Learning from Others at Work: Communities of Practice and Informal Learning

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Abstract

This paper addresses the question of who is involved in learning in workplaces and ways in which members of workgroups learn as part of their normal work. It draws upon qualitative data from a study of multiple work sites with differentiated work within a large organisation. It examines the value of the notion of communities of practice in conceptualising such workplace learning and suggests that other forms of conceptualisation are also needed.

Introduction

Learning at work constitutes a large part of the learning undertaken by adults during their lives. This paper investigates a fundamental aspect of this: learning from others at work. This is important for two reasons. Firstly, there have been frequent suggestions that formal systematic learning is of lesser importance than informal learning. For example, both Garrick's (1998) analysis of the building industry and Boud's (1999) consideration of the academic profession suggest that informal interactions with peers are predominant ways of learning and that the impact of formal training on practice can be quite marginal. Secondly, it has been argued that the person who is nominally expected by organisations to foster learning in the workplace—the workplace supervisor—may be unable to do so effectively because of the structural constraints of their role. Hughes (2002) has suggested that staff can have difficulties in trusting supervisors to facilitate their learning because of supervisors' formal role in surveillance of staff and the need for individuals to portray themselves as competent workers.

The aim of this paper is to identify ways in which participants within different workgroups in an organisation learn with and from others. It uses rich portrayals of engagements in work sites drawn from work site interviews to raise questions about appropriate forms of conceptualisation of learning in workgroups. It starts with portrayals of the workgroups and moves later to the implications of these observations to theory. It does not aim to address normative questions of the value or efficacy of such workplace learning; rather it acts as a contribution to discussions about the learning that occurs unprompted by deliberate facilitation. It assumes that only through an understanding of formally unmediated learning can secure understandings of mediated learning develop.

In particular the paper poses the question of whether the framework of communities of practice (Lave and Wenger 1991, Wenger 1998) is a useful or sufficient framework for discussions of informal learning at work. According to Wenger (1998), social participation within the community is the key to informal learning. It is embedded in the practices and relationships of the workplace and helps to create identity and meaning. It both complements and can substitute for formal learning mechanisms. Informal learning is often not acknowledged as learning within organisations. It is typically regarded as being 'part of the job' or a mechanism for 'doing the job properly' and is thus rendered invisible as 'learning'. The position we take here is that there is value in rendering learning visible so that it can be consciously deployed in enhancing work and the quality of work life.

The research project on which this paper draws is a joint endeavour between the University of Technology, Sydney and an Australian State government provider of vocational education and training. The project aims to find ways in which informal learning can be more effectively utilised within organisations. The work reported here is part of a broader study focusing on the relational aspects of learning at work that aims to uncover informal learning. It draws on interviews with workers in diverse work sites within a single organisation and presents preliminary findings about how these workers find what they need to work effectively.

The focus on learning from others informed the methodological approach. The research has been qualitative—employing long interviews and social network analysis as the primary instruments to draw out subjective experiences of work and learning. Each member of a workgroup was

given a semi-structured interview lasting approximately 45 minutes which sought to identify general information on their role and their career trajectory, who were the primary sources of workplace information, and how challenges in their jobs were dealt with. They were also asked to draw a map of which others they communicated with regarding workplace matters over the period of the following five days. The data was analysed to identify the issues discussed with other workers and whom they related to with respect to which kind of issue. In addition to these interviews, members of the project team spent time in the work sites seeking to understand and document the context of work and the nature of the activities in which participants engaged.

The workgroups and their learning practices

Those interviewed were part of four distinct workgroups within the organisation. The sites were chosen to maximise variation in workplace activity, diversity of work and working relationships. The first group (teachers of floor and wall tiling) is a unit in a single physical location comprising floor and wall tiling teachers of many years' standing. The second group (educational planners) is a specialised unit offering advice to the leader of a group of colleges on current trends and future educational planning. It includes senior college management and administrative support personnel across several geographical locations. The third (human resources) are an administrative, office-based human resources unit with personnel staff working closely with each other. The fourth (learning outreach) is a group of business studies teachers who offer training exclusively off-campus to commercial clients. Despite belonging to a large bureaucracy that sought to homogenise work practices through extensive documentation of policy and procedures each of the workgroups exhibited a unique context and learning experience.

