

Work-related learning: elaborate, expand and externalise

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This paper presents a new model of work-related learning, integrating collective learning and professional learning theories and research. Work-related learning consists of individual/professional learning and collective learning in three stages: (a) from/in practice, (b) from/in research and (c) from creating and contributing to a related team or organisation. This three-stage process model consists of elaboration, expansion and externalisation. It is a model that can be used for individual learning as well as for collective learning. Various ways of learning collectively are described in the final section. Based on practical experiences with individuals and groups in a master programme on management of learning and development, on consultancy practice and on research, four hypotheses are described and explained for each of the stages of implicit and explicit learning.

1 Introduction

In this paper we present a three-stage model of work-related learning. It is based on practical experiences with individuals and groups in a master programme on management of learning and development, on consultancy practice and on research. It extends ideas about professional learning that we have described elsewhere into the broader field of all work-related learning. We are motivated by our wish to gain insight into the complexity and richness of learning in organisations, in order to help organisations to accelerate their learning, development and change.

First, we define professionals and learning professionals, and then we compare professional learning with other forms of work-related learning. Next, we treat the three ways of learning one by one: elaboration, expansion and externalisation. The final part of this paper treats the various ways of learning collectively.

2 What is work-related learning?

2.1 *From the learning professional to work-related learning*

In order to define work-related learning, we go back to the learning of professionals (Simons & Ruijters, 2001). Before we can define learning professionals, we should of course first define what professionals are and what learning is. In doing this, we sympathise with the Dutch educationalist Lievegoed (cited in (Germans, 1990)), who as far back as the 1940s defined a professional in terms of vision, methodology, tools and techniques. Real professionals should fulfil the following criteria:

- a) they should have an explicit vision of the profession and its contribution to society
- b) they should have developed a unique methodology (way of working)
- c) they should be able to work with a set of tools and techniques that fulfil the quality criteria of the professional association
- d) there should be alignment between the vision, methodology, tools and techniques.

A professional can now be defined as someone working in a professional field who has an aligned combination of an explicit vision, a unique methodology and a set of high-quality tools and techniques. But bodies of knowledge change rapidly, as do standards of quality. Training wasn't enough to professionalise in the past, and it certainly won't be in the future. This statement can be legitimised as follows.

More and more we have come to realise that tacit knowledge and skills developed while working cannot be easily taught because they originate in daily practice with clients. Tacit knowledge and skills have therefore been reevaluated. And it has become clear that knowledge and skills have a social life (Brown & Duguid, 2000). They originate in and can be distributed only through social interactions. This lays new emphasis on the need for collective learning.

Furthermore, we observe the boundaries fading between professions. New developments originate at the boundaries of disciplines, professions and perspectives (Engeström, 1999). Multiperspective learning is needed between communities of practice as much as within community learning (Lehtinen, 2001). Finally, innovation is an important characteristic of work nowadays. The question is how can we contribute to the innovation of our own work, the business of our organisation and the profession.

For all these reasons, we need a more dynamic conception of a profes-

sional; we call this the “learning professional”. But we need to do more. We need to elaborate on all work-related learning, in relation not only to the individual, but also to collective learning on the team and organisational levels.

We asked ourselves whether there was so much difference between professional learning and the more general work-related learning. Are not many kinds of work similar to professions? Take for instance teachers, or managers. Although, unlike medical doctors or lawyers, teachers and managers have no professional association, parts of their work are at least semi-professional. There certainly is a body of knowledge, and there are journals and handbooks. And what about secretaries? Can't there be an association of secretaries? Aren't they becoming increasingly like professionals? Is the difference between professionals and other kinds of workers weakening? Does the difference lie not so much in their learning but rather in other aspects? Our conclusion is that there are many differences between professionals and other workers, but only a few in relation to learning. The main difference, in our view, is that professionals have two forums: the team / organisation and the profession; other workers have the former but not the latter. When there is no professional association and when there is no body of knowledge that constitutes the work know-how, the only forum is within the team / organisation. Another difference perhaps is that professionals function more individually and less as a group. Consequently, there is an even greater necessity for them to learn in groups. Other workers have their team colleagues, whereas professionals have to find different kinds of teams to learn with and from.

