

## **REFLECTIVE LEARNING AT WORK**

### **-AN ORGANISATIONAL AND PARTICIPATORY PERSPECTIVE**

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### **Introduction**

The focus of our paper is learning at the workplace level within the steel and metal sectors in industrialised countries. We start with a general discussion about learning as a combination of formal (education) and informal processes (tacit and work-based training). Our empirical material is taken mainly from Sweden and Finland, two small, advanced European countries. In spite of these limitations we endeavour to present firstly a general thesis on learning in the workplace, secondly to do some preliminary explorations into how this learning is dependent on contextual and organisational factors. We oppose the idea of a “best practice” in organising learning at work.

One of the main features of work organisation that we are dealing with is its increasing complexity. Its origins are to be found inside and outside of the organisation. Tasks change, organisational boundaries vary, technologies are converted or customer habits and fashions arise and disappear. It is widely believed that the world economy is moving into a new age.

Even traditional blue-collar tasks within manufacturing (at least within large plants) have changed their content in the last few decades. When we categorize workplace learning into two dimensions, namely adaptive and developmental learning, blue-collar

workforce tasks include increasingly developmental elements. (Ellström 2001).

During the most recent phases of the industrial era, learning was understood as been separate from working. First basic education dominated, then vocational or professional education became popular and later work and perhaps some necessary complementary training at work came into focus. The opportunities to learn on the job were strictly differentiated between blue collar and white-collar employees. In Scandinavian and some European countries (Germany for example) three levels of opportunities to learn at work actually developed: manual, technical and professional levels

Current research on lifelong learning has demonstrated the fact that most learning takes place outside the formal educational system. One develops his/her skills, qualifications and competencies throughout one's lifetime, mainly informally, learning by doing, experiencing, experimenting, imitating and interacting. Learning and working are not separated into different parts of one's lifetime and competencies for work, but family life, hobbies and leisure time can be understood as complementing each other. (Boud & Garrick 1999; Gerber & Lanshear 2000).

At present, learning and knowledge are regarded increasingly as the primary resource of enterprises. There are few opportunities open to employees at any level who do not continue to learn throughout their working lives. The future of enterprises and educational institutions are becoming more intimately linked. Simultaneously there is a perceptible re-conceptualisation of work and learning when we become conscious of the informal features of organisation and learning.

### **Learning in an organisational context**

There are many categorisations of skills, e.g. practical, theoretical, explicit or tacit skills. The term “learn” is also used in many senses. Many writers use the term “learn” on the one hand as a synonym for improving individual skills and on the other hand as a synonym for generating new knowledge.

Our basic assumptions about learning are based on social relations as a basis of knowledge creation in the sense that Mead (1934) used the term in his theory of symbolic interactionism (e.g. Stacey 2001). Knowledge generation occurs through action and social relations, not through theory, individual mental models or educational systems. There is constant interaction between individuals who both act and reflect, that is who are both affected by and affect the conditions in their lives themselves.

Individuals act together with other individuals or within a context where others — in the form of rules, values, attitudes, expectations, etc, make decisions. This practical and social point of departure for the generation of knowledge contradicts the traditional view of the individual alone as the centre of the learning process. The point of departure for shared action leads towards another way of viewing the connection between theory/practice and knowledge/action.

Human action is to a considerable degree habitual or routine. Learning in this sense may be called *adoptive*. We are however more interested here in learning that implies calling into question-established patterns of action and thought. We call it *developmentally oriented* learning.

The background to this latter concept of learning is presented by Dewey (1989;1909) as a process of different stages/phases where doing and reflection are interwoven. Learning is understood to be “forward movement“: from habitual doing, on to

problem definition, analysis and understanding of doing: doing that both solves a problem and offers new knowledge.

Dewey defines a number of phases in reflective learning (cf. Miettinen, 2000). On the one hand, habitual doing lacks reflection. Only when disturbances occur obstacles, problems, difficulties, doubts, resistance, diffuseness, uncertainty and indecisiveness - is the habitual pattern broken and does learning begin. Reflective experience is developed then, out of the deficiencies and resistance in doing steered by routine. That is why surprises are an important part of the learning process.

