

THE EVALUATION PROCESS OF SHORT TRAINING SESSIONS IN ORGANIZATIONS

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Abstract

This paper presents a critical reflection of the evaluation of learning processes in organizations. Based on learning and evaluation theories and concepts we discuss qualitative and quantitative evaluation processes, and its relationship to short training sessions to foster sustainable development. Short training sessions solve barriers for learning, and support informal learning. Reasons for paying more attention to informal learning are given.

Historical cases, like the Dutch cleaner production case, show the role of learning and communication in the process of first and second change towards sustainable development. The NIDO Corporate Social Responsibility case, focusing on system innovation, show that traditional ways of quantitative performance measures, often required by stakeholder, don't support the lengthy internal qualitative learning process. Cases on different forms of appearance of Microtraining, short training sessions, show improved communication, which might contribute to both first order, and second order change in organizations. These Microtraining sessions appear in formal and informal way, and ask for different evaluation processes. Different ways of evaluating both formal and informal learning are summarized.

The traditional ways of evaluation will be valid for planned series of sessions with defined Microtrainer, topic and target group. This matches the traditional way of reporting for internal environmental management systems and certification, like EMAS and ISO. More informal, ad hoc and spontaneously ways of applying short session will need different evaluation methods. We can learn from new approaches in self-assessment and reflection and instruments to assess learning on the job, such as workplace diaries, and guided reflection.

Keywords:

Microtraining, Informal Learning, Workplace Learning, Evaluation, Short training sessions

1. Introduction

Nowadays organizations have to deal with the need for sustainable development as an answer to increasing political pressure as well as social and economical interests. A way to augment sustainability is through innovation. Sustainable innovation can be defined as innovation towards sustainable development. Many sources show the role of learning in sustainable innovation (Dieleman, 1999) (Kamp, 2002). Innovation requires on the hand a process of continuous breeding and incremental improvements that are often based on tacit knowledge. These so called first order changes often originate on the work floor. On the other hand radical innovation that requires second order learning and changes are needed. Literature review shows that learning is an important condition but not a guarantee for change. Sustainability learning for change needs a deep knowledge of the basics of sustainability (Segalas Coral, 2010).

Learning in organizations is understood as an active process of knowledge creation taking place in social interaction at the workplace. We can see that both formal and informal learning activities are important for the capacity of an organization to learn and to innovate. We also have another perspective on learning: the difference between individual and group learning, and organizational learning, with the latter understood as cultural change of the whole system of an organization. There is a strong demand for organizations dealing with sustainable development to go beyond individual learning and reach organizational learning, thus a cultural change towards sustainability. Furthermore, sustainable development is understood as a negotiation process involving many of an organization's stakeholders in learning, action and change (Clarke, Roome, 1995).

Barriers for learning at the workplace can be summarized in five categories: 1. lack of time, 2. lack of motivation, 3. lack of focus on the target group, 4. lack of means, and 5. organizational issues (Deltalinqs, 2007). The concept of short training sessions seems to be an answer to these barriers. Organizing short training session provide a structured method for knowledge sharing with the following advantages: Easy to organize, time saving, cost saving, flexible to apply and problem oriented.

A new method has been developed to stimulate learning within short training sessions to build a bridge between individual and organizational learning and support the knowledge flow within an organization.. This so called Microtraining method was consecutively developed and tested over the last five years in two European projects in cooperation with

over thirty organizations. It provides solutions for workplace related learning demands that need a quick response. This different way of training and learning also needs a different way of evaluation, both on the learning process itself and on its impact on sustainability. As an answer to this need two evaluation perspectives, that have become integral parts of the Microtraining method, have to be distinguished:

1. The measurement of learning effectiveness, and
2. The measurement of the ability to support sustainable development throughout Microtraining activities.

Section 2 describes evaluation processes of learning in organizations. We will elaborate on the evaluation of both formal and informal learning. In this paper we only briefly address the link between the two other perspectives: individual learning and organizational learning.

