor is more open, where participants with different backgrounds - employees, shop stewards, safety representatives, managers on different levels, etc - can contribute with their specific interests, perspectives and experiences. Fixed and strong power

relations can make it more difficult to present new perspectives and new ideas because different groups are more occupied with maintaining the relations than with learning. On the other hand, an environment characterised by uncertainty could as well be the result. Without formal rules, it might be difficult, especially for employees with little or no formal education, to operate within the network. They do not know the 'codes'. Therefore, they may regard the network as a rather insecure learning environment.

Network as learning space comprises dilemmas. Being involved in finding your own position and gaining status within the network can lead to rich, albeit tough, learning experiences. Likewise, increased understanding of power relations can develop by being confronted with other political cultures in the network. Participating in this 'game' may improve the participants' ability to establish powerful political coalitions that can support their interests (Pfeffer 1981). But some might 'break their neck' in the effort.

In the LOHSO-network, traditional power relations were to a certain degree reproduced in the early stages. In general, the safety managers participated more actively than the safety representatives in defining relevant issues for further investigation, describing practice and perceptions in own enterprise, etc. This did not come as a big surprise – the safety managers are better educated, most of them are dealing with safety issues full time whereas the safety representatives only use a few hours a week on these matters and the safety managers are closer to if not a part of management in the home organisation. Thus, the representatives also expected them to be in charge and go ahead.

In order to change this pattern the researchers decided – from their position on the top of the power hierarchy in the network – to divide the group into two in some of the network sessions; managers in one group, safety representatives in the other. The two groups were discussing the same themes and questions, but now on terms that are equal and using the different perspectives represented by the groups as a point in itself. An example: The network was working with detecting elements in the participants' own organisations that could further or hinder learning. At the first part of the session, the participants were divided into these two groups discussing the theme and drawing their picture of the present situation. Later on, they were gathered and the different pictures were compared. The pictures did actually differ between safety managers and representatives, especially in the private enterprises. Comprehensions of possibilities of influence and learning, visibility of decision processes, relations between management and employees, etc varied and these differences – among organisations and among persons from the same organisation – gave opportunity for valuable discussions. Furthermore, being together with peers made it possible to have in depth discussions on their own role as safety managers and representatives and on what they regarded as major dilemmas and difficulties in their work.

In much of the Anglo-American literature on network, network comprises managers, middle managers or highly qualified specialists but typically no 'shop floor employees' (e.g. Dyer and Nobeoka, 2000). However, in a Scandinavian and middle-European context, employees on all levels, their representatives, and trade unions are considered vital actors and change agents when it comes to initiating organisational learning and development. Without their active support and relevant competencies, it will be very difficult to make durable and effective changes. In line with this, Håkansson and Johanson (2001) argue that participation of employees and managers from different levels and with different expertises is a necessity in order to make development networks.

Another important factor for learning possibilities within the policy field is the resources granted for participation. If network learning is to become organisational and not only individual, activities, ideas, and aims from the network must be rooted in the home organisations. Participants in the network of course play a decisive role in securing this. Firstly, it takes time. Giving the time to participate in network meetings is not enough – bringing back ideas, comprehensions, and reflections and working with what and how to transform and implement them are also very important parts of engaging and learning in network. Secondly, the participants cannot do it entirely by themselves. Network goals and activities should be acknowledged and supported by key actors in the organisation. It can for example be managers that put relevant themes on the agenda, help taking care of practical problems in relation to implementation, etc. Or shop stewards and colleagues that take active part in communicating and discussing ideas and solutions from the network with other employees.

All in all, network-based learning is highly dependent on conditions/learning space within the home organisations. An active interplay between the two settings is necessary if network activities should lead to organisational development and learning.

Norms and values concerning social relations – the informal social field

Like in the policy field, the informal social field of the network is not defined from the outset – as it would be in the workplace. The network forms a new organisational setting where rules, norms, coordinating principles, and ways of conduct are to be settled. The participants will bring along understandings and habits from their own organisations but these understandings will be bent towards each other and mixed in new ways. Moreover, taking part in the formal and informal definition of these matters and being confronted with other ways of handling situations, other workplace cultures are in itself an important part of the learning processes in networks.