Thus, we decided to expand our model of professional learning to work-related learning in general. We mean the implicit and explicit kinds of learning of working people at individual, group and organisational levels.

2.2 Three areas of work-related learning

There are three main areas of activity relevant to professionalising an organisation: professionals can only be and remain professional when working in practice with clients; they need to be connected with research in the disciplines connected with the work; and they have an important role in transmitting professional experience to others and contributing to the professional field of expertise.

In thinking about and working with these ideas of Lievegoed and Germans, we have extended and changed them a little in order that they may fit better in current theories and the context of organisational learning. We have mainly added the learning experiences. Take the first element: it is not only working

in practice, but also learning from experience and making the outcomes of this learning explicit. Secondly, it is not only being connected with research or being involved in research, but also learning from research. Therefore, we redefined the second step into three ways of learning explicitly: critical, inquiry and theoretical learning (see below). Thirdly and finally, it is not only teaching others that is important; it is broader than that. It is creating new ideas, innovations and visions, and disseminating these within the organisation and within the profession. It is helping other professionals to develop and by doing so learning yourself.

Work-related learning thus involves (see Figure 1):

- elaborating on work competences by learning from and in practice (elaboration)
- expanding on theoretical knowledge and insight by learning explicitly from and in research (expansion)
- externalising innovations, building on practical and theoretical insights, and contributing to the development of the organisation and the profession (externalisation).

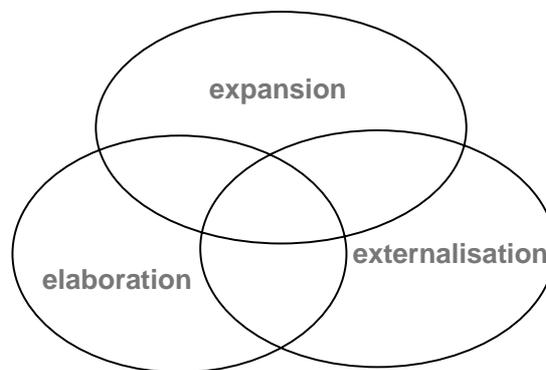


Figure 1: Three areas of work-related learning

2.3 Then what is learning?

These three areas of work-related learning will be discussed in more detail in the sections that follow. Let us first define learning, however.

Learning, in our view (see (Bolhuis & Simons, 1999) for the argumentation), refers to implicit or explicit mental and / or overt activities and processes that are leading to changes in knowledge, skills or attitudes, or the ability to learn of individuals, groups or organisations. These can under some conditions also lead to changes in work processes or work outcomes of

individuals, groups or organisations.

Thus learning can be both implicit and explicit, consisting of mental or overt activities and /or processes at the group, team or organisational level. This distinction between activities and processes comes from (Willems, 1987). He convincingly argued that learning is sometimes organised (by the people concerned or by outsiders) and sometimes not. When not, it is “just happening as a side product of working, playing or problem solving”. It is only afterwards, from the changes we notice, that we can conclude that these learning processes must have taken place.

Sometimes learning can lead to changes in work processes and outcomes. The outcomes of learning can be knowledge, skills or attitudes, but the ability to learn can also be an important result of learning. All of this can occur at three levels: individual, team and organisation.

2.4 Distinguishing learning, development and change

In talking about organisational learning, it is not only learning but also development and change that are relevant. So for the sake of a clear discussion, we will define both.

When the focus is on *long-term learning processes* (mostly implicit), we can call this learning “development”. When the focus is on changes *in work processes or work outcomes*, the term “change” may be preferred. Is all change in work processes and work outcomes covered by the term “change”? We do not think so. The word “change”, in our view, is to be reserved for deeper and enduring new ways and new outcomes of work. Because we defined learning at three levels, there can also be group development and change and organisational development and change. Thus, we use the term “learning” in a broad sense and it then encompasses development and change. In a more restricted sense, learning focuses on changes in skills, knowledge, attitudes and learning abilities. Figures 2 and 3 summarise what we mean. In the remaining part of this contribution, we will use the broad sense.

