1. Abstract

Communities of practice are a powerful and focused way to promote development of skills and construct new knowledge among workers. This is demonstrated when theory, policy and funding are brought together in the form of ANTA’s Reframing the Future project. At the same time, there are potential negative aspects of communities of practice and in particular a concern that individuals might disappear into a community of practice and become alienated from their workplaces. There is a need for further research in this area as little work has been completed investigating what happens to the individual in a community of practice.

My current research into a community of practice among civilian technicians working in an Australian Defence Force installation has yielded preliminary findings about the relationship between the individual and the community of practice, particularly in relation to acknowledging and reducing the potential for worker alienation. A group that did not form a community of practice was alienated from the process and the product of their labours and they did not perceive a connection between their performance and the performance of the organisation. The individuals in the group that formed a community of practice have an appreciation of the process and an understanding that their labours are directly connected to the outcomes and performance of the organisation. This paper proposes that a community of practice is not only a powerful force in informal learning at work but also reduces the potential for alienation of the individual from the workplace.

2. Introduction

This paper is an outcome of research that was focused on informal learning at work. The research was conducted in the first half of 2003 to fulfil the requirements of a Master of Educational Studies program at Central Queensland University.

This paper proposes that an organisation that not only allows, but also encourages communities of practice to develop at work and through communities of practice encourages the skill development and construction of knowledge of workers is working towards minimising the potential for alienation of the workers from their labour. Workers who are accorded basic respect and are valued for their skills and knowledge by their peers, supervisors and managers will perform better and will have higher self esteem and a reduced potential to be alienated from the process and organisational product.
My research looked at a number of electronic technicians working to maintain a complex defence installation. Technicians experienced difficulty with accumulating knowledge about the system because it: is unique, is complex, employs leading edge technology and undergoes constant change. The technicians find the problems with achieving a solid level of understanding about the system are exacerbated by the depth and scope of the knowledge required and the widespread and ongoing change experienced as defence scientists discover better ways to do things.

I found a workgroup that were not learning, were not encouraged to learn and were generally performing badly. I found another workgroup, physically separated from the first, working with the same system and who were actively learning, happy in their work and performing well when measured against organisational key performance indicators. The marked difference in performance by what appeared to be very similar groups was worthy of investigation. It seems that the group performing well had formed a community of practice and in the group that performed poorly the line manager had employed a managerialist approach and made a, seemingly, active effort to squash the forming of a community of practice. There was a strong belief in the group that was performing well that, as a group, they were greater than the sum of their parts, that is, as a cohesive group they would perform better than any individual. The group performing poorly did as they were told, followed procedures and relied on the line manager to solve all problems. The group that were performing well were happy and connected to the organisational processes and products. The group, performing poorly, do as they are told, follow procedure blindly, even though they perceived what they were doing as ‘bad’; they were disconnected from the organisational process and product, unhappy and in some cases, recalcitrant.

In this paper I define the scope of the study and identify the theoretical framework utilised as a basis for analysing data from the study. I then investigate the characteristics of the group in isolation and then in comparison to each other. I then discuss the outcome of this investigation and informal learning at work and what that means in the workplace. Finally I provide a conclusion that addresses the alienation of the individual for their labours

3. The Study Scope

The study identified two groups of electronic technicians: a group of eight electronic technicians who appear to work well together and work effectively to develop skills through informal learning at work; and a group of eleven electronic technicians who are unhappy, and fragmented and have not performed well when measured against the organisation’s key performance indicators. In this study I have used the term ‘group one’ to identify the happy and cohesive group and the term ‘group two’ to identify the unhappy and fragmented group and the letters of the alphabet to identify the individuals i.e. group one uses Albert, Anthony, Alan and group two Barry, Basil and Brian. I use the term ‘organisation’ to identify their employer. I had worked alongside these groups of electronic technicians for approximately 6 months prior to conducting semi-structured interviews with a majority of the participating electronic technicians. The participating electronic technicians report to the same line manager, are engaged in work to provide maintenance support of a technically complex operational defence asset. They have a sound grounding in electronic theory and diploma level qualifications, are male, were born in Australia of parents born in Australia and are aged from late 20s to early 40s.