Analysis of the interviews and social networks yielded two key findings with regard to who workers learned from. The first concerns the interaction between context and the form of the learning that occurs, and the second is the significance of informal networks for learning. These are considered together here. In order to capture the features of each group, a summary of the practices of each is given followed by some comments of overall learning patterns.

The following are portrayals of the different workgroups and the work and learning processes in which they engaged:

Tiling Teachers

The tiling teachers are a well-established unit who have worked together for at least ten years. Formally, they are considered to be peers, apart from the senior head teacher who is two grades above them. In recent years their learning has encompassed coming to grips with significant changes in their curriculum imposed by the institution, the use of computers for both teaching and administrative purposes and product changes within the industry. The head teacher has attempted to master all of this, plus come to terms with the multiplying administrative demands of the organisation.

The head teacher's role is key in managing the information flow to the unit and therefore the learning of its staff. He passes information on verbally at regular informal lunchtime gatherings. He reads trade journals, newsletters and the administrative updates that come into the unit, marks the relevant sections and passes them around to the other teachers to read. He receives information about ongoing changes within the institution through involvement with committees, his participation in external working groups and consultancies on behalf of the organisation. When one of the tilers was asked how he accessed information about what was happening or what counted in the organisation, he responded: "we've got a head teacher to do that".

When it comes to teaching matters, the picture is less clear. Discussions about the lack of effectiveness of the new curriculum have taken place extensively among all of the teachers, both at their informal meetings and among individuals. The results of the discussions were reported to other levels in the college, once again by the head teacher, and feedback on their input was received. Interestingly, another source of feedback to the teachers about the effectiveness of the curriculum is a vicarious one—the students who are apprenticed to tilers report the opinions of their bosses about what they have learnt, and sometimes information about new products filters back to the teachers in this way.

The challenge of adapting to computers has been a key area of learning. While some have taught themselves how to use computers with enthusiasm, there has been resistance to their use by others. The cause of the resistance for most of them appears to be because retirement is their next career move, and they are not prepared to invest effort in learning how to use e-mail or new

online student administrative systems. The computer enthusiasts within the group act as a learning resource for the others. One teacher describes both his learning and his resistance this way: "Hank's incredible with the computer. He's taught me everything I know, which is probably nothing."

The teachers draw primarily on each other as resources for solving issues with students. They have devised an informal division of labour among themselves for administration tasks such as typing and filing the curriculum notes and drawing specialised diagrams—tasks that may well have been done by an administrative assistant in the past. There is little need for them to seek any kind of assistance outside their own unit. In fact they have very little contact with other tiling teachers in the state, and meet only informally with these colleagues on annual golf days. They have some contact with industry specialists who visit them and speak to their students about new products and these people are relied on in turn to solve problems that occur with the use of those products. Occasional social contacts with working tilers help to keep them informed about developments in the industry.

Educational Planners

Many in the educational planning group have reached the pinnacle of their careers in the organisation, having been teachers and head teachers or having held other significant management positions. They were drawn together to form part of a unit which was created only two years prior to this study. The roles they undertook were also newly created, and evolved from a major restructure. In addition to providing planning advice to the head of their organisation, each one holds responsibility for a faculty of up to five divisions. Even though the purpose of the group was defined from the start, their actual role within the organisation emerged from a process of exploration. Some months into the job it became apparent that the advice they were providing to the head was not what was required and a major reassessment of the roles ensued.

This was undertaken as a problem solving exercise. While there was some formal input, sharing of their experiences and collective knowledge over time was the focal point. This pattern of sharing knowledge is now characteristic of the educational planners, with all of them nominating their colleagues as primary sources for information and discussion of issues within their own

faculties. However, the consistency of their information sharing has been interrupted at irregular intervals members get seconded to other areas to act in other roles for periods of up to six months. Other officers in turn are seconded to the unit to replace absent members. The unit manager, who is in fact two administrative grades above them, was also significant in providing guidance and feedback on their performance. Some had the advantage of informal networks whose ranks included more senior colleagues who were able to offer them advice.

