English summaries

Maria Gustavsson and Camilla Thunborg: Education within working life – Development of the research area from 2005 to 2015 in Sweden

This article provides an overview of the development in the research field of education within working life during the last decade (2005-2015) in Sweden. More precisely, the aim of this article is to analyse how research on education within working life is reflected in Swedish PhD theses from 2005 to 2015. The material consists of 87 PhD theses selected from 702 theses in education from the database Swepub. The 87 theses have been categorized into eight themes, as presented in table 1.

Table 1. Themes within Swedish PhD theses in education within working life published 2005-2015.

Themes within Swedish PhD theses in education within the research area of working life	The number of PhD theses
Recruitment	2
Competency and competence development	4
Workplace learning and workplaces as learning environments	16
Managers' leadership, work and learning, and development of leaders	15
Organizational change and development	13
Inter-organizational learning and working in partnership	6
Learning in the transition between education and working life	10
Professional practice, identity and professional development	21
Total	**87**

The theme of recruitment seems to have continued to decline in PhD theses during the last decade in comparison with theses published before 2005 (Ellström, Löfberg and Svensson, 2005). In previous analyses there was a strong focus on research in competency and competence development but this theme seems to have decreased during the last decade (four theses) in favour

of the theme of workplace learning and workplaces as learning environments. Hence, competence development seems to be included within a broader focus on workplace learning in general.

Workplace learning and the development of employees as well as organizations have received great interest within the area of education within working life, and the sixteen PhD theses cover studies of organizations in different kinds of areas such as health care services, industry, the manufacturing sector and the IT sector. The theme of managers' leadership, work and learning, and development of leaders (15 theses) as well as the theme of organizational change and development (13 theses) have received significant interest from researchers. Even though the school sector dominates in these PhD theses there are also examples in the theses from the health care services, universities, private companies, and ice hockey associations.

A new theme that has emerged in the area of education within working life is inter-organizational learning and learning in partnership. The increased interest in partnership as a way of organising inter-organisational learning and innovation is due to a need for cooperation between different organizations in order to solve complex problems in society. This type of joint learning requires new ways of organizing working life, and examples in these PhD theses are drawn from regional developmental centres, and learning centres which are studied as learning environments in which information is shared and developed. The interest in national programmes as development partnerships has also grown in the field of education within working life over the last decade.

The interest in the theme of learning in the transition between education and work has also grown. In the PhD theses there emerge different ways of understanding the education-to-work transition and a broad picture of how the transition could be enhanced is presented. In some theses it is claimed that there is a border between education and working life that is difficult to overcome. In other theses, higher and vocational education is seen as a pre-condition for vocational and professional development and thus for working as a professional or in a vocation. In still other PhD theses, the workplace is seen as the most important arena for learning a profession or a vocation. Other theses have a special interest in internship as a bridge between education and working life, but the conclusion is that internship is not enough for learning a profession.

Research on professional practise, identity and professional development is the largest theme, with 21 theses published between 2005 and 2015. The research includes both traditional professions like physicians, teachers, and the police, and new professions such as environmental workers. There are also studies of vocational groups such as home help workers and social workers. The construction of a professional identity can to a large extent be seen as part of

participating in a professional practice, but can also relate to the construction of gender and personal experiences as well as expectations and requirements from organizations and society. In some of the PhD theses it is pointed out that professional groups' legitimacy and autonomy are challenged by models for standardization and quality assurance in working life. The interest in gender issues and gender equality has notably decreased during the last five years in PhD theses on education within working life. All eight theses that have a focus on gender issues were written before 2010.

What direction will Swedish research on education within working life take in the next decade? There are reasons to believe that workplace learning, leadership and organizational development will continue to be themes of interest in research during the coming decade. It is also likely that the new areas that have gained increased interest during this decade will continue to be of interest, for example inter-organizational learning, learning in the transition between education and work and professional practice and development.

