

Supporting continuous learning in a large organization: the role of group and organizational perspectives

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Abstract

Many organizations recognize the need to continuously adapt and learn in order to survive and remain competitive. Learning and therefore change in organizations is driven in two ways. First, there is strategically driven learning, motivated by high-level factors such as market changes, company mergers and newly emerging approaches to organizational management and workplace learning. These changes reveal themselves in the introduction of new training programmes, recruitment strategies and knowledge management methodologies. Second, there is local, continuous learning occurring from the ground up. This is revealed as workers become more adept at their job through experience and collaboration with colleagues. Continuous learning is more gradual and requires local autonomy. This paper describes an experiment in supporting local, continuous learning, and its dissemination, but driven by a strategic initiative of the organization. This work raised many issues concerning the difficulty of integrating local and global organizational influences on learning. We outline lessons learned and suggestions as to the extent to which it is possible to align continuous learning with a company-wide perspective.

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1. Introduction

Most organizations need to learn and change in order to survive. The learning and development of an organization is usually driven in two separate ways: top-down and bottom-up. Top-down approaches can quickly change the priorities of an organization and the viewpoint of its members. These initiatives can change both the content of what is learned and how it is learned. In terms of the content, an organization may identify a gap between the required skills of the workforce and current competencies. Training regimes can then be devised to bridge this gap, or employment drives instigated to provide the required skills from outside the current workforce. Although capable of delivering rapid change, training regimes have certain disadvan-

tages. They put pressure on decision makers to correctly predict the skills gap, reduce workplace autonomy, cause stress among workers as skills have to be developed abruptly (Ivergård, 1998), and evidence shows that most training fails to transfer to the job (Detterman, 1993). Top-down approaches can also be used to establish new methods for learning and the development of workplace competencies. Recent initiatives in this area include quality circles, best practice and benchmarking. These approaches aim to provide a methodology to support professional development and the sharing of ideas, but often fade out and fail to become an established part of organizational practice.

Learning often occurs in organizations from the ground up, without strategic intervention from senior management. Workers learn through experience and reflecting on their work practice, and share ideas and stories among colleagues (Orr, 1990). This kind of learning is often described as organizational learning

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(Argyris and Schön, 1996). The advantages of organizational learning are that it is gradual, less stressful, responsive to ongoing developments in the workplace and provides a degree of workplace autonomy. The disadvantages of this approach are that this form of continuous learning can be too localized and slow for the required pace of the organization, and can easily be disconnected from, or even conflicting with, strategic initiatives of the organization.

The study described here, conducted as part of the EU-IST-funded ENRICH project (Sumner et al., 1999), aimed to support organizational learning in a way that supports the sharing of knowledge beyond local groups, and is integrated with a strategic initiative of the organization. From this experience, we learned a number of lessons regarding the challenges in aligning organizational and team perspectives when supporting learning in the workplace. Sections 2 and 3 provide theoretical background to organizational and group level perspectives on learning and knowledge. This is followed by the account of our experiences in aligning organizational learning with a strategic initiative. We then condense these into a number of lessons and provide suggestions toward how locally occurring continuous learning and organizational strategies can be integrated.

2. Organizational and team perspectives on learning

Strategic organizational initiatives aimed at improving workplace learning and professional development need to have both top-level support and the local support of teams and individuals. To receive top-level support, the initiative needs to be seen as cost effective, delivering value for the organization, and meeting important problems or challenges. For individual and team support, the initiative has to be seen as providing tools, methods and skills that help workers to develop and get their job done. From the knowledge management literature, case studies have identified a lack of both high- and low-level support as reasons why initiatives have failed (Damodaran and Olphert, 2000). For high- and low-level support, the initiative must be seen as *important* and *beneficial* from both the organizational and the team or individual perspective.

An approach to supporting workplace learning is more likely to be seen as important by both parties if it is targeting crucial factors of the work and productivity of the organization. From the knowledge management field, this relates to Brooking's, (1999) notion of "critical knowledge function". These are knowledge intensive activities that are central to the functioning of the organization. What constitutes critical knowledge will depend on the context in which the organization operates. The critical knowledge of the company is not

necessarily the most complex, but is the knowledge related to the core business of the organization. If we imagine a company that produces some product, then knowledge related to the development, manufacture, and marketing of that product will probably constitute many of its critical knowledge functions. A likely reason why many strategic initiatives die out is that they are seen as a fad that does not sufficiently connect with the real work of the organization (Stewart, 2003). Focussing the learning around critical knowledge functions is an important step toward ensuring high and low level support, but does not alone guarantee success.