Levels of learning	Individual	Team	Organisation
Ways of learning (broad sense)			
Learning (restricted sense)	Skills, knowledge, attitudes (<i>skil</i>), learning abilities of	Skills, knowledge, attitudes, learning abilities of group	Skills, knowledge, attitudes, learning abilities of organisation

	individual		
Development	Long-term <i>skil</i> of individual	Long-term <i>skil</i> of group	Long-term <i>skil</i> of organisation
Change	Work processes or outcomes of individual	Work processes or outcomes of group	Work processes or outcomes of organisation

Figure 2: The various ways and levels of learning and their outcomes (within the cells)

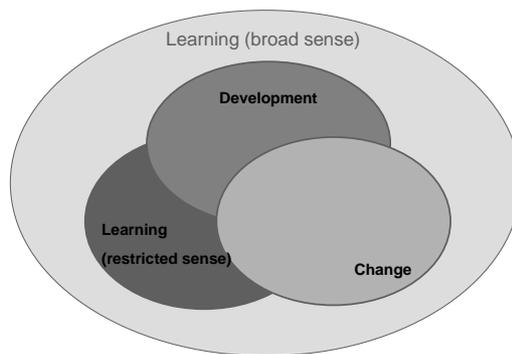


Figure 3: The various ways of learning and their interrelations

Now that we have defined work-related learning, the three areas of work-related learning (elaboration, expansion and externalisation) will be discussed in further detail.

3 Elaboration

One important characteristic of work-related learning / learning organisations is working and learning *implicitly* from and in practice. We believe, however, that this is not enough. It is important for professionals and collectives to become aware of the outcomes of their implicit learning. Why is this the case?

3.1 Why should individuals or groups become aware of implicit learning?

Research shows (see for example (Eraut, 1998b) (Doornbos & Krak, 2001) that many work-related learning processes, as well as learning outcomes, remain implicit. This becomes clear when people try to talk about their job-related learning. When Doornbos and Krak (op. cit.) interviewed police officers about their work-related learning, they reported hardly any learning outcomes or learning processes. They discovered, however, that just asking the officers about learning was not the right way to go about it. The word “learning”

nudges people into the wrong mode. They start to think about courses they have attended, books they have read, coaching they have received and so on. Only when the researchers omitted the word “learning” and asked instead about changes in competences (see next section) did people start to realise that they had learned a lot in and from their work. By focusing on concrete changes in work processes or outcomes, they were able to become aware of their learning processes. When they realised *what* they had learned, they started to talk about *how* they had learned.

Experience in these studies, as well as in advisory work within organisations, shows there are good reasons for working people (employees as well as employers) to develop more awareness of learning processes and outcomes. First, when people realise what they have learned implicitly, they develop a sense of pride and undergo a shift in their mental model, from learning-is-only-for-the-IQ-smart to learning-can-take-place-every-moment-in-my-work (Claxton, 1999). “Gee, I didn’t know this job gave me so many opportunities to learn” or “I thought I wasn’t much of an egghead, but I’ve learned quite a lot in such a short time, and not just by being lectured or reading things”. In our experience, it is important to start by focusing on what one has learned, not on what is lacking.

A second reason to create awareness about learning processes and outcomes lies in the fact that people can only share the outcomes of learning when they actually realise them. And third, how can people or teams improve their *ways* of learning when they do not know what and how they learn?

In the next section, we will first discuss ways of making implicit learning outcomes and processes explicit. We will also discuss some of the inherent dangers. After that, we will come back to the more explicit forms of learning.

3.2 How can one become aware of one’s implicit learning outcomes and processes?

Because such a huge percentage of our learning takes place implicitly (Simons, Linden van der, & Duffy, 2000), we are intrigued by the idea of improving implicit learning. In studying experiential learning in our consultancy practice, we have been exploring how to act on implicit learning outcomes (and after that on their learning processes). We have discovered six issues.

First, it is important to realise that it is neither possible nor desirable to make all implicit learning outcomes and processes explicit. Sometimes it is better not to make implicit learning explicit. As Nonaka and his colleagues (Von Krogh, Ichijo, & Nonaka, 2000) made clear, there can be an implicit kind

of exchange. And it is within informal activities and settings, and without explicitness, that people develop a feeling of shared competences (Nonaka, Reinmoeller, & Senoo, 1998).

