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Group Inquiry to Aid Organisational Learning in Enterprises

Abstract

This paper describes a method for surfacing and exploring 'situated knowledge' in SMEs, with employee groups utilising a 'low impact' form of group support system (GSS), based on wireless handsets.. Some results of piloting this method are summarised and one intervention is presented in detail. The method encouraged organisational members to give voice to the emotions and politics of leadership and learning in organisations, and helped to articulate how situated knowledge was ignored, as well as utilised. The method is practical, and may be used by organisations for themselves to aid the development of group as well as individual reflection, to stimulate the consideration of change.

Key Words:

Group Support Systems, Organisational Learning, Situated Knowledge

1. Introduction

The activities described in this paper are aimed at finding a solution to a key problem in enterprises: the difficulty of acquiring, integrating and applying learning and knowledge to sustain growth. A practical approach to surfacing political, emotional and relational dynamics is described, which utilises a particular design of Group Support System (GSS). The paper explains how a group support system can aid the process of organisational learning, employing a simple method which organisations may adopt and use internally for themselves. The method provides an experiential approach to helping work-groups to '*understand and work with the complex social and political processes which characterize living and working in organisations'* (Vince and Reynolds, 2007).

 Methods of encouraging face-to-face conversation may be particularly relevant in an age of media-generated communication, given that it has been found that people perceive the latter to be less useful, or beneficial to well-being, than the former (Schriffin et al, 2010). Group support systems have been found to reduce communication barriers and facilitate decision- making activities by increasing participation and providing increased opportunities to influence the opinions of others in groups (Fjermestad and Hiltz, 1999; 2001, Fjermestad 2004). Group decision support has also been developed to help identify the core knowledge to be developed by an organisation (Lin et al, 2007). However there is little evidence that demonstrates the usefulness of group support systems as a tool to support organisational learning. Bennet and Tomblin (2006) have contrasted the theoretical underpinnings of organisational learning and knowledge management, and have provided a framework to guide the application of information and communication technology to both of these closely related fields.

The approach to organisational learning which we describe is based on a form of 'group inquiry', which has been used in one large organisation (Vince et al, 2003). The present paper presents our experience of extending 'group inquiry'

to small and medium sized organisations (SMEs). Features of this extension are:

- The organisational context (especially collective learning in SMEs) where there have been few previous empirical studies.

- A field based demonstration of how a 'low impact' form of group support can aid employee groups to access their own 'situated knowledge' in a number of situations.

- An emphasis on internal validity of the method in terms of generalisability of the findings of one GSS design, and one way of use, across a variety of contexts. (e.g. see White, 2006; Finlay, 1998; Eden and Ackermann, 1996, for reviews of the evaluation of GSS).

The method is under-pinned by a social perspective of the process of organisational learning, focusing on the experience and sense-making abilities of groups of people in a work-place (Higgins, 2009). From this perspective learning emerges from social interactions, and the learning itself is concerned with surfacing local knowledge about situated practices, embedded relationships, and power structures. Of course, this type of learning is always present, otherwise it is hard to imagine any co-operative activity at all! The question is: *can methods be employed which can accelerate this learning in a world which is changing, around and within the given enterprise?* In commercial terms, a successful method could give a competitive advantage in terms of accelerating effective change.

Our reasoning has been informed by several perceptions of organisational learning, summarized as follows:

There is a tendency to regard organisational learning as the sum or result of individual learning in an organisation. An over-emphasis on individual learning has minimised the importance of studying collective learning. This means that there is often little attempt within organisations to

consider the systemic dynamics that impact on the organisation. Consequently, the potential for learning and change at an organisational level is under-developed or ignored.

The SME sector is an important research site because the focus is not only on individuals within the organisation, but also on a set of diverse stakeholders connected to the enterprise, its creation, and its growth.

Learning is defended against as well as desired. Organisational learning is unlikely to occur without explicit links between the human experience of learning and the broader, organisational power relations within which the learning experience is created and contained. Learning is a political as well as a personal experience within an organisation: it serves both a desire for change, and a desire not to change.

Organisational learning involves analysis of the relationship between learning and organising. Such an analysis involves an approach to reflection that goes beyond notions of 'reflective practitioners', and that is designed with the intention of questioning the assumptions and practices that have emerged through organising. This broader view includes the identification of those organisational designs that have emerged through organising, and that can come to constrain learning, or make it possible. An outcome of this broader view of organisational learning is a re-evaluation of the form and function of reflection in relation to organisational processes, and the development of methods which may accelerate them.

The study of organisational learning in SMEs is important because the focus of learning in this sector has been on the development of the skills and knowledge of individual entrepreneurs, rather than on the organisational designs for learning that can sustain and develop successful business activity. There is currently a need to provide empirically informed ideas about organisational learning in SMEs in order to support SMEs in creating organisational designs and activities that can encourage collective learning and sustainable development. There has been little research that has attempted to highlight ways in which small and medium sized enterprises

might organise in order to promote collective and organisational learning to promote new organisational practices.

A challenge for SMEs is to appreciate the difference between the concepts of individual learning and of organisational learning; and to apply organisational learning within a broader notion of the enterprise. Little empirical research has been undertaken into these dynamics within SMEs.

The method described in this paper represents one approach, a designed intervention into 'normal' practice, intended to give the members of an organisation an opportunity to understand the emotions and politics which have come to shape their organisation, and its practices. Such understanding can lead to reflection on, and questioning of, existing assumptions, with the possibility of making strategic changes, to the benefit of the organisation as a whole.

Development of the method was based on a pilot study of 'situated knowledge' in each of seven SMEs. Both knowledge and learning were studied using a 'low impact' form of Group Support System (GSS), based on wireless handsets (Gear and Read, 1993). The advantage of using this design of GSS was that it helped to minimise individual defensive reactions against learning, while encouraging dialogue, on a range of 'difficult' organisational issues concerned with power relations, leadership and emotional states.

The paper concludes that the GSS method is a useful tool for organisations to explore complex issues of organisational behaviour and action; and that the open exploration of these issues, as forms of situated knowledge, are important to company strategy and development. The field-work from seven SMEs supports the proposal that a 'low impact' form of group support can provide opportunities for organisational learning. The approach may reveal and clarify the ways in which employees experience the company, its leadership and its operation.