Even when the initiative is focused on critical knowledge functions, there are still obstacles to overcome in aligning the strategic initiative with human resource and training functions of the organization. Ivergård (2000) identifies the lack of cohesion between learning initiatives in different subsystems of an organization as a major problem, and argues that these separate endeavours need to be interfaced, but cannot be turned into a unified structure. Numerous factors can affect the complexity of the integration process, including the relationship between staff and leaders.

As well as being seen as important to both parties, the approach taken to supporting workplace learning has to be of benefit to both. From an organizational perspective, many learning initiatives aim at least in part at formalizing and capturing the knowledge of the workforce so that the knowledge can form an asset of the company. If this appears to be the only goal, then workers may then reject the approach as they see it as making them dispensable to the organization rather than supporting their work (Storey and Barnett, 2000). The initiative should then also clearly support professional development among the workforce, in order that the workers themselves also perceive direct benefit.

Approaches to workplace learning therefore need to retain high- and low-level support, relate to critical knowledge functions of the organization, demonstrate clear benefits for all those involved, and often interface separate learning activities within the organization.

3. Individual, group and organizational knowledge

Much of the knowledge supporting workers in their everyday tasks is tacit. This knowledge supports the seemingly effortless and routine performance of tasks, but it is very difficult for the worker to describe how the tasks are performed. For example, a designer may intuitively feel that a particular approach is right, or doomed to failure. They cannot explain why, but their intuition is nearly always correct. This kind of activity is referred to by Schön (1983) as knowledge-in-action. Much skilled professional work is driven by tacit knowledge, and workplace learning generally involves

modifying, sharing and acquiring the knowledge required for skilled performance.

According to Schön (1983) learning by the individual is triggered by a breakdown—when the knowledge that a worker uses and applies during their professional duties produces an unexpected outcome. This requires the worker to reflect on their performance, a process he refers to as reflection-in-action. This involves reframing the problem—viewing the problem from a different perspective. This allows them to reflect on their actions, question their assumptions and reshape their activity, whilst in the process of their everyday work.

Nonaka and Takeuchi (1995) view collaborative learning in organizations as requiring the externalization of tacit knowledge into explicit knowledge in order that it can be shared and then internalized by other members of the organization. This is one part of what they refer to as the knowledge creation spiral. This view on learning has been extended by the work of Cook and Brown (1999) who differently view the relation between tacit and explicit knowledge. Here explicit knowledge is seen as a rationalization or interpretation of performance guided by tacit knowledge rather than a translation of the tacit knowledge itself. When explicit knowledge is viewed in this way, the process of sharing knowledge guiding skilled performance is less direct. Drawing on one of their own examples, a verbal account (i.e. explicit knowledge) of how to ride a bicycle is very different in content to tacit knowledge supporting the riding of the bicycle. For example, many people who ride a bicycle cannot state which way to turn the handlebars to prevent a fall to the left or right, though this is clearly part of their tacit knowledge. Developing skilled performance should therefore be viewed as far more than just the translation of knowledge from one form to another and one person to another.

A further important factor affecting the learning and sharing of knowledge between workers is whether they share a community of practice (Lave and Wenger, 1991). A community of practice is a group of individuals who work, learn or socialize together sharing insights and developing a shared knowledge as a consequence of participation. Communities evolve, develop and merge around shared interests and expertise. These communities do not necessarily equate to the team structures of the organization. Due to common assumptions and co-participation in tasks, the sharing and development of knowledge is far easier within communities of practice. Sumner (1995) describes the sharing and construction of explicit knowledge in communities of practice as domain construction. Domain construction describes the processes by which groups elaborate and evolve a shared knowledge of their domain over time. Domain construction takes many forms: negotiating and defining new domain concepts, making links between concepts, and making links between concepts and the tools of work.

Sharing knowledge is far more difficult across community boundaries, due to the lack of a shared domain. Community knowledge is situated in the vocabulary and methods that the community has evolved. When this knowledge is transferred outside the community, perhaps in the form of documents, it has to be interpreted and applied by people who do not share the same vocabulary and methods. Boland and Tenkasi (1995) argue that learning across communities requires what they term perspective taking. Perspective taking describes the process by which communities recognize, use and evaluate the perspectives of other communities as part of their work, and use these to reflect on their own work practices. An example of perspective taking would be for a community to read and reflect upon a document prepared by another community. Understanding the document and its potential relevance requires the reader to engage in the world of the community that prepared the document. This process of perspective making permits a community to then view and evaluate themselves from another perspective.