It seems important, however to put emphasis on the decreasing legitimacy and autonomy for professionals, especially with regard to new ways of organizing working life into more flexible and short term work contracts. There is also a need for more critical research within the area of education within working life, as well as research into the consequences of increasing migration and issues of integration and ethnicity. Possibly, a renewed interest in issues of gender and equality in working life may emerge. Finally, research about innovation, such as product innovation, social innovation, employee-driven innovation, and how innovative learning can be enhanced for renewal and competiveness in different organizations seems to be of increasing interest. The continual development of research on education within working life in this direction will to a large extent contribute to critical examination and enhancement of workplace learning, organizational development, and a sustainable working life.

Camilla Thunborg & Jon Ohlsson: Pedagogical challenges for workplace learning

Workplace learning research has had the ambition to contribute to an increased knowledge and understanding of learning processes and its conditions in working life. On the one hand, researchers have focused on organizations' abilities to create good working conditions as well as productivity, effectivity, quality and innovation (see for example Ellström, 2004; Engeström, 1999 & Ohlsson, 2004). On the other hand, researchers also have had an interest in how working life is enhancing adults' life-long learning, i.e. their opportunities

to learn during the whole life cycle, life-wide learning, their possibilities to learn in different life settings, and life-deep learning, i.e. their potentials for deepening their knowledge and integrate their life experiences (Jarvis, 2004).

During the last decades, increased flexibility and standardization have challenged these ambitions. These two ways of organizing working life, can at first sight, be seen as contradictory. The first is connected to less control and greater autonomy, and the other to increased control and decreased autonomy for the individual.

The aim of the article is to illuminate and discuss previous research about increased flexibility and standardization in working life, and to analyze their consequences for workplace learning. Furthermore, we discuss the pedagogical challenges for research as well as practice.

In describing flexibility, both Swedish and international research concerning boundary less work and contract work is used. As the research within the area of standardization is profound, the presented research is limited to NPM within the school sector in Sweden.

Trying to synthesize different workplace learning theories three thematic aspects are elaborated, i.e. situated learning aspects, experience based learning aspects and collective learning aspects.

The findings show that flexible and standardized work affect learning in different ways shown in table 1.

Table 1. Two ways of organizing working life and its impact on learning

Thematic aspects of learning		Flexibility	Standardization
Situated learning aspects	Conditions	Temporary acces, weak belongingness	Access to a limited community of practice
	Processes	Exchangeable participation	Participation in a community of practice of their own
	Outcomes	Vagabonds Nomads	A de-professionalized identity

(Table 1 continues on next page)

(Table 1 cont.)

Thematic aspects of learning		Flexibility	Standardization
Experience based learning aspects	Conditions	Limited opportunities for individual reflection Discretion in relation to temporary projects	Limited opportunities for action and reflection
	Processes	Mainly adaptable learning. Some developmental learning in relation to temporary projects.	Mainly adaptable learning in relation to rules and manuals.
	Outcomes	Liminal competence	Standardized competence
Collective learning aspects	Conditions	Teamwork in temporary projects	Strong teamwork in relation to standardized work tasks
	Processes	Exchange of experiences and interaction in temporary projects	Exchange of experiences and interaction in relation to control and the following of rules rather than to organization development
	Outcomes	Limited shared understanding and competence	Limited shared understanding and competence

As shown in table 1, flexible workers seem to have a temporary access to and participate in several communities of practices at the same time. However, they do not belong to any of these communities of practice which makes them form identities as "nomads" or vagabonds". Furthermore, flexible work seems to lead to individual and adaptive rather than collective and developmental learning, as there are limited opportunities for individual reflection, exchange and interaction related to their temporary membership. Thereby,

flexible workers need to develop a liminal competence for handling being in between. An exception is however, temporary developmental projects where there are conditions for both developmental and collective learning processes. The problems with these projects are that they are temporary, which makes it hard to create collective learning processes that last between projects.

In standardized work, participants' access to the workplace is unchanged but the communities of practices are changing. Standardized work limits the learning conditions, in this case, teachers' opportunities to design their teaching practices individually or together as a team. The standardization thereby, seems to lead to a de-professionalization of the teacher professsion, with limited possibilities to create local goals, identify local indicators of quality and develop ways of working. This weakens the conditions for developmental, collective learning and strengthens the conditions for adaptive, individual learning which enhance a standardized competence.