2. Organisation Learning

Our perspective on organisational learning is connected to specific parts of the current body of knowledge. We locate ourselves with other academics who believe that 'learning… *stems from the participation of individuals in social activities'* (Gherardi and Nicolini, 2002; Elkjaer, 1999 and 2003), as well as authors who are interested in the politics of organisational learning (Coopey, 1995; Coopey and Burgoyne, 2000; Vince 2001), and emotion and organisational learning (Antonacopoulou and Gabriel, 2002; Vince, 2002 and 2004; Gherardi, 2003; Fineman, 2003). From this perspective, organisational learning is seen as both a social and political process. It happens with and through other people, it is relational by nature, and emotion is seen as 'the core of learning as well as its product' (Fineman, 2003). In addition, there is an emphasis on what is constructed and reconstructed through action. Learning is promoted and resisted through communities (of practice), through groups of individuals connected through their attempts at organizing and contributing to the implementation of their ideas in practice. Therefore, the study of organisational learning involves the identification of actions and invites reflection on the ways in which organizing perpetuates itself (in practice) within the context of broader social and organisational emotions and power relations.

A great deal of research has been undertaken into organisational learning in the past fifteen years. Even so, as yet '*we know little about learning at an organisational level'* (Schein in Coutu, 2002), and this seems to be particularly true in relation to SMEs. Therefore, our general focus in this paper is on attempting to better understand, and reveal the relationship between, learning and organizing, rather than to focus on individual learning and the impact this might have on the organisation. An over-emphasis on individual learning has minimised the importance of studying the organisation of learning. This means that there is often little attempt within organisations to consider the systemic dynamics that impact on the organisation. As a consequence, the analysis of learning and change at an organisational level has been under-developed or ignored (Vince, 2001).

The distinction between individuals' learning in an organisation and organisational learning has been referred to as 'learning-in organisations' and 'learning-by organisations' (Lipshitz and Popper, 2000). The first implies learning that is directed at improving the proficiency of organisational members, the second has organisational level outputs, which implies changes in formal and informal norms and procedures. It is particularly this second aspect – 'learning-by organisations', to which we are seeking to contribute. We are aiming to add to knowledge concerning the specific dynamics of learning and knowledge creation and distribution. March (1996) has shown that such dynamics arise from attempts to manage tensions between exploration (trying to shift existing assumptions through new learning) and exploitation (trying to reinforce existing assumptions through control mechanisms). Such tensions are characteristic of the relationship between learning and organizing.

We think that it is important to study how knowledge is constructed and used, as well as looking at the potential barriers to the utilisation of knowledge and learning (e.g. how it is ignored and abandoned). The full utilisation of the knowledge that companies generate (through their everyday practices and through attempts to learn) is unlikely to occur without explicit links between the human experience of learning and the broader, organisational power relations within which the learning experience was created and contained. Learning is a political as well as a personal experience within an organisation: it serves both a desire to change and a desire not to change.

To summarise, our conceptualisation of organisational learning is that it concerns organising processes of learning ('learning-by organisations') that are fundamentally informed by emotions and politics. In addition, the ability to identify 'situated knowledge', and to relate this to attempts to learn, is seen as one way of shifting assumptions, norms and procedures. Our perspective emphasises the importance of identifying organisational dynamics and (implicit) designs that have emerged through organising and that come to constrain learning, or make it possible. The method we describe provides a way for employees to make sense of both their own and others' perceptions of

their situation, that is their 'internally constructed version of reality' (van der Heijden, 1996): the social and political engagement that is shaped by individual and collective perceptions.

3. Situated Knowledge

The emphasis on learning in companies has tended to be on individual abilities to learn and to apply new knowledge, rather than on gaining an understanding of the broader, collective knowledge that is created as an inevitable part of organising . We use the term 'situated knowledge' (Lave and Wenger, 1991) to refer to individual and collective knowledge that emerges from the experience of working in a company. Such knowledge is constructed both from everyday experience and practice, as well as from the underlying political, emotional and relational dynamics that are characteristic of a particular enterprise. We assume that, despite the possibility of a high degree of similarity, no two organisations are the same in terms of the knowledge they have created, or in terms of the potential for learning that is implied by such knowledge.

The paper is concerned with presenting a practical approach to the acquisition of situated knowledge, defined as local knowledge which is specific to the work and practices of a given enterprise. Two inter-related strands can be discerned: knowledge which is work and task orientated; and knowledge that relates to the social and working practices. We take the view that in both cases, knowledge is created by people in social, working conditions. This implies that individuals and groups need opportunities to access this knowledge in what has been termed 'communities of practice' (Wenger,1998), which emphasise the social aspects of how people are working together in an enterprise.

Situated knowledge encompasses the established skills and competencies which are available, intellectual know-how, processes and procedures which have evolved over time, along with rules and roles, and with which an enterprise exists. These include product/service aspects, as well as supplier,

customer, and competitor knowledge. Equally, situated knowledge involves less tangible aspects concerned with how company members and groupings relate to each other, regard each other, and interact with each other, in sharing power and knowledge, making decisions, and enacting leadership. Also, and most crucially, situated knowledge is concerned with how these activities can both engender, and drive, a range of emotional states in the minds of individuals and groupings, which is emotional knowledge.

These forms of knowledge are the creation of people working together in some co-operative and purposive way, which is how this type of knowledge acquires meaning. What constitutes knowledge in some context only has relevance and value in that context. Because this knowledge exists as a result of joint activity, it requires activities which are intrinsically social and collective to surface its existence, and open up the possibilities of individual and organisational learning (see, for example Holman et al, 1996).

We describe one such activity aimed at collective learning of situated knowledge in SMEs. We argue for a form of social activity involving 'conversational learning' (Jensen et al, 2002; Turner et al, 2009) to address the contextual nature of situated learning, facilitated by a 'low impact' form of group support. The approach which we describe is designed to surface relationships (of power) in a social context which are usually difficult to explore openly because they may be 'uncomfortable' or potentially threatening to individuals or groupings. Any review of established relationships opens up the potential for change to relations with a redistribution of power (Foucault, 1979). The approach is designed to be participative and interactive, limiting the threat to individuals, with the potential for learning and change.

4. Group Support Systems

The approach taken to acquiring knowledge and learning in organisations utilises a Group Support System (GSS) known as Teamworker. Group Support Systems may be defined as *"interactive computer-based environments that support concerted and coordinated team effort towards*

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completion of joint tasks." (Nunamaker et al, 1997). There are a number of different types of GSS, however many share common characteristics. These include enhanced communication facilities between group participants, enhanced modelling and interface facilities to permit voting and ranking, and the availability of both qualitative and quantitative decision support tools, with which members are comfortable, which are transparent in operation and which are flexible. Such systems may be designed to embrace features of group-based processes, including processes of information sharing, storage and retrieval, and also of learning (Wilson et al, 2007).