A crucial factor for making learning possible is that learners find activities and social relations meaningful. Earlier, when describing the production field, relevance of the goals and ways of working in the network and how these conditions affected motivation for learning were discussed. When it comes to social relations, learning in network depends, among other things, on participants believing that they can gain from engaging in this specific network with these specific organisations or persons.

In accordance with this, learning can be supported if relations between participants in the network are characterised by trust, confidence and openness (Håkansson, 1990). In order to contribute actively and engage full-heartedly in the network activities the participants need to know that the others will not use the information and knowledge in an inappropriate way – what they say should be handled in confidence and in a supportive way. It should be possible to take discussions rather openly and participants should try to put themselves in the other persons' places in order to understand their needs and experiences. On the other hand they should not be too supportive and understanding – an open discussion would comprise critical questions and perspectives but given in a constructive and respectful way.

Furthermore, a trustful atmosphere means that all participants are willing to contribute with their experiences and competences. Network activities cannot bear many 'free riders'. Participants are expected to take active part in discussions and present own experiences and practices. Some kind of mutuality is needed (Svensson et al 2001).

These guiding principles – trust, confidence, critical support, mutuality and openness – are important in school and workplace settings as well if learning should be encouraged. Such relations can perhaps be easier to establish in a workplace but the risk here is that one either ends up being too supportive or too critical because the interdependency are too high and too many other relations are involved. In school settings, it will often be more difficult to form such an environment, depending on the duration of the course/training activity. In networks, it should be possible to create such conditions but it takes time. However, network settings do hold opportunities for establishing supportive social relations, norms and values because the new mix of people and organisations can make it legitimate and perhaps part of the natural agenda to discuss these issues rather openly.

In the LOHSO-network, it did take to time to establish openness and trust. Participants did not regard one another as business competitors but in the beginning they were very eager to appear competent and to tell the others about all the good things taking place in their own organisations. The display of less good experiences and problems did not occur until later. Actually, openness was best reached in smaller fora within the network. For example among a smaller group of participants representing private production companies. They were drawn to each other because of what they expected to be mutual conditions and problems. They regarded some of the technical, organisational, and financial conditions to be fairly similar at the enterprises and therefore believed they could learn from each other, but they were much more doubtful whether this would be possible from public enterprises.

Even though trust and openness was established in this ‘network in the network’ and they did come quite close to some of the problems and potential conflicts in each other’s organisations, it still was very difficult to get beyond the mere exchange of concrete experiences and ideas. This dilemma as well as the focus on organisations that appear to be similar to one’s own, underlines the difficulties in conceptualising themes and problems in a more general way. Participants from some of the production enterprises were actually concerned with issues that were very close to the interests of some of the public enterprises but they did not recognize this until the end of the project where the network activities were about to stop. They focused on the ‘external’ appearance of relevance instead. Thus, trust and openness can pave the way for mutual engagement and exchange of experience but cannot in itself guarantee double-loop learning.

Network-based learning – some points

In this last part of the paper I will outline some characteristics of network-based learning and development network as learning space, especially compared to school-based and workplace learning. This does in no way pretend to be the full and sufficient story of network learning. Hopefully, it can nevertheless give insights to some elements of this phenomenon and point to themes for further research. The scheme below illustrates some of the characteristics described in the previous pages:

Different learning spaces

	School-based learning (cvt)	Network-based learning (development networks)	Workplace learning (learning at work)
Definition of goals and means	Fixed goals defined by others (ministry, trade, etc)	Goals negotiated among participants – they can influence → double-loop learning as a possibility	Goals often not explicit, unspoken; defined by management
Who is in charge? Role of the participant	Teacher as the overall expert → participants as pupils who can play an active role Expect others to be in charge	Participants act as both teacher and learner → shifting roles, external experts as well Taking responsibility	Can act as both teacher and learner Roles and responsibility often unclear
Distance to work	Easy to establish	Possible, but difficult → a challenge	Difficult
Transfer/transformation to work	Difficult	Near transfer fairly easy Transfer of general principles very difficult	Easy, imbedded
Learning ‘aim’ Concept of knowledge	Theoretical knowledge Practical experiences can be used to illustrate theoretical points	Problem-oriented Exchange of experiences Describing own practice; new perspectives on this	Practical knowledge Improving performance Practice taken for granted
Power relations	Formalised Teachers in charge – they are on ‘home ground’	Uncertain, open to negotiations	Normally well defined – managers in charge; but participants on home ground – rules known
Need and possibility for follow-up	Very needed; does often not take place Managers know too little about content	Need for anchoring and legitimacy in own organisation	Small needs, usually
Trust and openness in social relations	Difficult in shorter courses Easier to question values and practices of others – lack of information can hinder	Can take time Balance between trust and distance as a goal – critical remarks possible	Can exist – if not, hard to establish Close relations and high trust can hinder critical remarks

Network as learning space, as a specific arena for learning is placed somewhere in between school-based learning and workplace learning. In some respects it is related to workplace learning, for example in participants’ difficulties in taking one step back and make distance to daily work situations and conditions in order to search for new perspectives. In other respects, there are parallels to school-based learning (cvt), for example, when participants struggle to transform knowledge from the network/school context to their daily work. But networks form a learning arena of their own. Network-based learning is in both aspects situated somewhat in between: It is part of the nature of development networks that experience from the participating enterprises is discussed and at the same time it is challenging to take a step back in relation to own experience. In addition, transformation of other participants’ experience to own work situations has showed to be rather difficult.

On that background it seems to be a task still object for further analyses and initiatives to develop the questioned mediation between own workplace experience and the ability of looking at the same experience from a certain distance.

This could be part of the role of the (external) network facilitator. However, as the LOHSO-experiences show, it is not an easy task. And it takes time. Gustavsen and Hofmaier (1997) claim that a development network should be operating for at least four years and preferably more to accomplish larger organisational changes and development. The LOHSO-network existed for 2½ years.

Being an active participant and organisational representative in a network is not an easy task. It takes specific skills and competences to further own and others' learning processes within development network. The needed skills and competences may vary according to the type of network, but the following persist (Havn 2002):

- To be able to change perspective
- To be able to regard yourself– as an individual and an organisation - as part of a whole and understand the connection you are part of, i.e. interpret the actual situation.
- To be able to seek and interpret information, from others and be able to 'translate' and transform this information to situations at your home organisation.
- To be able to gather experience, to put it into words and reflect on your own and others' practice.

The experiences with networks have revealed that such exploring practice is not automatically present. This is a new or at least unfamiliar work method to many of the participants. It is not a common method used neither in workplaces nor in school settings. However, development of these skills is needed if network-based learning should be strengthened and be able to play a significant role as a valuable supplement to school-based learning and workplace learning. And one way of learning these things is by actually participating actively in networks. Leaning on an external facilitator in the first period of the network's life could be one way of introducing the exploring practice and help maintaining focus, supporting discussions on what and how to transform ideas to own organisation, and change perspective.

Network learning might hold potential of forming an important supplement to building bridges between school-based learning and workplace learning. Some of the difficulties related to these two learning arenas can be reduced in a network setting, and in that way network-based learning can help building bridges between the two 'traditional' learning arenas. In a network it should be possible to create meaning, motivation, influence on goals and work forms, acknowledgement of experiences, a certain equal status between participants and supportive social relations characterised by trust, openness and constructive criticism – all elements that should pave the way for development-oriented learning that makes sense to the participants and is useful in their home organisation. However, a determining factor for reaching these goals is how the learning spaces at the home organisations are organised. If the learning space here does not support network participation or learning at all, it will be extremely difficult to get results in terms of organisational learning and development from the network activities. Successful network learning in this respect would require that participants see themselves as representatives of their organisation, and that the home organisation on the other hand has to accept this role and be ready to follow-up on and support

ideas and initiatives coming from the network. The interplay between the two learning spaces – network and home organisation – is decisive/crucial for network-based learning.

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