As indicated, flexibility and standardization of working life limit the opportunities for reflection and mutual understanding in daily work. Neither enhances collective and developmental learning. There is however one exception. Project based work within the area of flexible work, gives opportunities for exchanges of experiences and discretion that affect learning conditions. Problematically enough this work is limited to a certain project regulated in time and space.

Flexibility and standardization have from our analyses several possible consequences that make us think they are similar. Both focus on individual, adaptive learning through the idea of making people exchangeable and/or to govern their actions through manuals. This affects the opportunities to enhance a deeper understanding, an integration of knowledge, and collective and developmental processes in organizations. It is hard to avoid thinking that they have negative consequences for both learning and development.

Learning seems to become part of a production rather than a developmental process, where people and their competencies are exchangeable products and individuals are carrying knowledge between different production systems. Thereby, opportunities for learning and collective reflection are reduced.

From this article, there are several pedagogical challenges for future research and practice. The development of organizations and working life are more generally, not guided by research concerning workplace learning. One could ask to what extent working life is an interesting arena for studying learning and development. At the same time, the ongoing critique against the ways of organizing working life could create possibilities for the future. The tendencies give rise to contradictions that can develop new work and learning conditions. To both further investigate learning in temporary projects, networks and knots and learning, and focus on development and innovation oc working life are

interesting options for the future. There are also opportunities to change the focus of interest from workplace learning to leisure time or learning opportunities enhanced within third sector organizations.

Erica Byström: Health care assistants and their conditions for learning within health care work

In this article the aim is to investigate and contribute to increased knowledge about health care assistants and the conditions that enable or constrain their learning at work. Good conditions are assumed to enable the health care assistants' learning, while less favorable conditions are assumed to limit their learning. Research on the health care assistants' work as well as a suggested model of conditions for workplace learning is reported in the article. In the model, learning conditions are grouped into the following four categories: 1) work 2) individual traits 3) social conditions, and 4) education and training activities. Three different health care units – an emergency unit, a children's unit and an operating unit – in a large hospital were included in the study. Seventeen health care assistants and five care unit managers were interviewed. The results show that health care assistants from all units, involved in situations that require emergency care or the treatment of trauma, have varied and unpredictable work activities, and this situation creates good opportunities for learning. Furthermore, health care assistants who are involved in core care activities are able to learn. What is crucial here is that these duties are perceived as interesting, meaningful and stimulating. Learning is facilitated for health care assistants who work in a care unit where they are involved in both the work and the work community. Health care assistants who collaborate with other professional groups may find greater potential to learn than those who do not interact with other professions. Delegation of tasks also affects health care assistants' learning potential. The result also shows that health care assistants can be hindered from learning if the nurse with whom they work (in a nursing pair or team) does not allow them to perform certain tasks. It is also clear that health care assistants who lack an interest in their work learn less. Health care assistants have limited opportunities to take part in, and learn through formal education and training. Few courses are available for health care assistants, and existing courses do not always deal with core care work.

Sam Paldanius: Learning opportunities in monotonous routine work

Monotonous work is commonly associated with routine work, i.e., tasks performed by certain patterns of behaviour in a given time period. Routine work has a long history and during the early 1900s it was rationally systematized in to new labour systems for mass production. Similar labour systems and tasks are used in many of today's production organizations. However today lean manufacturing offers a different and a more developed system for production. For almost thirty years, lean systems have spread across the Western world, and in many cases contributed to a more refined division of labour system (Womack, Jones and Roos, 1990). Taylorism advocates a division between head and hand were the lean system, a bit simplified, stress the necessity to bind head and hand together. Another developmental trend has been work-place learning as an increasingly important part of the organizational development (Ellström, Löfberg and Svensson, 2005). At a time when much research and many conversations tend to focus on technological development and knowledge-intensive businesses, this article seeks to investigate and discuss the developmental aspects of monotonous routine work (Smith 2014). What learning opportunities can be identified in monotonous routinized work tasks? The aim of this article is to describe, analyse and discuss operators' learning opportunities in monotonous work tasks and situations. Particular emphasis is placed on operators' identification and possible use of opportunities for learning.