The dynamics of experience/doing and reflection/concept-construction is central to Dewey's thinking. Doing and reflecting assume and determine one another. Concepts are not developed autonomously and individually; they are an integrated part of doing. It is carried out in a social context, i.e. doing occurs in the form of interplay with others in interaction with the environment. For Dewey, doing (collective action) is central to the analysis. It is the solution for distinctions (tensions, dialectics) between experience and reflection. Learning - the investigative way of working - is a social process, which is played out in an organisational or societal context.

This problem solving and error correcting view of learning is however, only one perspective of learning. In their perpetual communicative interaction people actively respond to each other and in so doing, their experiences are patterned in narrative-like forms. When they reflect on what they have been doing, on what they are doing, and on what they hope to do, they select aspects of dense narratives and abstract frameworks. The description of Dewey's model presented above is one narrative among many others. The stories of people even when they are solving problems following the "Dewey model" include much more than rational processes, which, by the way, resemble the basic model of scientific positivism. There are

hopes, dreams, ideas, innovations, inner tensions, emotions, experimental thoughts, fantasies etc. All these are “complex responsive processes of relating that can be thought of as themes and variations that recursively form themselves” (Stacey 2001, 140). As they converse, people never fully understand each other and no one knows precisely what has been understood well and what has been misunderstood. For this reason, conversational themes trigger others along unexpected and unpredictable routes. Small misunderstandings may escalate and major ones suddenly occur with important consequences for joint action. New knowledge arises from these variations. As Flood (1999) concludes: “What we do know is a matter of interpretation and is mysterious. It is possible to learn within the unknowable”.

On an abstract level, we can define levels of learning as a function of the scope of action that exists with respect to different aspects of the work-learning situation. In other words we ask how much discretion (scope of action) employees have in the process of defining tasks, methods and results. (Ellström 2001)

When we deal with concrete situations we have to take into consideration new aspects. The important factor has always been the organisational position of the employees. The basic technology and the size of a workplace are other aspects and they have, among other elements, influence on the formalization of work processes. For example the automatic, but mainly mechanical process of steel production contains a lot of tacit skills that are learned through adaptive experience during long employment relationships. The batch production within the machine engineering that is organised following the up-to-date network model with many small and autonomous partners, directs core production processes towards flexibility and extensive autonomy also among blue-collar workers. The production of information-intensive and rapidly developing products of most modern technologies creates work places where a great majority of

employees have high formal education. Their tasks are more or less developmental and the standardized tasks are outsourced.

In practice there are numerous variations within the above mentioned technology categories. We can only point out that there are differences in organisation culture (e.g. conservative or innovative orientation of organisation), organisational processes (management, leadership, decision making processes) and reward systems. These differences are produced by workplace history, but obviously they are to a remarkable measure, also outcomes of conscious and unconscious choices of management and employees. We underline the initiatives of management even though we are aware of the fact that the influence is reciprocal. The orientation and behaviour of employees help create management orientation too.

When one is planning and organising learning processes in workplaces, it is important to analyse the above-mentioned factors. As a result of this examination it is possible to make a realistic evaluation about which resources for learning that are available. Especially important is to evaluate how much time, which kind of information and knowledge and which forms of participation the management is prepared to provide for employees in question and what are the subjective factors (motivation and capabilities in participation) among employees to participate.

### **Empirical illustrations from steel industries**

In this section we will give a short presentation of some strategies for learning used in the metal sector in Sweden and Finland. The presentation is based on the research in a Learnpartner programme (<http://www.leeds.ac.uk/learning-inpartnership>)

In Sweden and Finland the trade union and the employer organisations regard learning within steel plants as very much

connected to education and training. Education is often regarded as synonymous to enhance workers educational level in core competencies such as language, mathematical and computer skills. When it comes to the aspects of training, it is seen to be the perspective of the skills of an all around worker. Technological development in the steel industry has had a very significant impact on the individual worker regarding how the work tasks are carried out. The aspect of being able to operate machinery is regarded as the reason why workers need to be skilled in the industry. It is expected that a skills gap exists in the industry, between worker skills of today and anticipated future skill requirements. In order to deal with this situation national competence agreements have been made between the parties in the labour market.