One area of learning essential for members of this group was perceived to be how to master the organisational micro-political intricacies of the job. Such mastery of the political appeared to be a key to rising through the ranks to their present role. The overt political issues on their agendas could be quite sensitive: downsizing a department, entailing the need to satisfy industrial union requirements, or encouraging teachers to accept a new curriculum they were resisting. As newcomers to dealing with issues at such a high level, and in divisions that they were unfamiliar with, this was one of the biggest challenges they had to face. The unit manager was again a key resource in assisting them to deal with the political within the wider organisation, and once again they drew on the experiences of the other planners in their unit together with senior colleagues in their informal networks, and community sources outside the organisation.

Human Resources (HR)

The third group whose context we examined is the payroll section of the human resources unit. The focus of work was to process payroll and leave applications from across the college. This was the most stratified of the three groups, consisting of clerks at various grades, a section manager and a unit manager. Despite its divisions, the unit had a strong identity of being a team. The most junior clerks do preparation and checking work; the next grade do the more complex processing while the higher grades act as team leaders and trainers to the more junior staff. The section manager is their substantive supervisor while the unit manager supervises all of the unit's different sections. All are required to be familiar with administrative processes. This includes the terms of the industrial agreements that govern different grades of staff as well as using a dedicated computer based HR system.

Initially, junior staff learn their job with supervision from more senior clerks with strong backup from other clerks at junior levels. Any new procedures or new administrative systems are

initiated from the team leader, and once again the team leader is a resource for dealing with unusual or difficult problems. Informal meetings are occasionally held to deal with changing requirements, and matters that affect the whole unit are dealt with at regular staff meetings. The most junior clerks do not seek help from anyone beyond their own peers or immediate supervisors, while the next level contact their counterparts elsewhere in the organisation if unusual problems arise. The senior grades are given the opportunity to participate in college-wide committees, and the section manager regularly deals with others in a similar role from all over the country. She has in fact initiated an e-mail discussion group to assist her learning:

> I've set up a network, because HR changes all the time—new awards, new conditions, change of policies … What we found, we were becoming more and more isolated because we're autonomous and we do this, this way, so there was a need to meet on a regular basis to work through some of these issues and ensure consistency, like interpretation.

All staff are encouraged to act in jobs at a more senior level, or to act in jobs in other more specialised HR areas within the unit while others are on leave. Needless to say this provides a key opportunity for informal learning.

Learning outreach

The fourth group is the smallest of them all. It consists of four teachers who have been placed in what they refer to as a 'workplace training unit' to conduct activities on the premises of external clients. They represent the commercial arm of a government department, what some of them regard as the future of the organisation. They all have a background as classroom vocational teachers, but now operate in a radically different mode. They travel to organisations, plan and conduct learning activities which may involve some teaching and assessment, but are overwhelmingly responsive to the needs of the businesses in which they work. This may not involve any of the conventional teaching activities in which they were originally trained. They are based within a college and travel out from there, often individually. Their work site is both localised at their college base and distributed as they travel throughout the state and sometimes beyond.

The size of the group and their generally close working relationships with each other did prove to be generative of considerable peer learning, which they valued highly. Their special position within the overall organisation led them to be conscious of the innovative nature of their work and the need to plan it carefully. Their unique position was reinforced by the tensions they continually faced with respect to the bureaucratic procedures established to control conventional teaching activities.

Of particular note was consciousness of some participants of the role of their own peer learning outside the immediate workgroup. For example, within the context of a formal staff development activity that brought the outreach teachers together with the wider group of business studies teachers, one of them commented:

> They give us a lot of information. It's usually run as a meeting where they give us information, and we've got the opportunity to ask questions. But one of the biggest values of it is that during the breaks, we network furiously. And it's amazing what you can pick up in terms of new ideas or what has been tried and hasn't worked, when you've been thinking about trying the same thing. And you can modify it or adjust it because you've learnt from their experience just listening to them.

The very active seeking of new approaches was a key characteristic of many of those interviewed in this workgroup.