Process operators are one category of wageworkers, which include everything from simple to qualified work tasks. Process operators' tasks may include many routine tasks. In an overview of developments in the last fifteen years Gustavsson (2014) concludes that process work tasks of the operators have been relatively stable and that an increasing automation of tasks affects the operators work content. The increased degree of automation of routine work tasks and stable production processes together seems to indicate a future of limited learning opportunities for operators. When operators are given fewer opportunities to intervene in the production process, it reduces their ability to handle disturbances. In the article, I will utilize several theoretical concepts. Gustavsson (2000; 2005) has developed a concept for learning opportunities denominated as potentialities for learning as a way to describe and analyse what operators can identify as learning at their workplace. A second theoretical concept on learning is affordance. According to Billett (2004) the concept of affordance refers to participation and learning at the workplace. Affordance means that various situations produce opportunities to take part in workplace learning. However, opportunities may vary between groups of operators. An example of this type of concept can be seen among machine operators when

there is an unplanned shutdown that requires problem solving (Döös, 1997). Affordance or situational offers to learn are not fixed to a particular place or situation. Instead, they tend to be "floating", in a state of constant change. Billett use the term "invitational qualities" (Billett, 2004; p 14) to denote a space between the workplace and the potential of the individual response with commitment. Ellström (1996) present a third concept or conceptual pair to learning at workplaces. He describes two main learning processes that occur in most workplaces. The two processes are a reproductive and a developmental orientation of learning (Ellström, 1996; Gustavsson, 2005). In the reproductive orientation of learning, outcomes are pre-defined, and there are few variations on how the tasks should be performed. The developmental orientation refers to learning guided by critically questioning of the practices and positions in everyday work. The developmental orientation can lead to higher efficiency, better productivity and an increased potential for operators learning (Ellström, 2005; Gustavsson, 2005). Döös (1997) has shown that operators learning can occur in everyday situations by problem solving spawned by machine downtime.

The final theoretical concept is pedagogy of immanence which focus on how historical contexts orientate what learning processes are supported or barred (Ödman, 1995). The word immanence means that the environment is an active part affecting what and how we learn. For this article one implication of the concept is that when studying learning, we must turn attention to things that at first glance may seem irrelevant, thus allowing us to see beyond denominations such as monotonous and routine tasks.

The empirical study was carried out at a laundry company in the middle part of Sweden. The data used for the analysis were collected in 2009-2010. The data consists of notes collected from a number of observations at the production line and interviews with operators. The observations also included participation in performing certain operations. Ten informants were interviewed for this study. Given the population of operators, a max-varied selection was used to get a functional mix between gender, age, and different assigned workstations. There are more women than men included in the selection, and it corresponds to the whole population of operators at the company. Interview subjects' age spanned from 19 to 58 years.

The analysis of the material was made in several steps. First, the different workstations at the production line were observed and with the help of these notes an overall picture was reconstructed. Interviews aimed to deepen the knowledge of the operators' views on the meaning of work, learning, career and organizational culture. The reconstruction of the work processes at the company was important to understand the context in which the workers

acted on a daily basis. The theoretical concepts presented above were used as analytical tools.

The results show that the operators felt that monotonous and routine tasks at this company were stressful, both physically and mentally. The most common practice of learning among the operators around the production line was reproductive learning. The work tasks were pre-defined, and it was important that the operator learned as quickly as possible. The hidden learning of the workplace took place when operators acted the way they usually act, following the procedures of the practice. According to immanence these actions carry the history of the workplace and work tasks. When a newly employed was trained to become a member of a team at a certain workstation, he or she learned not only about the tasks but also about how to learn and teach. These hidden learning processes strengthen reproductive learning among the operators. Thus the everyday work practice does not encourage developmental learning (Ellström, 1996). The limited opportunity to learn implied a risk for operators to develop passivity and indifference to working engagement. Such an attitude makes it harder to look for and identify potentialities for learning (Gustavsson, 2000; 2005). It relates to what it means for the operators to function in this particular environment.