But what has happened at plant level? Not very much has happened yet. However work on how to transform the agreement into actions has been started. If a plant wishes to achieve anything out of the agreement, it has to make assessments on the skills gap existing between workers. How this gap is identified will vary between plants. One method employed is to use analytical tools in order to assess each worker's competence in comparison with expected skills. Another method is to leave the assessment task to the work teams.

Recent research shows that the way learning is understood and organised, varies between plants depending on the tradition and context of the plant but also on how learning is promoted by management and the trade union.

At the plants where learning has traditionally been part of every-day activities the competence agreements have very little significance for planning activities. As learning is regarded as part of work, it is planned as part of every day chores. Learning and training is agreed on a mutual basis between the management of the plant and the workers, often as part of the trade union work at the plant. These plants focus on seeing the work teams as members of a community of

practice where learning can be part of developing the workplace and work tasks.

If learning is required to consist of (formal) education and organised outside the workplace and connected to activities, where education is emphasised, it is even harder to activate the agreement. The trade union focuses more on how learning can result in a higher pay check and the employer focus on organising events, which makes learning something else than part of work. At these plants there exists no tradition in how learning can be organised as a natural part of work, therefore it needs to be invented. Workers are not seen as members of a community, they are regarded as individuals needing to be persuaded to see the benefits of learning, which is to be stated in a personal competence plan. Identifying and assessing competence needs are left to management and human resource personnel. This strategy is contrary to the one presented in the theoretical section above.

In one of the plants in Sweden they have previous experience in combining learning in informal, non-formal and formal settings. They have also understood that learning is situated in a practice where the newcomers can learn from the oldies. This plant has managed to motivate workers to participate in learning as they can see that learning is closely connected to a change in work routines.

How has this plant been successful in finding out working methods for learning? The success is probably found in a combination of several factors.

- There is common understanding of the concept of working in teams, at the plant, which gives a meaning to the employees.
- They have managed to engage each worker's interest in doing the job well, which entails that the employees can see the benefits from learning as a mean to be able to do the job well.

- All employees at the plant share the experience of participating in the battle to save the plant, which they won and made it very profitable.
- The feeling of a joint responsibility is probably one reason for why learning is part of every-day work at this particular plant.
- Learning makes sense to the employees and it makes sense to the managers.

Above arguments can be understood in the concept of learning in a social practise as an expression of a learning culture. The joint understanding is the basis for learning and there exists a tradition of learning that has started in riding out a crisis. Learning is organised in a practise where newcomers learn from oldies and where learning makes sense to the learners.

### **Some concluding remarks**

Learning is seen as a central factor in the modern industrial states. Here we have presented a discussion about learning as the combined effort between informal training and formal education. There is a high competence level among many steel workers in Sweden and Finland, because of their tacit knowledge. But this practical knowledge must be combined with theory if the workers' general employability is to be increased. In this way the workers will not be so vulnerable to the ongoing restructuring process.

We also pointed to the need for a developmental aspect of learning, which implies autonomy for the individual worker to use his/her knowledge and abilities at work. A developmental learning process will be stimulated by the work organisation, which stimulates problem solving, experimentation and decision-making both on an individual and collective level.

From these theoretical points of view we analysed the strategies for learning in the Steel sector in Sweden and Finland based on our ongoing research in a Learn partner project. The conclusion were obvious and unanimous – the lack of defined strategy in both countries to put the vision of life-long learning into effect. There is no strategy in practice to combine informal and formal learning. But in a few of our case studies we have found some examples of an integration of individual and organisational learning. The use of autonomous groups is important to accomplish this integration.

The trade union policies lack a basic reasoning about the foundation for learning described from a theoretical perspective. It is mostly apparent in the lack of answers in *why* learning is to be understood as vital for the employees in a sense of meaning and as part of work. We argue that in the aim of lifelong learning it is important to combine learning with the duties of the work, preferably with activities organised and placed at the workplace. We also want to stress the need that individual learning should result in change processes at the workplace, connected to organisational learning. If individual learning activities can result in change processes at work it will be easier to *motivate* people to participate in learning. Learning will then be understood and experienced as having a meaning for the participants as illustrated in above the example.

In our project we use an interactive approach. In this way we hope to stimulate a situation in which learning becomes an important part of both individual and organisational development.

## References

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