It can be seen in the different sites that the strongly hierarchical nature of the organisation plays a key contextual role in the kind of learning that takes place and the scope of who can be drawn on as a resource for learning. Beyond the immediacy of peers and supervisors, informal networks begin to play a more significant role the further through the hierarchy one progresses. Contingent, informal factors which are not an artefact of the formal structure, such as career stage or the particular way of operating of supervisors such as head teachers, and the micro-context of the learning outreach teachers are highly significant for the who and what of learning.

If any of the workgroups were to be conscious of their own workplace learning, we would have expected it to be firstly the group that was specially created with this as their mission—the workplace training unit— and secondly the group of planners promoting workplace learning programs. However, in interviews we found only a little more reflexivity about their own

learning than members of the other workgroups did. By this stage of our project we no longer found this surprising as we had already reported on our own lack of reflexivity about our own workplace learning (Solomon et al 2001). Observation of the same phenomenon in the group of workplace trainers did lead us to think that our own experience was not untypical of those who have the vocabulary of workplace learning but do not foreground their own experience as learners within it.

Patterns of learning

The portrayal of the work groups emphasises the contextual differences between the work sites and its effect on the kind of informal learning that is engaged in. The experience of learning is strongly influenced by the nature of their work and the workflow of units in which workers operate. Nevertheless, the findings from the different groups also illustrate some commonalities in informal learning.

Three significant areas of learning are evident in the analysis of the interviews:

- Mastery of organisational processes. These include keeping pace with revised administrative requirements and becoming competent in the use of computer-based systems or other packages necessary to undertake work-related tasks.
- Negotiating the political. This category includes both negotiating relationships within the everyday workplace, as well as strategic positioning to ensure a successful future career path.
- Dealing with the atypical. These are issues for which there is no set procedure or process. Strategies have to be created for solving problems either as individuals or as a group.

These categories overlap. For instance, dealing with the atypical can obviously occur in the mastery of computer use or dealing with student issues. However, we have used it here in a more abstract sense to indicate how to creatively adapt a computer program for other purposes such as producing complex teaching diagrams for classroom use or undertaking a group exercise in redefining the work roles for a whole unit. The separation of the categories is a useful heuristic device to illustrate the complexity of learning networks.

Because the institution studied is a large bureaucracy, all levels of employees engage to a greater or lesser degree in formalised administrative processes or employ technical skills such as

teaching or using computer programs. All levels also engage in a degree of dealing with the atypical. But how each learning area is approached, and more significantly who is approached and the kind of learning that occurs, varies according to the interaction of contextual factors with each category. Many of the features of dealing with the atypical correspond with the construct of work process knowledge used in recent European studies (Boreham, Fischer and Samurçay 2002). It is knowledge embedded in the workplace, drawing on both theoretical knowledge and direct experience of the work at hand and resolved by workers themselves.

A common pattern is illustrated by the following. When a difficulty or query first arises concerning the organisational processes of a job, it is likely a person will seek an answer from a documentary source such as the Intranet or recent precedents, where these exist. For example, the human resources clerks routinely consult written updates on industrial agreements or look for precedents in their records.

If this source fails, an expert in the area in question is sought. The person most likely to have expertise in a similar area to that person is a peer, generally someone physically close to hand. If someone close to hand is unable to answer the query satisfactorily then it is likely that a peer doing a similar job in another geographical location or (in the case of the junior HR clerks) a person in a slightly more senior role will be approached. If this fails, then the supervisor will be approached. Occasionally, if the information sought is specialised, an expert in that area such as an officer from finance or the central administration will be approached first in preference to the supervisor.

This inclination to draw initially on documentary sources and on those who can readily point to precedents works well for our first area of learning, but for dealing with the atypical or the negotiation of the political there are generally no documentary sources for reference. It is here that both formal and informal networks come into play. When dealing with delicate situations such as downsizing teaching areas, one educational planner drew on contacts with industry representatives, teachers, his supervisor, other planners and the organisation's designated officers to negotiate a successful outcome.