In section 3 we focus on cases that show the development of environmental actions in organizations. Environmental Management Systems and Environmental Performance Evaluation, learning in Dutch cleaner production cases and learning in Dutch Corporate Social Responsibility cases will be discussed,

Section 4 describes the Microtraining method and its evaluation process of, on the one hand the evaluation of learning processes, and on the other hand the evaluation process to support sustainable development. Two cases descriptions illustrate the formal and informal appearance of Microtraining sessions.

In section 5 we will discuss the findings and draw conclusions on the evaluation process of short training sessions towards sustainable development.

2. Evaluation processes of Formal and Informal Learning in Organizations

Learning in organizations is important for today's organizations, because knowledge and expertise has to be identified, captured and shared, collaborative structures have to be developed (Clarke/Room, 1995). Learning is seen as the most significant factor contributing to organizational success (Clarke, 2004). In this section, we introduce our understanding of formal and informal learning in organizations and the need to assess these activities. In par. 2.1 formal and informal learning in organizations will be described. Par. 2.2 elaborate on the need for evaluation processes of learning in organizations. Par. 2.3 describes evaluation of formal learning, and par. 2.4 of informal learning.

2.1 Formal and Informal Learning in Organizations

Nowadays, most learning activities in organizations take place within formal learning settings like classrooms, seminars and predefined online courses. Understanding learning as a more

or less formalized activity takes into account the context in which learning takes place. In practice it shows that formal learning settings lack the flexibility to deal with the fast changing learning demands of today's organizations. More striking, most of the necessary knowledge at the workplace is derived from informal learning activities like discussions between colleagues (Cross, 2007).

Informal learning is understood as ad-hoc learning on the workplace, far away from formal learning settings like classrooms or pre-defined courses. Furthermore, it is often unplanned (Clarke, 2004). Current research shows that the effect of formal and informal learning on organizational learning is positive, but a too dominant formal structure is counterproductive (Wenger, 1998; Janowicz-Panjaitan & Noorderhaven, 2008). Therefore it seems reasonable to look for ways to support informal learning practices, understood as learning at the workplace. Such learning seems to become increasingly important to organizations and is more and more recognized as the most important type of learning (Clarke, 2004). Informal learning is seen as a crucial factor to corporate competitiveness and employment (Skule, 2004).

Members of an organization nowadays receive information in a huge variety of different formal and informal ways: from the boss's speech, from announcements and posters in the canteen, from (paper based or electronically) work instructions, handbooks and instruction leaflets, presentations, colleagues, demonstrating something, CD-ROMs, discussion groups, e-mails, internet, interchange of experiences and working together with experienced colleagues. The role of the organization in the learning process affects the process and culture of knowledge sharing, learning and training. Fostering learning activities is mostly a task of HR or training and learning departments, and is seen as an important management task. Still, most of these departments focus on the support of formal learning and training activities (see table 1).

Table 1: Aspects of formal and informal learning (based on Colley & Hodkinson, 2003)

	formal learning activity	informal learning activity
process	structured by a trainer	a spontaneous, learner centred activity
location and setting	taking place at a training facility, the course is based on a curriculum	taking place at the workplace without specific curriculum
central purpose	the learning itself	to support the work process
content	the knowledge transferred is on an expert status	pragmatic knowledge related to daily work tasks

On the other hand, Cross (2007) states that 80% of the knowledge we need for our work is obtained through informal processes, the remaining 20% through formal channels. Obviously this is not yet common ground for learning professionals, because about 80% of the training budget is spent on formal business training efforts. This can be qualified as an over-investment, which shows that many professionals are unaware of the possibilities offered by more natural and informal learning to increase the learning capacity of an organization and to implement sustainable development. Cross (2007) describes this phenomenon as the 'Spending & Outcome' paradox.

People are unique learners, thus they have a different experience level. According to Jonassen et al. (1993, 1997) and Rosenberg (2006) this should be taken into account when thinking of learning activities. Three levels are distinguished: early development, competent and experienced, expert (see figure 2). A newcomer needs good formal and structured learning to acquire basic knowledge and skills in an appropriate fashion. More experienced employees with more knowledge and skills are better served with a largely informal learning situation that better fits the rather ad hoc learning needs, so common for workplace related learning. For people with expert knowledge and experiences, formal and structured learning can even become counter-productive, because it does not fit the very personal learning needs.