A number of studies have considered how best to evaluate the effectiveness of GSS in different contexts (e.g. Stevens and Finlay, 1996; Eden (1996); Finlay, 1998; Shaw et al, 2002; Groves et al, 2002). White (2006) has presented the conflicting views of how to evaluate GDSSs. In particular, the contrasting claims of a positivist versus an interpretivist approach are reviewed. Others have analysed published studies to assess the effectiveness of GSS in experimental and field studies (e.g. Pervan, 1998; Fjermestad and Hiltz, 1999, 2001; Fjermestad 2004). These studies suggest that GSS are more successful when used in field situations than when used in experimental settings. Based on an analysis of 54 field studies, Fjermestad and Hiltz (2001) suggest that the use of a GSS in field situations can improve the efficiency, effectiveness and satisfaction of group processes, and can improve the likelihood of reaching a consensus.

Alavi and Leidner (2001) identified a need for more research in IT enabled collaborative learning and a number of studies have been specifically concerned with improving collective learning with the support of a GSS (e.g. Hardless et al, 2006; Read and Gear, 2006; Groves et al, 2006). Facilitated group decision support systems (GDSS) have been proposed by Hasan and Crawford (2007) as a socio-technical approach to aid social learning and knowledge mobilisation in an organisation to support innovation.

Most studies of GSS studies have been concerned with applications and trials of designs that comprised a room-based network of computers. The present

field study used a form of Group Support System (GSS) known as 'Teamworker', a system that has been extensively used to support a number of different types of groups and tasks (e.g. Gear and Read, 1993; Read et al, 2000, 2004; Groves et al, 2006). There is a growing interest in group support systems generally, and of 'low impact' forms which use wireless handsets, in particular (see a review by Banks, 2006, of 'audience response systems' used in higher education).

The system comprises a number of wireless handsets, one for each group member. Each handset has a 0 to 9 digital keypad and this allows each member of the group to transmit one or more numbers to a receiver linked to a personal computer. Typically, multiple choice type questions are posed to the group on a large screen. Each participant responds by pressing a key on their handset. It is important to note that these inputs are anonymous, and that all responses are received before an aggregated bar chart is displayed back to the group on the screen. The set of questions can be programmed into the software in advance and the responses to each question can be saved for later review and analysis. The feedback screen for each question is used as a focus for debate and discussion of the reasons for the differences or agreements that are displayed (e.g. see Figure1). We believe that it is these features of simultaneity of inputs, and anonymity of inputs and output, which makes this design potentially useful for organisational learning.
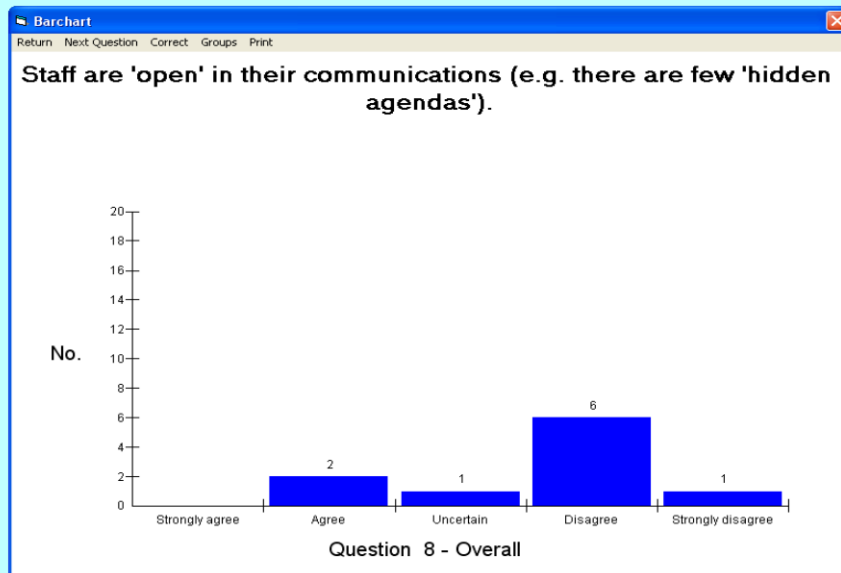
Figure 1. Example of a Feedback Bar Chart

5. Design of Field Trials

The choices that we made about the design of this study were primarily influenced by our need to find a way of capturing data that represented situated knowledge. We were also concerned to explore and analyse the nature of this situated knowledge.

The SMEs included in the study were those in South Wales who expressed a preparedness to take part. The employees in each SME were invited to take part by the HR manager or Chief Executive, without coercion. Group sizes ranged between 6 and 10 employees. Each session involved a mix of shop floor, and more senior, staff. The selection was made by the management in each case, and was based on the availability of staff from production and other activities on the given day. We decided that it was not necessary, or useful at the present stage, to design a 'more scientific' sample in order to explore the value of group support for organisational learning in SMEs, given the low state of current knowledge.

Seven SMEs were involved in the pilot study, and in each organisation an employee group was used to answer the question set and to engage in the session. Two stated aims were given to each employee group:

- To generate collective reflection on how the organisation is managed.
- To initiate a dialogue on how the organisation is managed.

Each group session lasted approximately 2 hours, and was facilitated by an external facilitator, who was not one of the research team, with the minimum of intervention. The facilitator was asked to stay out of the dialogue as much as possible, with the exception of occasions when it was potentially insightful to ask participants to provide an example to illustrate the point they were making.

For each session in a SME, the procedure followed was to introduce ourselves to the participants, and state the aims. A ground rule was also stated: '*the discussions that take place during the session should remain confidential, meaning that if, at any time after the session, you discuss anything that anyone has said during the session, that you should do so without attributing comments to any individual*'.

An audio-recording of the sessions was made, despite the danger of employees feeling inhibited by its use. In order to minimise the 'inhibitions' problem, the group members were assured that the recording would only be used by the research team for assessment of the main, emerging themes, and would not be made available to senior managers within the firm.

The members of the group entered their personal response to each of a series of questions presented on a large screen, without any discussion or feedback. This was followed by feedback of each question as an aggregated bar chart, and used as the starting point for a group discussion about the meaning and implications of the display. It is important to note that the

declaration of personal inputs, or views, was not a requirement during the discussions, but individuals did sometimes decide to declare their personal position or input.

A question set of 30 questions was used within each SME, designed around three key issues which are centrally concerned with organisational learning, following a theoretical framework presented by Vince – *power, leadership,* and *emotion* (Vince, 2001; Vince, 2004, Ch.3). The questions were designed using a 5-point Likert-type, agree/disagree scale. The question set is shown in Table 1.