One planner approached problem solving this way:

I would always just take a situation, take a look at what I thought was involved, map it out, talk to my boss the Director or talk to a colleague, raise it in a larger forum if I thought that some of the issues weren't clear.

However, other dimensions of the political are almost by definition unable to be articulated directly and can only be inferred from statements made in interviews. Another newly appointed planner reached further into his network when seeking feedback on his performance:

Well I've come into this position with an existing network of people obviously and so I'm drawing on that network of people. And also the person who was acting in [my supervisor's] job while he was overseas and also the other planners here and the various other senior staff that I've been meeting with. I've had a couple of brief chats with [the Director] and she's got her priorities fairly clear. So, it's not just solely with my supervisor.

The political here is two-dimensional and is somewhat understated. He is willing to draw on his informal relationship with the Director, who is more senior to his supervisor, for advice about his role. He has downplayed the fact that this could be seen as a piece of strategic positioning for future roles. This example is illustrative the importance of informal learning networks when negotiating the less tangible political aspects of a job. However, it raises further questions of whether a conflict between present participation in a community of practice and future career planning could occur with a resulting impact on the scope of informal learning.

Workplace supervisors are part of the networks of learning, but they are not necessarily the contacts of first resort. Workers in the sites examined tended in general to manage their learning needs to minimise their supervisors' involvement in their learning process except when they were clearly a part of the work flow (and thus not avoidable). In the case of the tilers they were involved when workers wanted to avoid engaging in their own learning! Supervisors were also involved on particular occasions in the second area of negotiating the political when it was necessary for them to be made aware of their supervisees' strategic needs, thus aiding their positioning within the organisation. This latter example might be regarded as an instance of impression management that is a feature of negotiating the political. Our analysis gives partial support to the views of Hughes (2000, 2002) on the role of the workplace supervisor: the

supervisors in our study were used more than a reading of Hughes would have led us to expect. However, consistent with Hughes, supervisors were commonly not used as the first source for learning.

Implications of communities of practice

The preceding analysis identified that people have explicit contacts for learning, some of which are determined by structural relationships, others of which are created informally. This sets the pattern for workplace learning in the work sites we have examined. Are these networks in themselves communities of practice as proposed by Lave and Wenger? Using Wenger's fourteen 'indicators that a community of practice has formed' (1998, pp. 125-126), we undertook an analysis of the transcripts of members of each group to examine the extent to which these features were or were not evident. We were able to identify examples of behaviour consistent with a number of these indicators in each workgroup, and examples of subsets of groups that operated as communities of practice with respect to specific issues. For example, the tilers had many shared stories, the strategy group had a common concern about their collective identity and the HR group had common ways of doing things.

Nevertheless, the workgroups themselves could not generally be regarded as communities of practice, or components of a community of practice, even with respect to some of their major roles. For example, in one or more groups there were differences of function, absences of common activities and lack of shared ways of operating. Examples of communities of practice that created identity and meaning (in Wenger's terms) were present within the networks at all of the work sites we examined. Each workgroup also had a sense of itself as a distinct entity and has to a greater or lesser extent a shared view of its role in the organisation. But there were also networks that contributed to learning but which did not help build identification with a practice or act directly as a community of interest, for example, some of those which sought to understand the bureaucratic operations of the organization. There were also examples of virtual networks, such as the HR section manager's e-mail group, which were not geographically bounded, and examples of communities of practice that are networks because of the nature of their work, for example, the tilers' community of practice is almost exclusively face to face. Their role as one of only three geographically diverse groups teaching their subject across the state, their on-site classroom-based teaching focus, and the longevity and exclusivity of their

working relationships creates the conditions for this. The learning of this group was strongly limited by their geography. This indicates that when work is structured differently or is subject to different contingencies then the learning potentials of the community of practice differ.