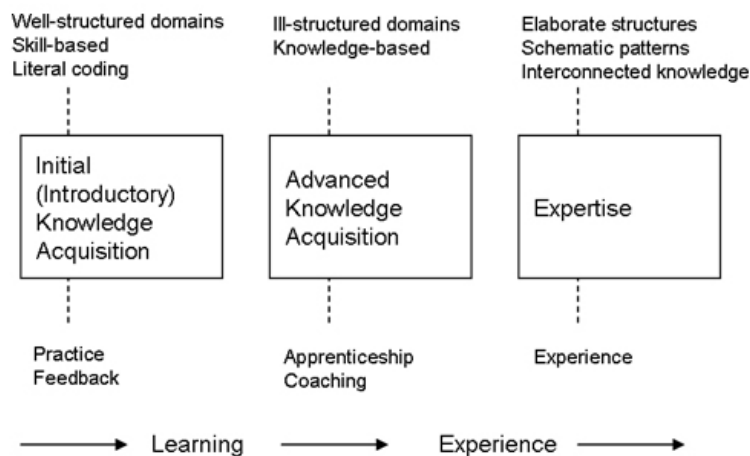


Figure 1. Levels of experience (Jonassen, Mayes, McAleese, 1993)

2.2 Evaluation processes of Learning in Organizations

Learning and training in organizations are defined as an important factor when it comes to competitiveness and innovation, but evaluating and assessing learning and training in organizations are fields with very little priority within organizations (Clarke, 2004). Nevertheless, it seems very important to assess the outcomes of learning activities to have

an insight on what is going on in an organization and if effective learning activities are taking place. The involvement of an organization in learning assessment activities can give a clue to the extent on how much learning and training is appreciated and fostered by an organization. Thus, a lively evaluation culture belongs to a lively learning culture.

Amongst others, how to measure and evaluate learning activities depends on the perspective from which we look at it. Referring to Clarke (2004), one can speak from the learning perspective as to analyze how the capacity of individuals or the whole organization to learn can be improved. As to look from the performance perspective, we seek for a deeper understanding of learning as a means towards better decision-making, different behavior and action. The learning perspective is less concerned in the performance of individuals or the organization and even rejects the idea that learning necessarily leads to changes in performance.

2.3 Evaluation of Formal Learning

When speaking about formal learning, we can see that assessing this kind of learning has a long tradition in organizations. Mostly, pre- and after-assessments like knowledge tests, simulations and case studies take place (Clarke, 2004). Qualitative and quantitative evaluation can be based on interviews (before, while, after the training / open, semi-structured, structured), questionnaires, observations and indicators. Indicators traditionally used in those evaluation frameworks on assessing formal learning activities are such as participation rates, training hours, expenditures or level of qualification (Skule, 2004).

Kirkpatrick's evaluation methodology (Kirkpatrick, 1998) is a very well known (and often used) evaluation methodology in this field, mostly applied to formal learning and to assess performance changes. He established four levels of evaluation: 1. Reactions, 2. Learning, 3. Application, 4. Business results.

Measuring the results of formal learning is possible when educational objectives or performance indicators have been defined in advance. Bloom's revised taxonomy of educational objectives (based on Bloom, 1956) distinguishes six levels of objectives from lower order to higher order thinking: 1. Remembering, 2. Understanding, 3. Applying, 4. Analysing, 5. Evaluating, 6. Creating, Within this model, evaluation is meant as the judgment of the learning material or activity based on personal values and opinions, resulting in an end product, with a given purpose.

2.4 Evaluation of Informal Learning

When searching for methods to assess informal learning activities in organizations, we identify a lack of indicators as well as of evaluation frameworks like the one of Kirkpatrick for formal learning activities. One problem that seems not to be solved so far is that informal learning activities are hardly to be separated from work itself. Referring to Skule, many studies like the Eurostat study (Eurostat, 2003) measure learning in terms of participation rates (for example the number of visits of a library), but do not refer to any quality factors (Skule, 2004). Informal learning is defined as unstructured and often is unplanned and ad-hoc, thus a planned pre-evaluation can hardly take place (Clarke, 2004). Clarke (2004) shows that many approaches to measure learning or performance outcomes of informal learning activities have limitations of different types like a lack of empirical grounding, or the still open question, whether all learning can be seen as effective or valuable learning.