Transferring local knowledge across community boundaries therefore requires a great deal of effort. This can be contrasted with high-level directives of the organization that can traverse the whole organization overnight. These can travel quickly, first because they have authority, but also because they tend to be on a higher level of abstraction. Additionally, although they can span the organization quickly they often fail to be operationalized and make any long-term impact on work practice.

In summary, learning in organizations through the sharing and co-construction of ideas occurs primarily in communities of practice. Sharing knowledge across domains is complex, and requires a great deal of interpretive effort. More abstract concepts originating at higher levels of the organization can travel faster, but may be difficult to operationalize. Within the context of these challenges we will present our own experiences gleaned from an attempt to develop organizational learning support aligned with a high-level initiative of the company.

4. Experiences supporting organizational learning

Our project was motivated by an initial vision to provide computer support for a company team planning methodology. The organization concerned was a large engineering company with a number of sites in the UK. The company had already developed a planning methodology in the form of a paper-based workbook. The aim of the workbook was to support reflection on, and development of, work practices as an integral part of work. The paper workbook was divided into three

sections: plan, do and review, covering the development, implementation and assessment of a team plan. The workbook supported team planning around five company values covering issues such as addressing customer needs and the application of innovative technology. A number of tools, activities and metrics were included in the workbook to guide the team planning process. At the start of the project it was claimed by senior management that the team workbook was in wide use in the organization.

An electronic workbook was designed and implemented based closely on the paper-based workbook. As the paper workbook was fairly large (approximately 60 pages), the electronic version was broken down into sections navigable from a contents frame. Each section was given an associated discussion thread in order to support on-line discussions among the team concerning aspects of the plan. This, and all subsequent versions of the team planning tool, were developed using the CEDAR (contextually enriched document archive) toolkit (Hatala, 2000). CEDAR takes as input a raw HTML file that can then be broken up, associated with a

discussion space and published according to a user-defined template. The CEDAR tool also has document management functions for representing document groups and user profiles. An example planning tool interface developed using CEDAR is shown in Fig. 1. Due to reasons of confidentiality, the plan shown in Fig. 1 is similar but not identical to the planning tools described here. The rest of this section describes our experience in deploying, testing and revising this tool. An approximate timeline is shown in Fig. 2.

Once the initial version of the workbook had been developed it was presented to a number of teams, none of which were willing to adopt the tool to support their team planning, even though they were all aware of the workbook and the strategic push to use it throughout the organization. The top-down development and dissemination of the workbook had succeeded in making the initiative well known throughout the organization, but the same approach could not be taken to incorporating the workbook into everyday practice.

This led to a series of interviews being carried out with 12 teams in the organization, in order to determine why