Question Number	Question Text
1	Decision-making power is widely shared throughout the organisation
2	The predominant management style is participative rather than 'top-down'.
3	I feel able to participate in decisions which are important to the organisation.
4	Senior managers commonly delegate decision-making to others.
5	It is easy for me to raise awkward issues with managers.
6	Staff are encouraged to speak out.
7	Difficult issues are not normally brushed under the carpet
8	Staff are 'open' in their communications (e.g. there are few 'hidden agendas').
9	When the going gets tough, people help each other.
10	People are willing to admit when they make mistakes or errors of judgement.
11	Conflicts and disagreements are dealt with openly.
12	There is generally a high level of trust between members of staff.
13	I feel comfortable expressing my feelings in the organisation.
14	Important issues for the organisation are discussed readily.
15	Staff rarely feel anxious.

16	Staff rarely behave defensively.
17	We do not have a blame culture in the organisation.
18	Staff are encouraged to reflect on the organisation's processes.
19	I rarely feel threatened when things are going wrong.
20	I rarely feel powerless in the organisation.
21	Important issues are not avoided.
22	We have regular meetings to review progress and discuss issues.
23	I would welcome more responsibility within my job.
24	I am satisfied with the way I am managed by my immediate boss.
25	We learn from mistakes, and are not blamed for them.
26	I enjoy my work.
27	I trust the information I get from senior management.
28	I receive open and honest feedback about my performance.
29	I have the opportunity to influence the way I work.
30	The organisation needs to change.

Table 1. The Question Set Used to Capture Situated Knowledge

The GSS provided immediate, visible results, shown graphically to each group. The importance of the graphs is that they highlight differences and similarities of opinion while maintaining anonymity of personal response.

The outputs from group sessions were recorded for analysis in two ways. The inputs from the handsets provided a quantitative record of all judgements. The dialogue was audio-recorded, and then transcribed for later analysis. These two forms of record, one quantitative, the other qualitative, complemented each other in terms of analysis and conclusions. The quantitative information provided a survey of feelings and opinions from groups, while the dialogue provided insights into the reasons why these views were held.

During a group session the feedback display to each question was used as a means of stimulating a conversation focussed on the range of responses, (that is, range of perceptions). A low level form of facilitation, which simply

summarized each display, was found sufficient to generate conversations focussed on *the reasons for differences*. We found that individuals sometimes declared their own input, and sometimes preferred to maintain their anonymity. The particular usefulness of the bar charts in this context is that they highlighted differences/agreements of perception, and maintained a collective focus. The discussions that emerged from responses to the question set were audio-recorded for later analysis to provide the researchers with insights into situated knowledge within each enterprise.

6. Results of the field Trials

Different themes emerged from an analysis of the conversations in each SME. For the purpose of this paper, which is to describe and show, by example, how the method works in practice to surface situated knowledge, we present some results from two separately managed sections of one of the SMEs, known as 'Tech'. This organisation is a manufacturing company employing 80 staff. The organisation makes components for a multi-national electronics company, and is part of a network of small firms in South Wales that service this multi-national. The organisation is split into two distinct parts which we call Tech1 and Tech2, each manufacturing particular components on separate sites with their own management structure, but the same chief executive.

6.1. Feedback Screen Responses

Separate sessions were organized for Tech1 and Tech2. There were significant differences between Tech1 and Tech2 in terms of the responses obtained from each of these employee groups.   These differences are demonstrated with reference to the four questions 3, 10, 22 and 26 (see Table 1 for details of the question set). Figure 2 shows the Tech1 and Tech2 bar charts for each these four questions. Discussion of the responses for each of these questions is below:

Q3. I feel able to participate in decisions which are important to the organization

80% of the participants representing Tech1 feel able to participate in decisions which are important to the organisation, as compared to only 22% representing Tech2. Furthermore, 55% of the representatives of Tech2 felt unable to participate, compared with 10% in Tech1. This implies a much greater feeling of participation in Tech1 than in Tech2.

Q10. People are willing to admit when they make mistakes or errors of judgement

80% of the representatives of Tech1 believe that colleagues are willing to admit to making mistakes or errors of judgement, as compared with only 22% from Tech2. None of the representatives of Tech1 disagreed with the statement although 20 percent were uncertain. In contrast, 66% of the participants from Tech2 felt that people are not willing to admit to making mistakes or errors of judgement, with two thirds of these on the pole of strongly disagreeing. These results strongly suggest that a blame culture exists in Tech2, but not in Tech1.

Q22. We have regular meetings to review progress and discuss issues

In Tech1, 90% of participants stated that regular meetings are held to review progress and discuss issues, compared with 44% from Tech2. In addition 56% from Tech2 did not feel that there were regular meetings of this type, compared with only 10% from Tech1. These results are significantly different, especially as there was no uncertainty in responding expressed by either group of participants.

Q26. I enjoy my work

80% of the participants from Tech1 indicated that they enjoy their work, compared to 67% from Tech2. On the other hand, 20% of the participants