As an answer to this, many studies prefer qualitative methods and are limited to a specific organization but do not show a general evaluation model for informal, workplace learning (Skule, 2004). Indicators to measure informal learning cannot be extracted directly from underlying learning theories, apart from the existence of a lot of different and very broad definitions of the term informal learning. One answer to this could also be that individual approaches to measure informal learning are necessary (Clarke, 2004). Instruments to assess learning on the job (Clarke, 2004) are personal development plans, developmental counseling, workplace diaries, learning logs, and guided reflection during meetings.

Another approach shows different types of learning outcomes deriving from learning at the workplace (Eraut et al., 2004b) that can be measured. The categories are: 1. Task performance, 2. Awareness and understanding, 3. Personal development, 4. Teamwork, 5. Role performance, 6. Academic knowledge and skills, 7. Decision making and problem solving, as well as judgment.

When we assume that informal learning has some similar characteristics to what is referred to as "learning 2.0" (social learning, using social software), we can apply some categories of a model developed by Ehlers (2009) to distinguish different modes of evaluation. While at formal learning the quality of learning outcomes is assessed by experts, in informal learning settings the quality of learning outcomes is assessed by learners and peers, thus social networks and communities of practice are of high importance. Instead of pre-defined learning courses and material, it is the personal learning environment that makes the context

in which learning takes place. Learning diaries or e-portfolios can be used to assess individual learning performance. One of the most important assessment instruments of informal learning activities is the self-assessment of the learner itself (Ehlers, 2009). The aim of self-evaluation is not a complete (summative) assessment of learning achievement, but rather an improvement of learning abilities. Self-assessment is defined as students judging the quality of their work, based on evidence and explicit criteria, for the purpose of doing better work in the future. Studies refer, according to Ehlers (2009), to the positive effect of self-assessment on the learning outcome.

3. Evaluation of actions towards sustainable Development

To put sustainable development, learning, and the evaluation of environmental performance in a historical perspective this section describes different stages in environmental awareness in organization from risk management and end-of-pipe solutions to pollution prevention and corporate social responsibility. First the development of Environmental Management Systems and Environmental Performance Evaluation, that reflect these stages, will be described (par. 3.1). In the Netherlands several projects have been carried out to stimulate innovation towards sustainable development in organizations. The description of the results of the Dutch cleaner production cases (par. 3.2) will illustrate barriers for tailoring pollution prevention options available and adopting them. In par. 3.3 learning at the company level in the NIDO Corporate Social Responsibility cases, aiming at system innovation, will be described.

3.1 Environmental Management Systems and Environmental Performance Evaluation

In the early 1990's, several countries developed their own Environmental Management System standard (EMS) a management tool to evaluate, report and improve their environmental performance. They were all withdrawn in favor of ISO 14001, which was implemented in 1996 and updated in 2004, and which became then the global EMS standard. An EMS is a continuous cycle of planning, implementing, reviewing and improving the processes and actions that an organization undertakes to meet its environmental targets and requirements. The EU member states have EMAS (Eco-Management and Audit Scheme), operational since 1995, a European Union regulation. EMAS II, introduced in 2001, is fully compatible with ISO 14001. In EMAS II employees are more integrated in the EMS via a suggestion book system or project based work. EMAS has a strong focus on provision of information to the public, external communication and responsibility outside the organization,

and on environmental performance, that ISO 14001 does not have. (The Baltic University Programme, 2006).

Bennett (1999) describes three generations of Environmental Performance Evaluation (EPE). The first generation of EPE is largely about risk management and dealing with obvious environmental-related costs, such as high energy consumption, high wastage rates or emissions that require expensive pollution control measures.