If one does want to make learning outcomes and processes explicit, there are a couple of possibilities available, and thus a couple of choices to make. The first choice lies between reflection-in-action and reflection-on-action. **In action**, our implicit competences – although we ourselves are not conscious of them – are of course visible to others. By observing people in action, a trained observer can infer these underlying competences. By using pre- and post-action interviews, for example, people can learn to reflect-in-action, and become aware of their implicit competences and reflect on their knowledge, skills and attitudes themselves. In our experience, reflective practicums as described by (Schön, 1987) can be a very powerful methodology. And to this end, (Klarus, 1998) devised and studied an effective method combining pre- and post-action interviews with observations.

Reflection-on-action is probably less accurate, but nevertheless very informative. For this you can either ask others to reflect on your learning, or do it yourself. Often, clients or colleagues may have a very good idea of the specific competences they encounter in interactions with those subjects we want to help to become aware of their implicit learning. One can simply ask clients for feedback: “What, in your experience, is my specific way of working?” Besides this, 360° feedback methods can be a powerful tool. Probably more feasible, however, is to use reflective methods (both individual and collective ones). Then we help people to reflect on the outcomes of their learning. We will talk about them in more depth in the next section. Let us first give a short overview of the position so far. There are six ways to act on implicit learning outcomes (see Figure 4):

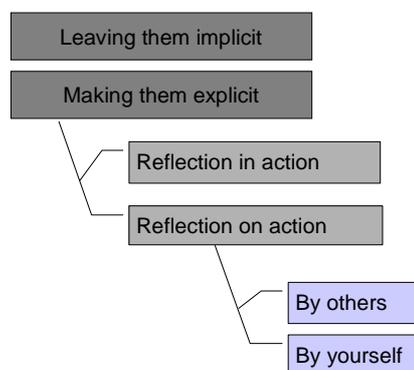


Figure 4: Six ways to act on implicit learning outcomes

3.3 *Self-reflection*

There are different methods available to make learning outcomes explicit. Because they can add so much to professionalisation and are not yet widely known, we will describe some of them in the current section.

The first technique for explicating learning outcomes by individual reflection came from (Eraut, 1998a). Instead of asking for learning outcomes directly, he asked semi-professionals (policemen and nurses in his study) what had changed in their work. In what way is your current work different from one, two or five years ago? What does this tell you about what you now know but then didn't and can now do but then couldn't?

Another technique used is asking people to describe an ideal professional or worker. For example: "How does an ideal train conductor or an ideal human resource manager do his or her work?" In our experience, people have quite concrete ideal role models. The next question could be: "In what respect are you yourself already an ideal worker / professional?" This leads, almost automatically, to explicating learning outcomes and differences between the ideal and practice. And sometimes this leads to on-the-spot discoveries of disconnections between ideals and current ways of working, and thus to new learning opportunities. For example, we met a human resource manager who described the ideal human resource manager as someone who was constantly networking with all the line managers in the organisation in an informal way. On the spot, he discovered that he himself was not practising this at all. Thus, asking people to reflect on the difference between their picture of an ideal practitioner and their own explicit and implicit competences may help them to become aware of the learning outcomes reached so far and the need for more explicit learning afterwards.

A third technique often used is the critical incidents method. People try to think of practical situations that were critical. From there, they start to think of the underlying competences. This technique resembles the "pretty good practices" approach described by (Marsick, 2001), where people talk about examples of situations where they performed pretty well. Marsick notes that it is important not to ask for "best practices" because then we put too much pressure on people to excel. In our experience, we found that it is even important to avoid talking about failures and to focus in the first place on positive incidents. With positive critical incidents or pretty good practices, there is a greater willingness – with less defence mechanisms – to do some "research" into details of the learning outcomes and processes. "Story telling" is also a related technique, where people tell anecdotes and stories taken from their practice. The difference here lies in the "story telling mindset", which

activates a certain amount of detail by describing circumstances and events from a certain distance (talking about yourself in the third person).