from Tech1, and 22% from Tech2, disagreed with the statement. Interestingly, given the results to the other questions, 33% of Tech2 representatives strongly agree that they enjoy their work, as compared to 20% from Tech1. These results show less significant differences between Tech1 and Tech2 than do those of the other questions discussed above.
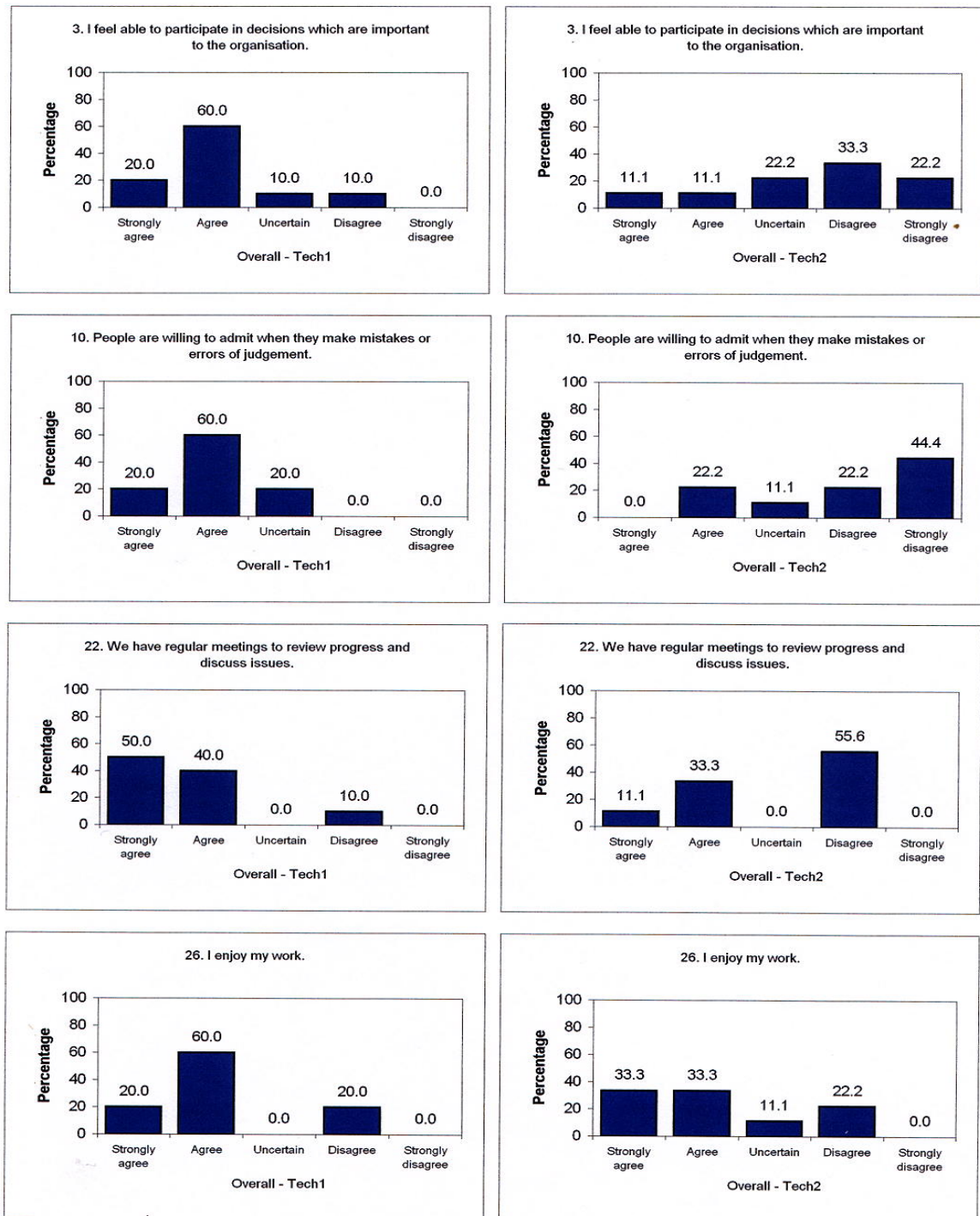

Figure 2. Comparison of Responses for Tech1 and Tech2

6.2 . Analysis of Dialogue.

The dialogues that took place as a result of the review of the bar charts for Tech1 & 2 were captured on a digital audio mini-disc recorder. We have provided a selection of quotations in Table 2 to illustrate the differences between the two parts of the Tech Company.

Tech 1 employee quotes	Tech2 employee quotes
• Everybody feels as if they could go and speak to any of them (the managers)" • "They are bending over backwards to please us because without us they couldn't go on. It takes a long time to learn the skills" • "We don't have any conflict really… you tend to sort things out between yourselves if there is any" • "There is a lot of fairness here. Everyone is treated exactly the same. You are asked 'do you mind going on a job', you don't mind being asked it is when you are told. But if you do mind, you still have to go. You are asked the proper way" • "At the moment they are prepared to say 'stop the line', you don't have to carry on regardless, things are sorted out on the line at the time when the problems occur" • "We are down to earth and we can speak, you've got to be able to say what you think to each other" • "Speak your mind, say what you think" • "They ask us if we've got any problems, whether they want to hear them is another thing"	• "The general manager said 'I want it' so we had no option but to do it" • "They just don't want to know, they make the decisions and that's it" • "There is delegation going on but when something goes wrong it is always someone else's fault. We get the blame for things" • "We have managers and senior managers. Managers can' agree among themselves, they fear for their jobs" • "The most senior managers won't even speak, they don't want to listen or even look at you, that's how I feel anyway" • "If you speak out then they say 'shut up, just get on with it'. You can be talking to them and they walk away" • "If they can save money rather than spending on us lot. We've got to have safety boots, we are still waiting for them. Trainers are not acceptable, but we are still wearing trainers" • "They call a meeting every Monday, a quality thing, it's only about ten minutes. • Every time there is a statement from management you are waiting for a follow up" • "Upstairs don't want to know if

	there's a problem" • "There's no trust between us and them." • "We are not given a choice, they do not discuss things, everything comes through the grapevine" • "They are not ready to give an open answer" • "Sometimes there is so much hassle you come here with a headache" • "We are treated as second and third class citizens"

Table 2. Employee Quotes from Tech1 and Tech2

6.3 Discussion of differences between Tech 1 and Tech 2.

Tech1 and Tech2 are two parts of the same organization, representing tensions that exist in the organisation as a whole. Although we have chosen the above quotations from the recorded dialogue to emphasise the difference, differences between Tech1 and Tech2 are clearly in the collective perspective that has come to characterise the experience of working in either part of this company. Understanding the tensions that shift the experience of work from one set of emotions towards another is important because learning often emerges from seemingly contradictory or conflicting positions. In Tech such contradictions were easy to see because they were represented in and acted out by the two employee groups.

From our analysis of the dialogues in both parts of Tech we were able to identify three organisational tensions that are likely to underpin the promotion, or avoidance, of collective learning. These are:

- A feeling that 'saying it' gets you somewhere/ a feeling that 'saying it' gets you nowhere.
- Mistakes can happen/ Mistakes don't happen.

- 'Us and them' works ok/ 'Us and them' doesn't work.

There are two fairly simple, but important components to situated knowledge (and the potential for organizational learning) that are common to both parts of Tech. First, the staff members collectively believe that they should be able to say what they think and feel (and that doing so is going to get staff 'somewhere', rather than 'nowhere'). Second, that there is a 'proper way' to be treated and asked to carry out tasks. These two ideas also represent both what is successful about Tech1 and what is problematic about Tech2. The organising practices of *both* parts of Tech are informed by these collective dynamics. They are simple messages that can be seen to have powerful effects because they represent the difference between a part of the company seen as 'successful' and a part of the company seen as 'unsuccessful'. All parts of the Tech organization may benefit from being informed of these two collective dynamics, with a view to making changes to organizing practices and strategies.