Second-generation EPE is focusing on pollution prevention approach rather than rely on end-of-pipe solutions. Key aims of quality measurement are to stimulate and support continuous improvement, particularly through awareness and tracking measures, and to provide data that is usable by line managers and staff generally, and these are central in this stage. The overall objective of third generation EPE is to achieve strategic effectiveness, so that an increasingly integrated body of data is shaped to meet specific objectives. Providing an overall assessment of business sustainability – including social dimensions- becomes an increasingly important objective in this stage.

3.2 Cleaner production cases

In 1988 in the Netherlands the PRISMA project, the first demonstration project for cleaner production (and the first systematic one in Europe) started, to prove that a systematic search process would lead to many options for cleaner production. Five year after the start of the cases Dieleman evaluated five of the ten cases (Dieleman, 1999). He distinguished between feed-back in terms of number of options implemented, the process to their implementation and whether the context was or was not favorable to support change. Overall the project resulted in the establishment of many options for cleaner production. But the implementation of options proved to be rather complicated. In almost all cases, the search processes to tailor the options available and adopting them to the organization and existing production processes were not easy because of the following reasons:

1. It was not part of people's jobs and standard responsibilities.
2. People could not rely on routines and known ways of operating, interaction and communication.
3. Responsible persons showed a lack of conviction in trying to involve employees. They did not set clear objectives and therefore it was not clear why things should be done and whether it was worth commitment resources.

4. Almost no support and technical assistance could be found from the business environment: the various stakeholders, like consultants, trade organizations and research organizations.

3.3 NIDO Corporate Social Responsibility cases

Between 1999 and 2004 the Dutch National Initiative for Sustainable Development (NIDO) facilitated collaboration processes between companies and their stakeholders in order to meet the challenges of sustainable development in practice. They were stimulated to find new solutions through new forms of co-operation and dialogue. NIDO's activities were aiming at delivering output for individual players (micro-level) as well as for their contexts (meso-level) to make a system innovation reality. The output for the individual players was new visions and strategies for the future and change of criteria for decision making. (NIDO, 2010)

Learning in the NIDO Corporate Social Responsibility cases has been described on three levels (Cramer, 2003): 1. Learning experiences at the group (the company representatives joining the NIDO project), 2. Learning at the company level, and 3. Learning at societal level. The task of the company representatives was to transfer the knowledge and experiences they had gained in the NIDO group (e.g. in the monthly meetings) to their own organization. According to Cramer experiences showed that it was relatively easy to pass on to their company information related to technical means and procedures. This type of 'first-order' learning corresponded well with the existing practices, policy statements and standards of the company involved. However, transferring the fundamental principles which underlie corporate social responsibility (second order learning) was much more complicated. Experience showed that the process of getting support from top to bottom in the organization was one of the hardest tasks in the whole endeavor. Making people enthusiastic and creating internal backing took up a lot of time and energy.

Cramer (2003) describes that the participating company representative felt frustrated that outsiders simply focus on the results, without caring about the internal processes. "The fact that a well-prepared annual report is the outcome of an often complicated and lengthy internal process does not matter for outsiders. The present guidelines on corporate social responsibility hardly reflect the cultural dimension that is so crucial for the change process. For instance: a company can have a written mission statement, but this does not show whether the employees are made aware of the fundamentals behind the company's mission.

The results of merely focusing on output parameters may well be that companies pay attention only to those activities that score well in questionnaires without changing the mindset about their position vis-à-vis society. In such a case reporting on corporate social responsibility simply becomes a procedural approach comparable to any other quality system.”

4. Short Training Sessions in Organizations: The Microtraining method

The Microtraining short training method to foster workplace related learning activities, is based on the didactical principles of the encouragement of active learning. Microtraining activities build a bridge between individual and organizational learning and support the knowledge flow within an organization. This section describes the Microtraining method (par. 4.1), evaluation within the method (par 4.2), the spectrum of Microtraining sessions from formal to informal (par 4.3) and two cases to illustrate this spectrum (par 4.4).