Again, another technique described by (Marsick, 2001) is “Walking in the shoes of the client”. People are asked to take the perspective of one of their clients and look at their own competences through the eyes of the client. A final example of a method described by Marsick is the “Multiple intelligence approach”. Here, people try to use pictures, drawings, metaphors, movements, etc. to make clear to themselves what they have learned implicitly. Many other techniques are around, to name just a few:

- teaching others
- looking into the future
- working in heterogeneous groups
- thinking of changes and improvements.

In these examples, we can easily recognise the connection with the other two fields of professionalisation. Teaching others is, as we will see later on, a way of externalising. But in teaching others, we do learn a lot about our implicit learning outcomes and, in thinking of changes and improvements, quite often we are inspired by models and articles of well-known thinkers in our field. In these concepts and ideas lies the overlap with “expansion”.

A common feature underlying all of these methods is that they start from concrete situations or experiences and go from there to learning outcomes and competences.

3.4 Increasing implicit learning without making it explicit

Is it possible to (re)organise workplaces without making learning more explicit, and to increase the chances of implicit learning? How can we do that? Based on and extending the studies of Onstenk (1997) and Kwakman (1999), we think this is possible by focusing on six features of work processes and work environments:

- variation
- responsibilities
- feedback
- reflection
- innovation/experimentation
- and vision building.

These six can be organised by managers (giving time for reflection, organising feedback, giving self-responsibility, planning innovation and experimentation, and so on), but they can also be organised by people themselves. They

can try to find feedback, reserve time for reflection, look for variation, be open to innovation, etc. All these features of work environments can be organised individually as well as in collaboration with others – with colleagues, coaches, managers and clients. Each type of actor may bring in different perspectives and contributions for implicit learning. The focus can be on individual as well as on collective learning (see below). Figure 5 summarises the possibilities.

	Self	Colleagues	Coach	Manager	Clients
Variation					
Responsibility					
Feedback					
Reflection					
Vision building					
Innovation					

Figure 5: Implicit learning features of work environments and the relevant actors

4 Expansion: explicit learning

Although we have been focusing so far on the advantages of implicit learning processes, it seems clear that in some cases, implicit learning (processes) will not be enough. For instance, when a coherent system of new concepts has to be learned, when there are security risks involved, when the intensive and guided practice of skills is needed or when an organisation is redirecting its strategy and exploring new possibilities, more explicit learning processes are needed. Sometimes implicit learning is too inefficient or too ineffective; for some kinds of learning conscious attention on learning itself may be needed; sometimes implicit learning is just too difficult or too time-consuming. Then, it is more effective or more efficient to use explicit learning. Part will take place off the job in training courses or in educational institutes with special responsibilities for learning. Part, we are convinced, can be organised on or near the job (on-the-job training, coaching, mentoring, etc.). Moreover, people can also organise these more explicit ways of learning on their own, both on and off the job, i.e. self-directed learning.

Trying to improve learning on the job by making learning more explicit involves:

- formulating learning goals
 - planning learning activities and strategies
 - testing learning results
 - monitoring learning
 - judging and rewarding learning
 - placing learning processes and learning outcomes in the focus of attention.
- This can be done by professionals / workers themselves or by others / other

means (teachers, coaches, managers, books, computers).

4.1 *Three ways of learning explicitly*

We tend to distinguish three ways of learning explicitly: theoretical learning, inquiry learning and critical learning (see also Bolhuis, 1995). In *theoretical learning*, the learner (or trainer) decides to learn new concepts and ideas and to connect pre-existing concepts and ideas with those of others or with existing theories and research outcomes from the profession or discipline. This is a way of learning that focuses on concepts, ideas, research outcomes, and theories developed by others, sometimes in scientific research, sometimes in thinking based on experience. In essence, it is connecting one's own concepts, ideas, theories and research outcomes with those of others inside and outside the profession – for instance, by reading books, attending conferences, and being involved in discussions and comparisons.

Inquiry learning is a form of action-research. Learners (and or trainers) decide to find out whether hypotheses arising from experiential learning remain valid under varying conditions or can be tested systematically or semi-systematically on the job or in more scientific research. Hakkarainen et al. (2000) described a useful inquiry-learning model for educational situations, which can also be used on the job.