7. Some Practical Considerations

Our aim was to produce an environment in which people were consciously participating in the creation of shared meaning, and the development of new and aligned actions (Dixon, 1999). Our assumption is that situated knowledge is a unique construction of the emotional, relational and political dynamics of a specific context.

It should be emphasized that the design of the set of 30 questions was based on the need to capture data concerned with issues of leadership, power, and the interplay of these with emotional states. (see model of organisational learning, Vince, 2001, 2002). One lesson for us was that the original set of 30 questions was long for one session. Analysis of the dialogue also showed that certain pairs of questions generated conversations focused on the same themes in a given SME. On the basis of retaining only those questions which raised fresh themes, we were later able to reduce the question set to 16, (see Table 3).

Question number	Question
1	I am in control of what I do
2	My actions make a difference to the organisation.
3	I can grow and develop in my organisation.
4	I am part of a working community.
5	I enjoy my work.
6	The activities I am engaged in are meaningful
7	Decision making power is widely shared throughout the organisation.
8	It is easy to raise awkward issues.
9	Managers are normally 'open' in their communications, with few hidden agendas.
10	People are willing to admit when they make mistakes or errors of judgement.
11	Conflicts and disagreements are dealt with openly.
12	There is trust between people at different levels of the organisation.
13	We have regular meetings to review progress and discuss issues.
14	We do not have a blame culture in the organisation
15	We receive open and honest feedback about our performance.
16	The organisation needs to change.

Table 3. The reduced question set

Our experience suggests that one can probably use a set with fewer than 20 questions without any significant loss of meaningful information at a session. However, if the research is to reveal useful information relating to each of the three main issues - power, leadership and emotion - one should probably not reduce the number of questions below about 15. This can allow for at least four questions focussed on each of the three issues (power, emotion and leadership). The reduced question set was not 'validated' in a statistical sense, but is 'validated' in the sense of being sufficient to raise the issues which surfaced in conversation in the seven SMEs which were involved in the study.

More important than the number of questions is the way in which the facilitator was able to prompt meaningful contributions from the employees during

sessions. In early sessions (the first two or three firms visited) there tended to be too many contributions from the facilitator. Some of the employees in the sessions had little experience of contributing to discussions on questions related to power, leadership and emotion within their organisation. Understandably, there were sometimes silences of up to about a minute, particularly for the first one or two questions. The temptation for the facilitator (an experienced lecturer) to 'help out', and fill the silence was sometimes hard to resist. This became obvious in parts of some of the audio -recordings. We learned to use 'silence' as a stimulant rather than a problem, particularly for the first screens presented back to each group, so that a practice of 'self-involvement' developed at the start of a session. This approach led to some quite long unfilled silences, but also to an improvement in the quantity and quality of the contributions of the employees attending the session.

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In running the supported sessions, short, open-ended 'prompts' to encourage conversation were found to be helpful in stimulating discussion, depending on the degree of congruence that existed between their responses to a given question. A comment from the facilitator pointing out differences, or similarities, of responses was frequently sufficient to open a conversation. On some occasions, the facilitator would ask a speaker to provide an example of the occurrence of a declared mode of behaviour. However, the preferred, (and frequently used), approach to generating conversation was to wait for the first person to break the 'silence' which ensued as participants studied each feedback screen.

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Another issue that had to be considered was the question of whether senior managers in the SME should attend the sessions along with their employees. On the one hand, if the managers attended it would show a degree of managerial commitment to the sessions, which could have a positive effect on the group members. On the other hand, the presence of senior managers could be seen by some group members as a threat (depending on the existing culture of the firm) and could inhibit honest discussion. It was also important for us to achieve and maintain a high degree of co-operation from the senior managers of the firms involved, and so we decided to leave the decision (as

to whether to attend) to the senior managers themselves. In the event, as far as we could judge, the presence of the managers did not have a significant inhibiting effect on discussions, but this issue remains important.

8. Reflections on Experience

In this section we broaden the discussion by posing some questions to ourselves, and generate responses, which represent our thinking at this stage.

- If situated knowledge is important, how is such knowledge constructed, used, ignored and abandoned?

On the one hand it can be argued that situated knowledge relating to norms, procedures and relationships, and 'the way we do things here' are essential prerequisites to the continuity of the activities of any firm, big or small. However, these relate to current operations, dependent on single-loop learning, and do not lend themselves to making changes to 'the way we do things here', which relates to double-loop learning as a means of informing change. The consideration of revised ways of operating implies, inevitably, some relational changes with implications for the ways in which power is shared and leadership is enacted. These are difficult issues for a firm to address in open forum, partly because it may not seem to serve the best interests of those in power, or those content with the status quo. The paper describes one practical way of breaking into this cycle, with its in-built tendency towards self-maintenance.

- Can we provide, have we provided, convincing evidence for the claim that 'a low impact GSS can provide opportunities for organizational learning'?

The low impact GSS and associated protocol provide the opportunity for an intense episode for the participants from a firm. The sample of people from

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across departments and from all levels of the organization are not typically members of a group who regularly work together, but will usually know each other. This means that whatever learning takes place is not bounded to one part of the organization. The other key component is the nature of the set of questions which were posed to the groups. These concerned relational issues of organizing, and the interplay with (sometimes unconscious) emotional states, issues which are not commonly addressed or confronted in organizations. However, the anonymity guaranteed by the handset technology, with which each person responds, appears to make it easier, and presumably worthwhile, for some honesty of response to occur. Apparently, the threat to the individual is reduced to a level which increases the potential for some risk-taking behaviour. This propensity to take risks also continued in the ensuing discussion of the reasons for the appearance of the feedback screens, even when those screens may be critical of certain relationships, or ways of operating and behaving in the organisation.

- Does the method reveal and clarify the ways in which employees experience the company, its leadership and operation?

The handset responses of themselves reveal little of the ways in which employees experience their company, its leadership and operation. The feedback screens are the means of generating conversation which may reveal the reasons behind each display. These conversations provide a vehicle for participants to learn about themselves from each other. In our experience it is often the more senior staff who learn the most, with comments at the end such as: '*I have to say I have learned something today*', perhaps also indicating a degree of surprise!. The ease with which this conversation seems to focus on key issues, with little or no facilitation, perhaps indicates a degree of contained emotion, for which the session provides a means of expression. It is relevant to note that, in response to an anonymous post-session question, 53% of the participants felt that they had gained insights into how the organisation functions, while a further 28% were uncertain how to answer this question. All the organisations involved with the pilot study have requested repeat sessions which indicates that the method has value for them. Of the 57

participants, 95% felt that both of the stated aims of the sessions were achieved.