4.1 The Microtraining method

Microtraining is based on several learning theories and concepts, including ideas of the social-constructivist learning theory, the concept of connectivism and Jonassen’s concept of different levels of experiences. This background is already described e.g. by Overschie (2006, 2007, 2008), Pérez-Moya (2008) and by Lukosch (2009, 2010). By adopting an active approach, the Microtraining method appeals to various learning styles and offers the members of an organization the possibility to learn together and to share their knowledge. The different parts of a Microtraining activity involve people in the subject of learning, but also in communication, collaboration, and consensus processes about the next steps.

The Microtraining method is based on the idea that several short training occasions, bundled up to one Microtraining arrangement, foster an active process of knowledge gathering and sharing. The main goal of the Microtraining activities is to establish an effective way of active learning by offering short training occasions with a minimum of interruptions of the normal workflow. The sessions can be organized quickly by any internal or external actor, referring to current needs and demands. To create sustainable learning outcomes, the design of the training occasions has to take into account the knowledge and experience of the individual learner or learning group. Furthermore, to facilitate the active self-directed learning activities of the employees, some organizational requirements have to be fulfilled. It is important that the Microtraining method cannot be supported by hierarchical control and standardized

learning situations, but by decentralized and autonomous working units, which integrate individual learning in the daily workflow.

Microtraining is in fact a framework for types of self-promoted learning support to be used by the employee or manager with a high level of practical relevance. A Microtraining arrangement comprises a time span of about 15 minutes for each training occasion, which can activate and maintain learning processes for a longer period if they are bundled up in series, being face-to-face, online or in an e-learning situation. Each session starts actively, followed by a demonstration or exercise, feedback or short discussion, and ends with directions for further development and a brief preview of the next sessions (see figure 2).

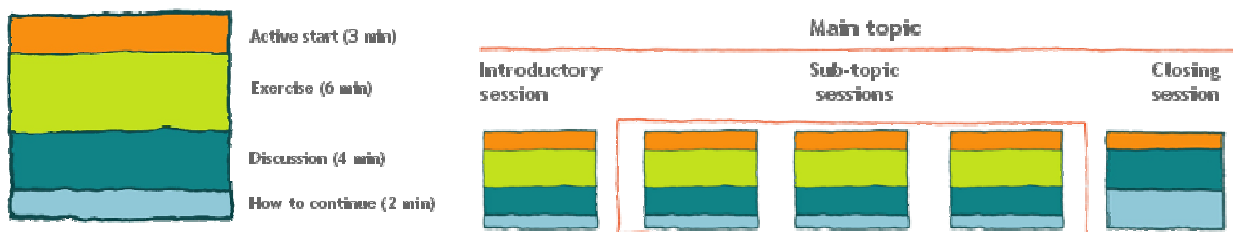


Fig. 2. The structure of a series of Microtraining sessions (based on Overschie: 2007)

4.2 Evaluation within the Microtraining method

The different way of training and learning also needs a different way of evaluation, both on the learning process itself and on its impact on sustainable development. As an answer to this need two evaluation perspectives evaluation approaches, that have become integral part of the Microtraining method, have to be distinguished:

1. The measurement of learning effectiveness, and
2. The measurement of the ability to support sustainable development throughout Microtraining activities.

For the first perspective tools are provided to measure the learning effectiveness that focus on the individual learning and the self-evaluation of the (Micro)trainer by questionnaires to be filled in after each session. Evaluation the second perspective, improvement towards sustainability, requires the following additional steps

- The manager will be interviewed before the series of sessions to get insight in the objectives of the organization.

- Ideas of members of the organization on how to reach the objectives will be collected in the introduction session.
- In the closing session members of the organization will commit themselves. Agreements will be made on how to really achieve the objectives and how to measure the achievements.
- A monitoring phase is introduced in the closing session to check the agreements after an agreed period of time.

The latter approach reflects the steps of the model of ISO 14001 Environmental Management System, (see figure 3) and has been designed by UPC, Barcelona and Govac, Barcelona, Spain in the Microtraining project (Microtraining, 2010).