However, the most interesting result in the study is that operators seemed to develop strategies to cope with everyday stress and boredom. Although the operators did not commonly use the word learning, routine tasks and the following boredom initiated a dispositional orientation to seek balance by trying to identify more stimulation in the environment. Typically they used a rotation of work tasks to get some more variation. Socializing and talking to their colleagues was much appreciated. Perhaps a more novel result was that the operators systematically made distinctions between different stations of work on the production line. By talking about the other stations as less interesting and generally bad their own station was highlighted as a better place to work, creating a sense of satisfaction. From a theoretical point of view, the boredom, felt by the operators, initiated a need for affordance and identifying potentialities of learning.

One idea for further research would be to study how strategically implemented conditions for affordance could pave the way for operators to develop better skills in identifying potentialities for learning in everyday work and thus create a less boring and more sustainable work situation.

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Situated learning aspects	Conditions	Temporary acces , weak belongingness	Access to a limited community of practice
	Processes	Exchangeable participation	Participation in a community of practice of their own
	Outcomes	Vagabonds Nomads	A de-professionalized identity
Experience based learning aspects	Conditions	Limited opportunities for individual reflection

Discretion in relation to temporary projects | Limited opportunities for action and reflection |
| | Processes | Mainly adaptable learning.

Some developmental learning in relation to temporary projects. | Mainly adaptable learning in relation to rules and manuals. |
	Outcomes	Liminal competence	Standardized competence
Collective learning aspects	Conditions	Teamwork in temporary projects	Strong teamwork in relation to standardized work tasks
	Processes	Exchange of experiences and interaction in temporary projects	Exchange of experiences and interaction in relation to control and the following of rules rather than to organization development
	Outcomes	Limited shared understanding and competence	Limited shared understanding and competence

Gunilla Avby: Organizing for knowledgeable practice through workplace reflection

Evidence-based approaches for making decisions have been marking a new era of progress in different welfare sectors and offer great promise for the development of a range of professional practices. At a general level evidence-based practice is assumed to bridge the gap between research and practice. Unquestionably, a broad range of caring professions in contemporary society use evidence-based criteria as the building blocks of practice. However, the focus on the use of evidence-based approaches has thus far primarily been on practitioners' instrumental use of knowledge, rather than on conceptual use in the form of enhanced awareness, knowledge and understanding of one's work and shifts in ideas and attitudes concerning various aspects of work.

This article addresses the issue of workplace reflection as a means for deliberately promoting professional learning and the remaking of practice. A basic assumption behind this article is that professional learning has the potential to be enhanced when practitioners interact with different knowledge sources in work.

The article begins with a brief introduction to the notion of reflection, as it is important to qualify and position this construct as a deliberate act. Also, as reflection long has been regarded as a personal matter, it is important to highpoint today's increasing emphasize on the social collective aspects of reflection. Then, a distinction is made between two different but complementary knowledge forms: research-based and practice-based knowledge. The distinction is made to underline the importance of the challenge that the interplay of different knowledge sources may create. In addition, adaptive and developmental modes of learning are explored to gain a better understanding of the learning processes at work. By conceptualizing four levels of action: (i) skill-based or routinized action, (ii) rule- based action, (iii) knowledge-based action and (iv) reflective action, the different learning modes show how knowledge and reflection are used to different degrees to handle a certain task in the course of daily work. The theoretical framework concludes by offering a conceptual model, which illustrates how organized reflection can support the practitioners' use of different knowledge forms to support professional learning.