- What insights has the research generated, and therefore what is the contribution we have made to research on organizational learning?

The sessions in each company used the same questions. However, the nature of the conversations relating to each question screen showed differences on each occasion. This leads us to suggest that the organizational issues relating to a given question in a given organization are likely to be different in each case.

9. Discussion and Conclusions

This paper makes a contribution to organisational learning by detailing and demonstrating a practical approach to both surfacing and researching 'situated knowledge', based on the use of a 'low impact' form of group support system with employee groups. The method is shown to facilitate a form of 'collective learning', providing opportunities to understand the nature of 'situated knowledge' in a given context. The method provides a means for an organisation to explore its own situated knowledge, *for itself*, without the necessity for an outside agency to intervene*.

The simple design of GSS based on wireless handsets was particularly appropriate to the task, providing confidentiality and simultaneity of inputs to each question from each member of staff in the group. The low level of facilitation, with no requirement to participate actively, or to declare ones personal input, reduced the degree of anxiety which may be present when responding to sensitive questions which relate to working practices. Anonymity of inputs may be a 'double-edged sword' in some decision making contexts (Klein, 2002; Read et al, 2000b, 2004), but it does provide a degree of safety allowing more participation to take place at an organisational learning session.

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The GSS was used to support employee groups in the discussion of organisational issues and dynamics that are often avoided, or discussed 'elsewhere' (that is, not openly in the organisation), and that relate to conflicts and/or power relations. The system proved to be particularly useful because the anonymity of responses minimised individual defensive reactions to these 'difficult' issues. We were able to encourage a *dialogue*, and capture data on emotional, power and relational dynamics within each SME, and highlight collective perspectives on these dynamics. Dialogue in this context implies thinking together in order to reflect on the assumptions that organising has created over time. The process of dialogue is aided when it is possible to surface and to explore differences of meaning and opinion on critical issues in a non-adversarial way. The central purpose of dialogue is to:

> '*Allow a free flow of meaning and vigorous exploration of the collective background of their thought, their personal predispositions, the nature of their shared attention, and the rigid features of their individual and collective assumptions'* (Isaacs, 1993).

The case study demonstrates a key issue concerned with the acquisition of 'situated knowledge': the difficulty of raising potentially sensitive issues relating to power and leadership in a collective way. The political and emotional aspects which are central to organisational existence, and created by the collective for practical reasons, can be exposed by a suitably designed group-based method, as presented in this paper.

A value of the method is that it encourages a group to reflect on what has been exposed, with a view to change. The anonymity of individual inputs, coupled with the non-intrusive design of the on-line technology, led to group sessions becoming 'intense episodes', during which data on underlying emotions and power relations emerged in a less-threatening way.

The nature of the interaction in a group will be linked to inter-connected organisational dynamics. On the basis of the evidence which we have presented, the use of 'low impact' group support can offer opportunities for

individuals to suspend their defensive reactions to an extent which is sufficient for the group to build a more collective, as well as individual, understanding. Each member of a given group leaves, to varying degrees, the safety of their own power and role, and enters into the collective domain of the group. The degree to which each does suspend their (external) role and position may govern the extent and nature of the group's learning (Moscovici and Doise, 1994). It is arguable that, at times, individuals may be locked into rigid positions due to external roles and relationships, prohibiting participation. Further research of this potential issue is required, which also relates to research of reflexive aspects, to understand how individuals and groups may learn to use the method on repeated occasions.

The method has the potential not only to aid organizational knowledge acquisition in a given organisation, but also to provide an instrument with which to address studies into the nature of this form of learning itself. In particular, the method may enable an investigation of the nature of 'situated knowledge' in various organizations, parts of one organisation, and in different business contexts. The objective of the method is simply to provide a forum which is safe enough for differences to emerge, be discussed, and in that discussion for learning to take place. The paper describes a way of doing this with the aid of a particular design of GSS. We cannot claim that the opinions of one group are representative of the whole organisation. Indeed, differences between groups in an organisation warrants further studies.

An application of the method in a larger organisation has been reported. (Vince et al, 2003). The organisation was broken down into departments for repeated, supported sessions. An issue for applications in larger organisations is how to design sessions so that both inter and intra departmental learning can take place, while maintaining a low level of threat to individuals. Another issue concerns the presence, or not, of more senior managers at sessions. There is an opportunity for human resource (HR) practices to contribute towards the design of sessions in order to encourage

appropriate behaviours and interactions in each situation. (Swart and Kinnie, 2010).

There is potential for researching the impact of this form of collective learning on processes of change and strategic renewal over time in longitudinal studies. For example, the use of the same set of questions at repeated sessions may enable studies of connections between the learning which takes place at sessions, and the implementation of changes. The method also makes it possible to focus attention on novel ways of operating and more collective, and perhaps participatory, forms of leadership.

References

Antonacoupolou, E and Gabriel Y (2002). Emotion, Learning and Organisational Change: Towards an Integration of Psychoanalytic and Other Perspectives. *Journal of Organisational change Management* **14**(5): 435-451.

Alavi, M, Leidner, D (2001) *Knowledge management and knowledge management systems: conceptual foundations and research issues.* MIS Quarterly **25**(1): 107-36.

Bennet A and Tomblin M S (2006). A learning network framework for modern organisations. *Journal of information and knowledge management systems* **36**(3): 289-303.

Banks D (2006). *Audience Response Systems in Higher Education.* Idea Group Publishing: Hershey.

Coopey J (1995). The learning organisation, power, politics and ideology. *Management Learning* **26**(2):193-213.

Coopey J and Burgoyne J (2000). Politics and learning. In: Easterby-Smith M, Araujo L and Burgoyne J (eds.) *Organisational Learning: 3rd International Conference. Volume 1*: 275-298. Lancaster University.

Coutu D (2002). *The Anxiety of Learning: the HBR interview with Edgar*

Schein. Harvard Business Review, March: 100-106.

Dixon N M (1999). *The Organisational Learning Cycle, How We Can Learn Collectively*, Gower, London.

Eden C and Ackermann F (1996). 'Horses for Courses': a stakeholder approach to the evaluation of GDSSs. *Group Decision Negotiation* **5**: 501-519.

Elkjaer B (1999). In Search of a Social Learning Theory. In: Easterby-Smith M, Burgoyne J and Araujo L (eds.) *Organizational Learning and the Learning Organisation.* Sage, London.

Elkjaer B (2003). Social Learning Theory: Learning as Participation in Social Processes. In: Easterby-Smith M and Lyles M, *The Blackwell Handbook of Organisational Learning and Knowledge Management*, 38-53. Malden, MA and Oxford, UK: Blackwell Publishers.