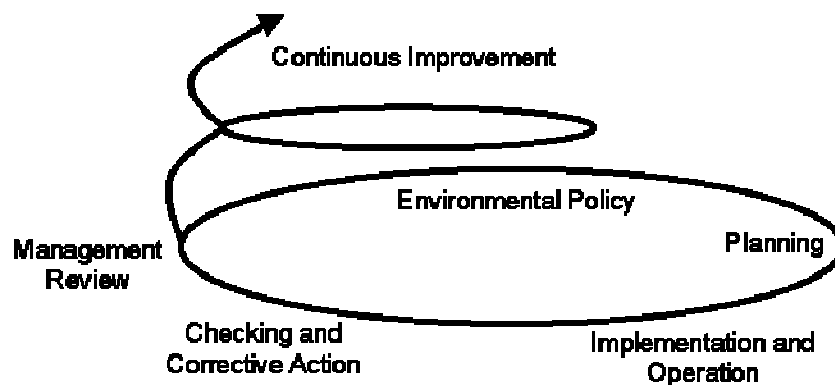


Figure 3: Model of the ISO 14001 Environmental Management System

4.3 The spectrum of Microtraining sessions

During and after two European projects (microteaching.org and www.microtraining.eu) the Microtraining method have been applied in over fifteen organizations. The method appeared in formal and informal forms (see fig. 4). After becoming familiar with the method organization first organized the session quite structured and formal. The trajectory of dividing the topic into understandable pieces helped to improve the quality of the knowledge sharing. In between the sessions the topic was discussed in informally. The more employees in the organisation became familiar with the method the more flexible and 'informal' the sessions were applied. A spontaneous and ad hoc session will address a topic and put it on the 'agenda' in the informal circuit, which will support a more focused knowledge sharing after session. Members of an organization learn to organize a session spontaneously when there

is a problem or question. The informal way of applying the training sessions share the advantages of the structured knowledge sharing through the educational format.

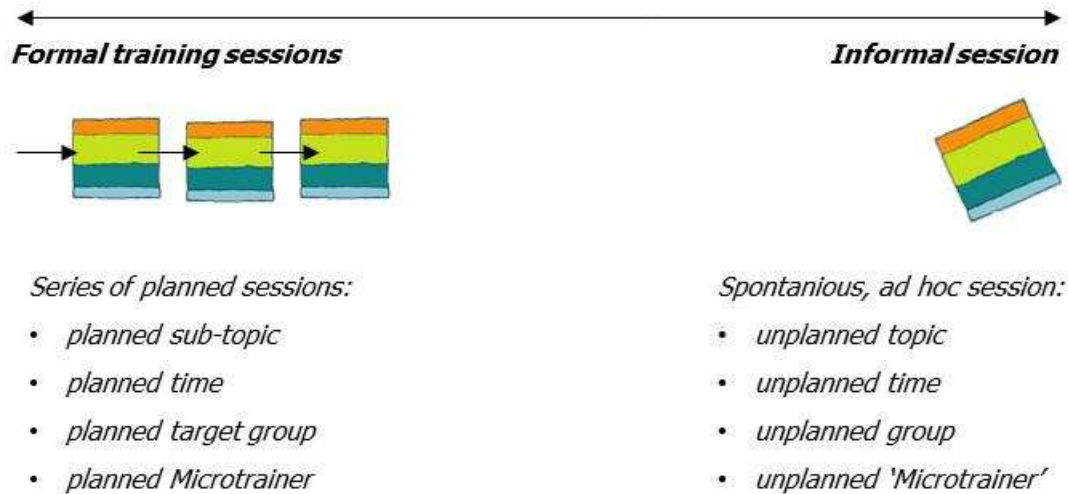


Fig 4: The spectrum of Microtraining sessions

4.3 Case 1: Microtraining in an innovative research oriented SME

In the case of an innovative Research oriented SME in the Netherlands, part of a large holding, all employees were informed on the Microtraining method during a presentation of the Director. Afterwards the slide show was showed continuously in the entrance hall. At the start the Director, who acted as first as the Microtrainer prepared general sessions and invited workers from the shop floor and from R&D. The sessions were planned on the short term when he found some time in his agenda. The topics were based on real needs. (fig 5, left side). He introduced the didactics of the method to different colleagues to be able to apply these in a afternoon work shop with all colleagues. They used the results of the different sessions as input for the next workshop session (fig 5, middle). After this workshop different employees were capable to organize sessions random and 'spontaneously' to solve exiting issues. They invited colleagues that could contribute to the solution or might need to learn on specific issues (fig 5, right side). Microtraining has become part of the learning culture. In this case applying the Microtraining method in various forms resulted in less production failures and, according to the Director, improved communication.