In *critical learning*, people look critically at their norms and values, asking questions like “Are we walking the talk?”, “Don't we have to adjust our way of working or learning in a more fundamental way?”, “Is our way of working still in line with our norms and values?”, etc. Although this form of expansion is closely related to elaboration, for this our learning should already be explicit in order to be an element of research. Besides this, the central question is always partly one of theoretical ideas and concepts: Are those we chose (espoused) in equilibrium with what we are showing (in action)?

5 Externalisation

The third part of our learning model, externalisation, refers to the need we see to connect learning to concrete and public milestones. These milestones can be in the workplace, both at the team level (plan for group actions, contributions to team learning) and the organisational level (contributions to company policy or to organisational learning) or in the profession (publications, lectures, workshops, teaching activities, etc). Common to these milestones is the fact they are concrete and related to the activities (learning or otherwise) of other people. Moreover, these milestones can be made visible and connected to a date and a place, for instance: “I will write an article for that journal before

the end of this year”, “I will make a checklist for my organisation before Christmas and publish this on the company website” or “Let’s plan a date in the near future to restate our vision and collective ambition”.

Concrete milestones make the outcomes of explicit as well as implicit learning visible and easy to share and plan. Milestones can bring the necessary challenge that helps the learner(s) to maintain the motivation to continue and to learn, and to put personal learning outcomes in relation to the learning and working of other people. Colleague professionals and team members can co-profit from one’s learning, and the learner has something to look forward to. The milestone can provide an extra form of reward when it has been reached. But most of all it is the process of creating something innovative, searching for the right words for explicating and combining ideas – so necessary for teaching others or making concrete applications – that accelerates learning.

6 The complete model of elaboration, expansion and externalisation

Figure 6 presents the full model, where all of the ways of learning are distinguished.

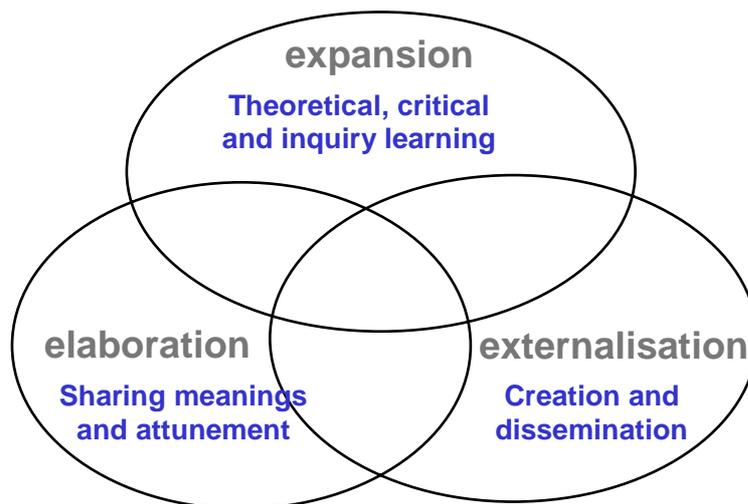


Figure 6: All forms of learning together in one view

7 Collective learning

So far we have treated learning as if it occurs among individual professionals only. But collective learning is gaining importance. The accelerating developments in our society make it necessary, but not sufficient, to have excellent groups of individuals in a workforce. Increasingly, people need to be able to work together in solving problems and innovating more accurately and more quickly.

So, more and more work is organised in teams, both interdisciplinary and monodisciplinary. In our view, work-related learning needs to be extended by collective learning in the future. Two forms of collective learning can be distinguished: organisation-related collective learning and profession-related collective learning. Organisation-related collective learning refers to the processes and intended outcomes of the learning of a working team or an organisation. Teams decide to collaborate in learning, focusing on common learning activities and processes or on common outcomes. In “communities of practice” (Wenger, 1998), people sharing a common interest in the organisation learn in and from their work and share this. Profession-related collective learning consists of professionals working in different organisations but sharing the same profession who decide to learn together from their different practices. They don’t have a common interest in one organisation; they may even be competing for the same clients; their interest is in learning. Therefore, we call this “communities of learners” and not “communities of practice”. Collective outcomes can be partly the same as those of communities of practice, but, in addition, collective professional outcomes relate to contributions to the professional field.