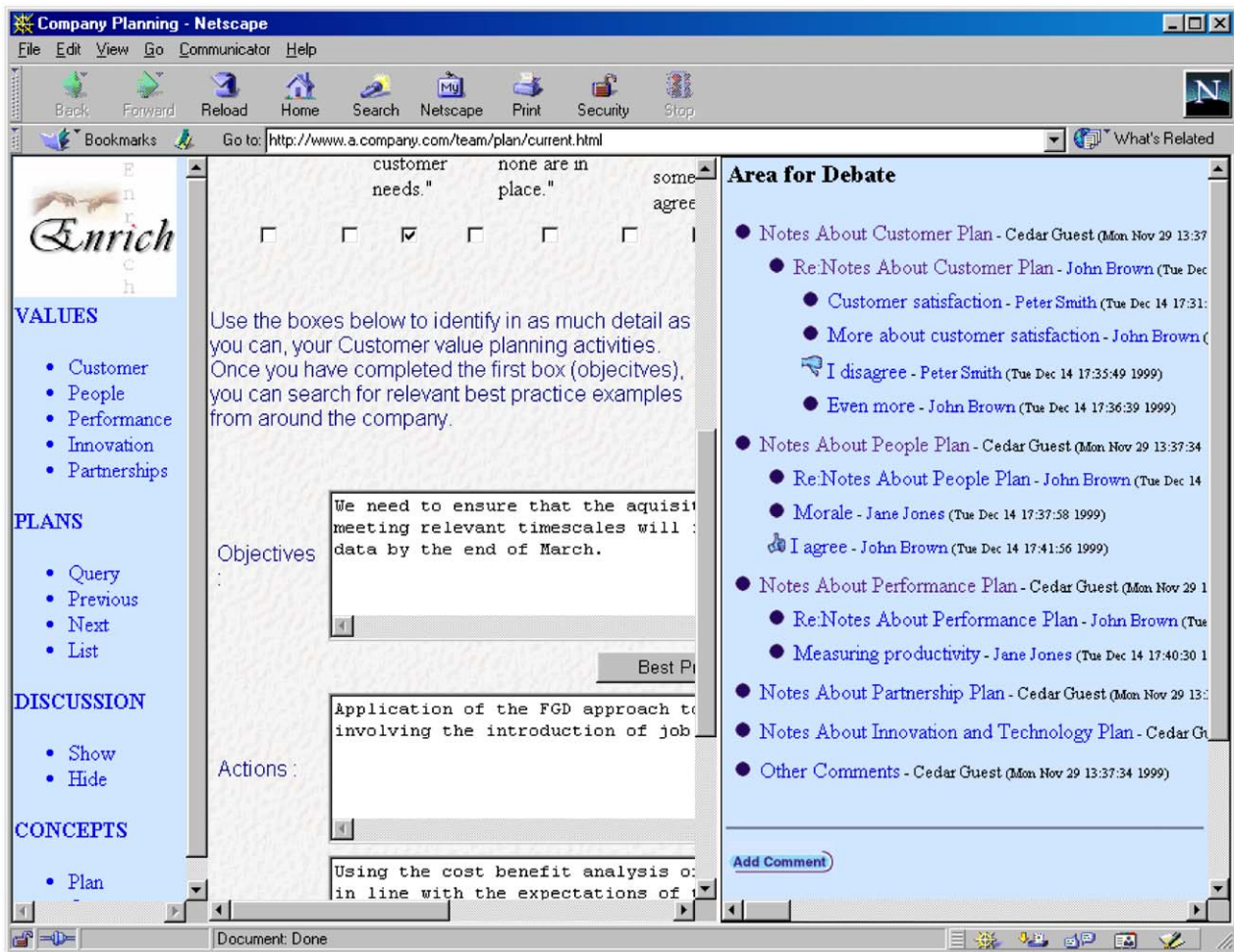


Fig. 1. A team plan produced using CEDAR, featuring the plan itself (in the centre), with a navigation bar (to the left) and an associated discussion and rationale space (to the right).

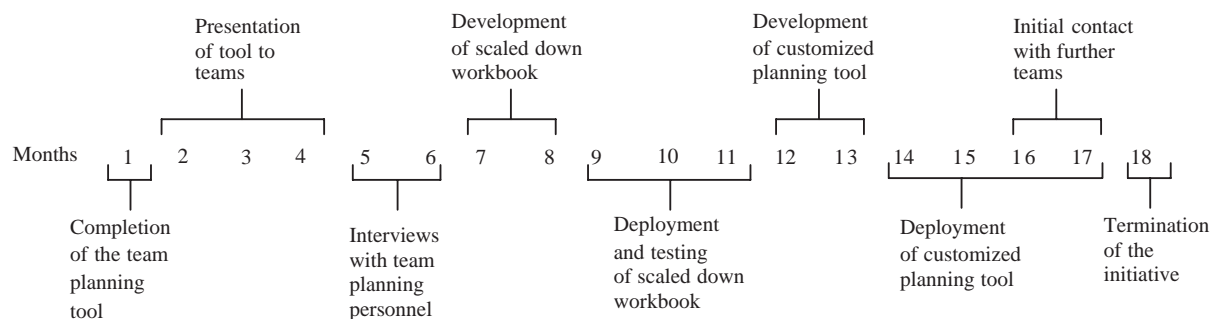


Fig. 2. Approximate timeline of the deployment testing and revision of the web-based planning tool.

the electronic workbook was unsuitable, and determine whether, or how, planning and development within teams actually occurred. Interviews were conducted either face-to-face or over the telephone with representatives of each team that had responsibility for, previous experience of, or interest in team planning activities. Each team was represented by between one and three people.

It was found that although the initial workbook was roundly rejected, team planning did occur, and across a number of teams this incorporated certain key aspects of the workbook. The teams studied were found to use the company values as defined in the workbook methodology and the scoring and planning matrices included in the workbook for recording and planning performance against the company values. These observations led to the development of a scaled-down version of the workbook, incorporating only the aspects that were in widespread use in the organization. The second version of the workbook also included three new features derived from discussions with the team. First, each team plan had a link to the higher-level departmental plan to facilitate lateral communication between teams of the same department and horizontally between team and departmental levels. Second, a tool for searching the company's best practice database was developed and integrated within the planning form so that the team, while in the process of planning, could be informed of related resources in the best-practice archive. Third, a facility was provided so that the plan as entered into the tool could be displayed and printed out in a way suitable for presentation on a team notice board.