Two cases involving professionals in the public sector in Sweden exemplify how organized reflection *can* be used to cross-fertilize different knowledge forms. The first case concerns reflection groups consisting of nine managers from three sectors (social work, health care and education) in a medium-sized

municipality in Sweden. The reflection groups were initiated as an executive tool with the aim of facilitating the managers' learning for improved handling of everyday decision making in situations they considered particularly challenging or difficult. In the second case, reflection groups were part of a trainee program in social work in one of Sweden's 10 largest municipalities. The purpose of the trainee programs was to prepare the candidates for future managerial tasks in social work and the municipality sector. Both reflection programs provided a formal, scheduled opportunity to meet and discuss matters of relevance to the professionals' learning. The participants had full support from their respective management and their engagement was encouraged, which gave this activity some priority. The reflection meetings lasted for several hours and the programs were carried out over an extended period of time. Indeed, the reflection programs had several characteristics associated with successful deliberate practices, such as individual motivation, a well-designed project, training opportunities (i.e. to reflect on the role as a leader) and feedback.

The programs were evaluated by means of interviews. The findings point to the relevance of a conceptual use of research, in contrast to the tendency of an evidence-based practice agenda focusing on practitioners' instrumental use of research-based knowledge. The professionals experienced that reflection improved their overall understanding of work, enhanced their security in their work roles, and made them feel acknowledged for how they reasoned and acted concerning various work situations. Research-based knowledge did not necessarily contribute to solving specific short-term problems at work, but was regarded as important in improving their understanding of the problems they had encountered, which could potentially lead to improved handling of similar situations in the future.

In all, it appears that the deliberate use of research-based knowledge can provide practitioners with analytical tools that make it easier to go beyond their specific here-and-now circumstances of current work practices or problems. This article contributes to a broader and deeper understanding of the importance of reflection for professional work, especially in a time of growing concerns for evidence-based practices. The article recognizes the challenges involved in attaining a more evidence-based practice, and the need to reach a better understanding of the conditions for research use in various practice contexts.

Annika Engström: Work-meetings – arenas for interaction and learning

Many organizations have difficulty finding the necessary balance between the two logics of learning and execution vis à vis the development of the same task. In this case, interaction in work meetings can be crucial to how well an organization performs. It is during working meetings that individuals in different groups and with different functions in an organization create an understanding of the task and learn collectively. This article is based on a study of the interaction during work meetings in a manufacturing industry. The purpose of this article is to increase understanding of how interactions during work meetings relate to managing tasks and learning, and to the imbalance between the execution and development of organizations. The following questions are addressed: In what way do different dimensions of the task influence interaction during work meetings? In what way does interaction during work meetings have an impact on learning? How can interaction during work meetings be organized to balance the execution and development of various tasks in the organization?

Previous research indicates that more and more time in organizations is spent on work meetings even though many meetings are regarded as ineffective and a waste of time. However, when people with the same or different functions in the organization get together to manage tasks, an important venue for learning is created. In this article, learning is seen as an interaction between cognitive and social processes. The individual learns in reaction to and in communication with the environment and the knowledge becomes collective when learning occurs in the communicative process with others. The result of learning is viewed from two different logics of action whereby adaptive-oriented learning takes place when the change is implemented from the top down, through instructions and rules. The acquisition of knowledge and problem solving is on the basis of given knowledge, concepts, rules and methods. The logic of development-oriented learning takes place when routines are made visible and result in reflected common agreements. Development-oriented learning focuses on innovation and exploration. Both learning logics can be related to the same task with both a simple dimension (execution) on a pre-given instruction as well as a dimension of development which requires change and transformation. In this article, the verbal communication during work meetings – as part of the interaction and human behavior – can be considered as the process whereby learning occurs. Task design and the contextual conditions for interaction are regarded as the structures that either hinder or facilitate learning. Results from the process can then be analyzed as different types of learning.

The article is based on a qualitative case study with an industrial company where 12 work meetings involving three different groups were observed and filmed. The analysis is based on both the content and process through interaction analysis.

We found that the groups tend to focus on technical issues rather than organizational issues, and that it is important that there are arenas for learning where the potential for development accommodated. Otherwise frustration can disturb a meeting with the focus on execution. The results also indicate that execution and development are two different, but equally important logics, which need to be separated in time and space to be able to integrate by individuals and groups. The various arenas for learning can be organized and conducted with various communicative actions that favor one or the other logic. The article concludes that arenas for learning advantageously can be organized and managed to stimulate task management in general and that the industry needs to consider how arenas for development-oriented learning can be given both time and space.