In our practice, we found out that it is very useful to distinguish different variants of collective learning, because especially the collective ones are difficult for people to conceptualise. They think, for instance, that they are learning collectively when they are involved in teamwork or in a learning team. When this occurs, people fail to organise the possible, more *explicit* collective outcomes. Sometimes, people undergo or undertake learning together, but without any actual or intended collective outcomes. Then the learning processes are collective, but the learning outcomes may be only individual ones. In other cases, however, actual or intended outcomes of learning (in terms of learning and / or in terms of changes in work processes or outcomes) are collective. Thus there is a distinction between *learning in social interactions* (with and from others) and *collective learning* (where the members consciously strive for common (learning and / or working) outcomes). These forms of collective learning are also called “team learning” and “organisational learning”. We prefer to use the term “collective learning” for ways of

learning where the intended outcomes (and maybe, but not necessarily, the processes of learning) are collective. Figure 7 shows the four possibilities, of which three are collective: individual learning processes leading to collective outcomes, collective processes with individual outcomes, and collective processes with collective outcomes. How can one make the step from individual outcomes to collective outcomes? We think that there are three answers to this question: (a) when groups or organisations reflect upon the common implicit outcomes of learning (see the methods in the section on experiential learning above), (b) when they reflect on or plan common explicit learning outcomes (see the section on explicit learning above) and (c) when they define common plans for externalisation in the team or the organisation.

Outcomes	Individual	Collective
Processes		
Individual	Individual learning	Individual learning processes with collective outcomes
Collective	Learning in social interaction	Collective learning

Figure 7: Individual and collective learning processes and outcomes

The collective outcomes in our model may be the following: balanced primary process, collective quality standards, gained and shared new insights, and collective visions, innovations and action plans for the team and / or organisation (see Figure 8).

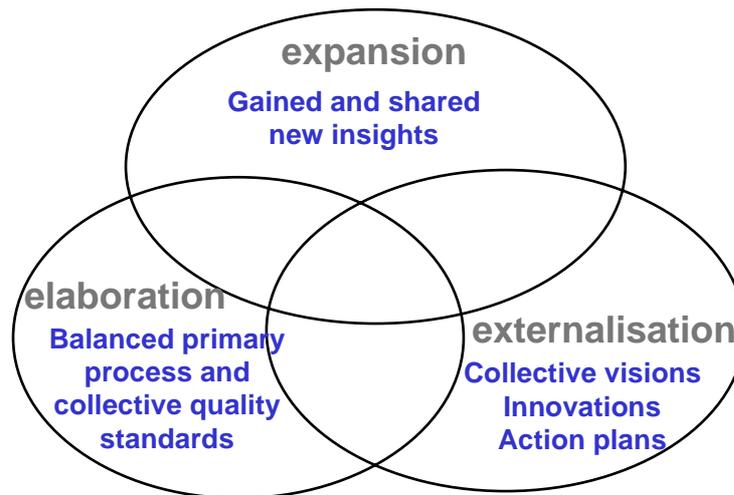


Figure 8: Shared outcomes of learning

All of this leads to the following hypotheses about collective learning:

Hypothesis 1:

Making implicit learning outcomes explicit collectively

- leads to balanced processes
- shared quality standards.

Hypothesis 2:

Learning becomes collective when people

- become aware of or plan collective learning outcomes
- plan collective actions based on those outcomes.

Hypothesis 3:

Explicit collective learning will occur and will be needed when groups want / need to

- expand and test their collective action theories (collective inquiry learning)
- compare these with other theories (collective theoretical learning)
- check whether they are walking the talk or find out whether fundamental new perspectives (double loop learning) are needed (collective critical learning),

leading to gained and shared new insights.

Hypothesis 4:

Determining collective externalised milestones helps groups to intensify and sustain their collective explicit learning on the job, leading to collective visions, innovations and action plans.

8 Conclusion

Our new model of work-related learning is, in a sense, a normative model. It specifies both that and how working people should be involved in learning, and how they can organise this. Although parts of the model are based on empirical research, the hypotheses still await further empirical testing. We hope that researchers will take up the challenge to test these hypotheses and that we will be able to do this research ourselves in the coming years.

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