A trial team agreed to use this scaled-down version of the workbook, but use of the planning tool was still not sustained by the team. The second scaled-down version of the workbook had been an improvement in that unwanted parts of the workbook had been removed, but had failed in that additional content, specific to particular teams, had not been included. Further development activities were then conducted in participation with team members. This third and final attempt to support team planning took a far more bottom-up

approach, in which we tried to support the teams according to their existing team planning activities, rather than trying to provide a management-led solution. Using this approach we developed a customized planning tool for one team, with the close cooperation of one member of the team who had a particular interest in the project. We took great care to include any charts or diagrams suggested by the team, and also included features that to us seemed ornamental. For example, the colour of the planning template was modified a number of times until the team was satisfied. Pictures of the products for which the team were responsible was also embedded within the plan. In terms of look and feel, the customized plan was very different to the corporate, generic look and feel of the earlier workbooks.

This customization also led to the reframing of the discussion space. Instead of being seen as a tool to support asynchronous discussion, it was renamed an evidence space. The discussion seed was structured around team targets. Evidence was then entered to provide a record of performance against each target. This change was valued by the team, and was also beneficial from a knowledge management viewpoint. The process by which plan objectives are achieved, problems that arise and how they are resolved, is often a more useful knowledge resource than the core plan itself. During the first two months, 29 pieces of evidence were added to the evidence space in the form of Word files, Powerpoint files, HTML documents or plain text. Much of the evidence was contributed by nine people who had previously not been actively involved with team planning. This was due to a greater awareness of the plan, and workers being able to identify some of the documents they produced during work as being evidence toward objectives within this plan. The evidence submitted either gave details of tasks completed in relation to objectives, or the financial targets and performance of the team.

The final requested change was the temporary removal of the best practice search facility. Once the newly designed planning tools became in use by teams, inadequacies became apparent in the existing

best-practice archive. The existing set of best practices was probably aimed more at senior management rather than teams within the organization. Their design also seemed to lack a clear methodology as to how knowledge contained in best practices could be reused. Plans were under way by the team to develop more localized, practical best practice, suitable for other teams within the same division.

The new customized planning was a clear success. Toward the end of the project, further teams in the division came forward with their current paper-based plans, and were keen to adopt the new technology for themselves. Analysis of these plans led to an interesting observation. Although, as had been found from experience, a plan will only be adopted by the team if carefully customized for them, the plans constructed by teams were remarkably similar, beyond seemingly surface criteria (e.g. colour scheme, layout, pictures, logos, etc.). Each were fundamentally based on the same terminology and concepts found in the generic approach, but their modifications were necessary for acceptance.

We now had one team actively using a customized plan and interest shown by six further teams to adopt a similar approach. Around this time, high-level management decided that they no longer wished to continue with this work and put an end to the customized plans and any activity toward the development of locally sourced best practice. We cannot provide a substantiable explanation for this, but two plausible explanations can be made. First, team planning was not part of the core business, and not a critical knowledge function of the organization; therefore there was insufficient commitment for long-term investment. Second it is possible that the local sourcing of planning methods and best practice did not fit with the vision of senior personnel.

5. Lessons learned

These experiences have illustrated some of the tensions between organizational and team perspectives, and the impact that this can have on the development and deployment of strategic initiatives to encourage workplace learning. Regarding the above case study, it could be all too easy to apportion blame to either the team or organizational level for the problems that were encountered. Teams could be viewed as straying from company strategy, or being over-insistent on “surface” changes to their planning tools. Conversely, senior management could be blamed for assuming that the generic workbook could be adopted without modification, and failing to appreciate the need for some level of local autonomy. The truth, however, is probably more complex than either of these positions.

Organizations often have inherent tensions between high- and ground-level influences. High-level strategic approaches are needed to instigate rapid changes of perspective in the organization, that could be required for the organization’s survival. Conversely, development within teams is inextricably linked with the development of the team’s own way of doing things. This local context can make it difficult to transfer this knowledge to other parts of the organization, a phenomenon that [Brown and Duguid \(2000\)](#) describe as “sticky knowledge”. The solution to this problem is therefore not to declare that either the top-down or bottom-up approach is superior, but to work toward devising methods by which these can be appropriately integrated. This leads us to propose four lessons toward an approach of how team and organizational perspectives can be aligned in learning initiatives.