Fineman S (2003). *Understanding emotion at work.* London: Sage.

Finlay P N (1998). On Evaluating the Performance of GSS: Furthering the Debate. *European Journal of Operational Research* **107**: 193-201.

Fjermestad J and Hiltz S (1999). An assessment of group support systems experimental research: Methodology and results. *Journal of Management Information Systems* **15**: 7-149.

Fjermestad J and Hiltz S R (2001). Group support systems: A descriptive evaluation of case and field studies. *Journal of Management Information Systems* **17**(3): 115-159.

Fjermestad J (2004). An Analysis of Communication Mode in Group Support Systems Research. *Decision Support Systems* **37**(2): 230-263

Foucault M (1979). *Discipline and Punishment: The Birth of the Prison.* Harmondsworth, Penguin.

Gear A E and Read M J (1993). *On-line group process support.* Omega **21**: 261-74.

Gherardi S and Nicolini D (2002). Learning in a constellation of interconnected practices: canon or dissonance? *Journal of Management Studies* **39**: 419-36.

Gherardi S (2003). *Knowing as Desiring: Mythical Knowledge and the Knowledge Journey in Communities of Practitioners.* Paper presented to the fifth international conference on 'Organisational Learning and Knowledge', Lancaster University, May/June.

Groves S, Gear A and Read M (2006). *Learning and Anxiety: Exploring individual judgement processes in a learning environment with a group support system.* In Banks D (ed.) *Audience Response Systems.* Idea Group Publishing.

Hasan H and Crawford K (2007). Knowledge mobilization in communities through socio-technical systems. *Knowledge Management Research and Practice* **5**: 237-247.

Hardless C, Lindgren R and Schultze U (2007). Technology-Mediated Learning Systems For Project Work. *Scandinavian Journal of Information Systems* **19**(2): 3-36.

Higgins D (2009). Engaging the small firm in learning: practice based theorizing on complex social knowledge*. Journal of European Industrial Training* **33**(1): 81-96.

Holman D, Pavlica K and Thorpe R (1996). Rethinking Kolb's theory of Experiential Learning: the contribution of social construction and activity theory*. Management Learning* **4**(24): 485-504.

Jensen, P J and Kolb, D A (2002). Conversation as Communion: Spiritual, Feminist, Moral and Natural Perspectives. In: Baker A C, Jensen P J and Kolb D A (Eds.) *Conversational Learning An Experiential approach to Knowledge Creation.* Quorum Books, London Chapter 2.

Jones C, Connolly M, Gear A and Read M (2006). Collaborative learning with group interactive technology: A case study with postgraduate students. *Management Learning* **37**(3): 1350-5076

Klein E (2002). Anonymity in Group Support Systems: Philosophical and Ethical Issues. Proceedings of International Conference: '*Managing Information Technology in a Global Environment*', held in Toronto: Idea Group Publishing.

Lave J and Wenger E (1991). *Situated Learning. Legitimate peripheral participation*, Cambridge: University of Cambridge Press.

Lin C, Liu A, Hsu M and Wu J (2007). Pursuing excellence in firm core knowledge through intelligent group decision support system. *Industrial Management and Data Systems* **108**(3): 277-296.

Lipshitz R and Popper M (2000). Organisational Learning in a Hospital. *Journal of Applied Behavioural Science* **36**(3): 345-361.

March J G. (1996). Exploration and Exploitation in Organisational Learning. In MD Cohen and LS Sproull (Eds.) Organisational Learning. Thousand Oaks, CA: Sage, 101-123.

Moscovici S and Doise W (1994). *Conflict and Consensus: a General Theory of Collective Decisions.* Sage, London.

Nunamaker J F Jr., Briggs R O, Mittleman D D, Vogel D R and Balthazard P A (1997). Lessons from a dozen years of group support systems research: A

discussion of lab and field findings. *Journal of Management Information Systems*, **13**(3): 163-207.

Pervan G P (1998). A review of research in Group Support Systems: leaders, approaches and directions. *Decision Support Systems* **23**, 149-159.

Read M, Gear T, and Townend D (2000). Development of an approach to the validation of client assessment models in social services using a group process support system. *Public Management* **2**(2): 251-62.

Read M, Edwards J & Gear A (2000b). Group Preference Aggregation Rules: The Results of a Comparative Analysis with in situ Data. *Journal of the Operational Research Society* **51**: 557-563.

Read M, Gear T and Devold R (2004). An experimental introduction of group process support in social services. *European Journal of Operational Research* **156**: 456-46.

Schriffin H, Edelman A, Falkensten,M and Stewart C (2010). The Associations among Computer-Mediated Communication, Relationships, and Well-Being. *CyberPsychology, Behavior and Social Networking* **13**(3): 299-306.

Shaw D C, Eden C and Ackermann D (2002). Evaluating group support systems: Improving brainstorming research methodology, Working Paper Series University of Strathclyde, Paper No. 2002 – 06.

Stevens C A, and Finlay P N (1996). A research framework for group support systems. Group Decision and Negotiation **5**, Numbers 4-6: 521-543.

Swart J, and Kinnie N (2010). Organisational Learning, Knowledge assets and HR practices in professional service firms. *Human Resource Management Journal* **20**(1): 64-79.

Turner D, Gear T, and Read M (2009). Conversations' in Education, Professional Judgement and Training, *Philosophy of Management* **8**(1): 55-

65.

Van der Heijden K (1996). *Scenarios – The art of Strategic Conversation*, John Wiley, Chichester.

Vince R (2001). Power and emotion in organisational learning, *Human Relations* **54** (10): 1325-1351.

Vince R (2002). Organizing Reflection. *Management Learning,* **33**(1): 63-78.

Vince R, Gear A E, Read, M and Minkes A L (2003). *Group enquiry for collective learning in organisations.* Journal of Management Development **22**: 88-102.

Vince, R (2004). *Rethinking Strategic Learning.* London: Routledge.

Vince R and Reynolds M (2007). *Introduction to Experiential Learning and Management Education: Key Themes and Future Directions.* OUP, Oxford.

Wenger E (1998). *Communities of Practice: Learning, Meaning and Identity.* Cambridge University Press, Cambridge.

White L (2006). Evaluating problem-structuring methods: developing an approach to show the value and effectiveness of PSMs. *Journal of the Operational Research Society* **57**: 842-855.

Wilson M, Goodman P R and Cronin M (2007). Group Learning. *Academy Of Management Review* **32**(4): 1041-1059.