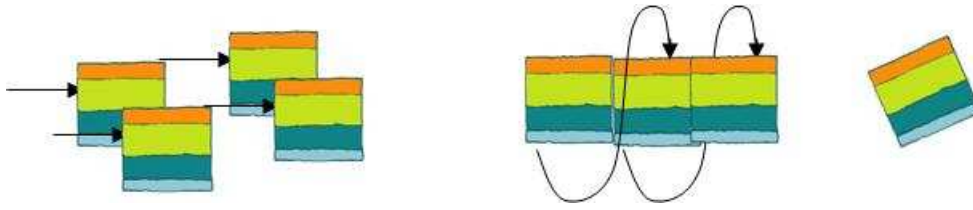


Figure 5: Microtraining in innovative research oriented SME

4.4 Case 2: Microtraining in a large production company

Microtraining carried out in Spain in a large manufacture of electrical connectors, focused on implementing an Environmental Management System. The series of sessions were organized on a regular basis, with a planned target group, and were conducted by the same Microtrainer. All sessions were prepared in advance (see figure 6, left side). Previous cases in Spain were organized in the following way: The sessions were roughly planned and customized after each session (see figure 6, right side).

For the evaluation of the sustainability results different questionnaires were used. The prior situation was determined before starting the session. Commitments and a monitoring plan of these commitments have been written down in the closing session. Self-evaluation by the Microtrainer and the participants have been carried out after each session and in the closing session. The participants agreed that Microtraining was a method to solve problems fast and direct without requiring much additional effort. They are interested in the use of Microtraining in the near future as internal tool to improve communication and solve day to day problems. (Perez-Moya, 2010)

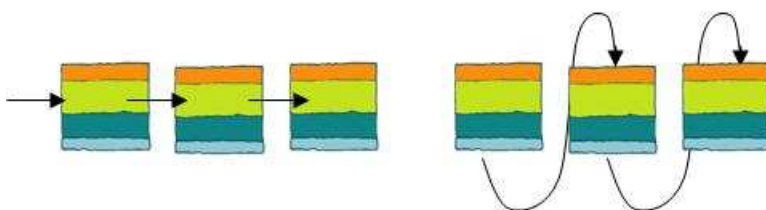


Figure 6: Microtraining in large production company

5. Conclusions

This paper presents a critical reflection of the evaluation of learning processes in organizations. Based on learning and evaluation theories and concepts we discuss qualitative and quantitative evaluation processes, and its relationship to short training

sessions to foster sustainable development. Short training sessions solve barriers for learning, and support informal learning. Reasons for paying more attention to informal learning are given.

Historical cases, like the Dutch cleaner production case, show the role of learning and communication in the process of first and second change towards sustainable development. The NIDO Corporate Social Responsibility case, focusing on system innovation, show that traditional ways of quantitative performance measures, often required by stakeholder, don't support the lengthy internal qualitative learning process.

Cases on different forms of appearance of Microtraining, short training sessions, claim improved communication, which might contribute to both first order, and second order change in organizations. These Microtraining sessions appear in formal and informal way, and ask for different evaluation processes. Different ways of evaluating both formal and informal learning are summarized. The traditional ways of evaluation will be valid for planned series of sessions with defined Microtrainer, topic and target group. This matches the traditional way of reporting for internal environmental management systems and certification, like EMAS and ISO.

More informal, ad hoc and spontaneously ways of applying short session will need different evaluation methods. We can learn from new approaches in self-assessment and reflection and instruments to assess learning on the job, such as workplace diaries, and guided reflection.

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