Lesson 1: High-level strategies are needed as they can travel, allow fast change, and provide overarching concepts.

High-level strategies driven from a wider perspective, and influenced by factors outside the organization are important for the development of the organization. Due to their generic nature and inherent authority, they can permeate organizations rapidly, leading to the adoption of new terminology and new perspectives on important issues. Within our case study, concepts from the generic workbook had provided a framework for the development of a team plan. Without such a strategic initiative it seems unlikely that team planning, which was having clear benefits, would have occurred at all. It is also unclear as to the extent to which a team could embark on constructing a plan without some initial guidance as to what a plan should contain and how it should be used. The observed similarities between customized plans demonstrates the strong influence of the organization-wide initiative. However, fast-moving initiatives need to be sensitive to team characteristics, if they are to be sustained in the long term.

Lesson 2: Local autonomy and customization are required to facilitate effective learning in communities.

Local learning within teams is, or a least should be, about learning through participation in a community of practice ([Lave and Wenger, 1991](#)). In order to be effective, the community needs sufficient autonomy to develop and express its own way of doing things. Members of a community learn for example by sharing stories, but the community needs not only the freedom to share these stories but also freedom as to how they are told. Communities evolve implicit rules about why a story is told, what makes a good story, and how the story is conveyed. [Cook and Brown \(1999\)](#) use the term genre to describe the personalizations that occur to group artefacts. For community documents and messages, the genre may include the use of certain words or phrases, the inclusion of pictures and the use of

formatting. As in the case study, this may include the colour scheme of the document. Communities therefore need to be able to personalize the way they communicate and learn from each other. There are two important consequences of this. First, the genre can help members of the group to more easily communicate and share ideas. Second, it makes the documents they produce more difficult for the outsider to interpret, as they will not be sensitive to the implicit clues, or aware of the community vocabulary.

Lesson 3: Strategic initiatives need to be interfaced with local autonomy in order to sustain low- and high-level support.

A learning organization cannot rely solely on either strategic initiatives that fail to connect with work practice, or locally sourced knowledge that evolves and develops slowly, but both of these play their part in the solution. When senior management are developing a new learning initiative for the organization, they should develop the overall methodology, concepts and terminology, but should not aim to produce a generic tool to be used by all teams. Instead they should provide support for teams to interpret and customize the generic concepts and method so as to align with the practicalities of their job. An important role in this process is the local developer. Drawing on the work of Gantt and Nardi (1992), a local developer is generally a member of the team, who has a greater interest in establishing the new approach within the team. During the development process, this person can act as a translator interpreting high-level concepts with the designers, and aligning them with the work of the team. Once the local methods are up and running, the local developer can also identify and help to disseminate ideas of the team that could be of benefit to a wider audience. Within the case study, the local developer played a central role in the design and deployment of the customized workbook.

Lesson 4: Efforts to store and share knowledge need to be driven by a reuse methodology that addresses problems of generality and operability.

Useful lessons originating from outside the community need to be interpreted before they can be applied and used. Descriptions of lessons learned and new ways of working should be prepared to help their interpretation. The nature of the preparation needs to be driven by a decision as to the intended scope of the document. The wider the scope, the more the document has to be generalized and decontextualized in order that it can travel. Additionally, teams may need support on how these general lessons can be specialized and applied in their own setting. Within our case study, best practices were perceived as not relevant to their job, because the chasm between the generic descriptions and their everyday work was too great, and there was little support given to help bridge this gap. Locally sourced best practice, rich in context, has the advantage that it is

easier to operationalize, but its limited scope has to be recognized. The organization therefore needs to make a conscious decision on how far they wish ideas to travel, and support this accordingly.

6. Conclusions

In organizations there are often discrepancies between the wider organizational perspective, and the perceptions of teams and individuals lower down the company hierarchy. This needs to be taken into account when developing and deploying learning or knowledge management initiatives within the organization. Generic concepts from high-level management can traverse team boundaries of the organization, supporting fast strategic change, but need to be customized in order to impact on work practice. Local knowledge is easier to apply but has limited scope. Neither high level nor local knowledge is superior. Each has its own strengths and weaknesses. Learning initiatives should recognize this and put mechanisms in place to support the interfacing of group and organizational perspectives.

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