While the idea of communities of practice provides useful ways of accounting for the phenomenon we are considering, it also has limitations and is not sufficient for our purposes of dealing with informal learning at work. We can clearly discern a variety of networks through which learning takes place. Some of these meet some of Wenger's indicators, however, some of the relationships reported to us reflect more loosely coupled groupings than those described by him. Some of the networks we have identified can be represented as loosely coupled communities of practice with others more tightly coupled. This has implications for the nature of learning that can take place and the ways in which it can be supported. For example, the tiling teachers and the HR group can be described as tightly coupled. They have sustained relationships over time and they have shared ways of engaging in doing things together. They are familiar with what other members know, what they can do, and how they can contribute to their common enterprise. The educational planners, as a more recently created and more frequently reforming group, have less coherence and sharing of meaning. They could be regarded as establishing themselves as a community of practice, but many of the features of their work militate against them becoming a strongly coupled community. While they look to each other for advice, some of the interpersonal and collegial familiarity that is present in the other groups is less noticeable in them. Their inclination as a group to draw on their pre-existing networks as much as their immediate peers is an indicator of looser coupling. It is interesting to speculate that because of their more frequent reformation and changing membership, they may be more representative of workgroups in many contemporary organisations than long established groups such as the tilers. Stability may be conducive to the emergence of a community of practice and the temporary nature contemporary work practices may be an inhibitor to their growth. This does not imply that the notion of communities of practice is not useful in such settings but that degrees of coupling may be an important feature to consider.

Another way of viewing the networks and communities of practice we have observed is through Bernstein's (1990) construct of framing. Bernstein had been interested over many years in the context in which knowledge is transmitted and received. From his studies of the curriculum and

schooling he developed the notions of classification and framing of knowledge. In his terms, framing of knowledge is strong when there is a sharp boundary between what may be transmitted and what may not be transmitted in a learning relationship. Where framing is weak, there is a blurred boundary, between what may and may not be transmitted. In our studies of the workgroups we can identify strong framing with the tilers and weaker framing with the educational planners. This idea might also be applied to communities of practice. A community of practice may be strongly framed when transmission of knowledge occurs closely between members or weakly framed when transmission of knowledge is less frequent or consistent. Thus, what we have been referring to as loosely coupled communities of practice may be regarded as communities in which the framing of knowledge is weak.

A third way of considering the patterns of learning we have observed is through activity theory, in particular through the notion of expansive learning articulated in the context of workplace learning by Engeström (2001). In activity theory, as in this study, the focus is on the social and organisational context rather than on individual learning and contradictions (or atypical events) as sources of change. Engeström draws attention to what he calls horizontal or sideways learning and development in which problem solving occurs essentially through interactions among peers without resort to a conventional knowledge hierarchy. This is a potentially useful way of conceptualising the learning pattern we have identified as 'dealing with the atypical' in which there is no set procedure or process and learning is required to address a problem or contradiction in ways which lead to an acceptable outcome. The process of doing this can require the crossing of boundaries or workgroups and practices and therefore cannot be adequately captured by the well-bounded notion of communities of practice.

The informal learning of the workplace as we have seen it in our sites of practice may be represented as sets of overlapping communities of practice as well as informal networks contingent on work flow and organisational practices which may change quite significantly over time. Learning from peers is a predominant mode in the work sites we have examined. However, an exclusive focus on communities of practice as an organising concept may limit accounts of workplace learning which reflect the complexities of actual practice. It may also limit the kinds of intervention possible to influence workplace learning. Communities of practice form naturally, are often strongly bounded, and may not be easily cultivated, despite the

encouragement of Wenger et al (2002) to think otherwise. They do provide a useful conceptual tool for examining workplace learning which we will continue to use alongside notions of identity and the key role of trust and power relations in the learning process that we are continuing to explore in the project.

Conclusion

This paper has identified a range of informal learning that occurs in workplaces and illustrated the complexities of such learning. There is a diverse range of people that we learn from at work, very few of whom are recognised by the employing organisation as people with a role in promoting learning—that is people designated as supervisors or trainers. In a large organisation, the range and diversity of communities of practice in which one may legitimately participate increases with seniority, and therefore the range of opportunities for informal learning increase as do the types of learning. Some learning networks manifest features of communities of practice, but others do not strongly build identity and meaning. While we have suggested some directions that might be pursued in the analysis of workplace learning, the development of further conceptualisations that help illuminate the processes of learning at work is needed.

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