The following description of the participating electronic technicians is taken from my research proposal and holds true for the two groups of electronic technicians participating in the study. They are located at one site, work shiftwork to cover a seven day, 16 hours per day program, and come from mostly defence backgrounds. The technicians’ work is “tightly linked to formal
bodies of scientific and technical knowledge” (Barley, 1996, p. 8). Communities of practice are produced when people form informal groups or networks that emerge from a “common sense of purpose” (Sharp, 1997, p. 1). An individual will participate in many communities of practice, formed as he/she interacts with different people and groups at and outside of the workplace. The technicians provide an interface between the scientists and the engineers and the empirical, highly technical reality of the operational system. They also insulate the system operators, who have little technical background, from the highly technical, operational system. The technicians use sophisticated instruments to conduct tests and experiments and to make observations. They also work with their hands and build and maintain equipment, sometimes getting ‘dirty’ (Barley, 1996, p. 8). The technicians’ status in the organisation is poorly defined because they sit between the clean professionals and their formal bodies of knowledge and the low-level technical world of the operators and workers with ‘dirty hands’. The technicians’ status may even change because of context but it remains the case that the technicians are highly skilled, well educated and essential to the day to day operation of the system.

Both groups of electronic technicians participating in the study interface directly with the Department of Defence (DOD) customer and their work is completed in full view of the DOD customer. It is important from the DOD’s perspective that the electronic technicians work effectively and efficiently because this allows for a minimal impact on DOD operations. It is important from the organisation’s perspective that the electronic technicians work effectively and efficiently because this impacts on indicators used to measure performance in the current maintenance contract and affects competitiveness in tendering for future contracts. Individual electronic technicians say it is important for them to work effectively and efficiently because poor performance impacts on their self-esteem as well as on their potential for advancement within the organisation.

The electronic technicians understand that gaps exist in their and their peers’, knowledge and skills and, in group one, they can be seen to share actively their informal learning and experiences. This study facilitated a better understanding of what informal learning is happening in the workplace, including what learning resources electronic technicians draw on and the underlying forces and tensions that produce barriers to, as well as facilitate, informal learning.

4. Theoretical Framework

I used a theoretical framework that was borne out of a social constructivist paradigm and the concepts of situated learning and communities of practice. Constructivism considers that individuals create knowledge based on experience and allows for construction of multiple realities. Knowledge is not an unarguable fact and changes “because new situations, negotiations, and activities inevitably recast it in a new, more densely textured form” (Brown, Collins, & Duguid, 1998, p. 2). Social constructivism “stresses the socially and culturally situated nature of mental activity, and defines learning as getting acquainted with cultural practices, their particular exigencies, limits and possibilities” (Vandersraeten & Biesta, 1998, p. 2).

The individual, her/his perceptions, participation in work and the underlying social discourse are essential to understand that “the production of meaning is a social effort and that meaning is produced by everyday, ongoing actions of a community of practice” (Henning, 1998, p. 97). Responses from participants showed they understand that, as Alex said, “people may be involved in the same activity, but construct different meanings and…[even]…see different learning experiences”. The participating electronic technicians say they are aware that their peers will see the same problem in different ways and that it is worthwhile taking time to discover how other people understand the problem, and their approach to solving that problem.
The technicians are at different stages of professional development, have different work experiences and come from different backgrounds. While they participate in the same activity, it is apparent to all technicians, in both groups, that the construction of meaning will depend on the individual technician.

I investigated the informal learning that happens in the workplace and the multiple constructions of meaning that happen through participation in workplace communities of practice. A social constructivist paradigm informed my study and allowed for the interpretation of a real life situation where human participants are involved in learning in the informal setting of the workplace. The way the technicians learn informally at work is consistent with a theoretical framework, based on a social constructivist paradigm and the concepts of situated learning and communities of practice that were used in the study.

5. Communities of Practice

Communities of practice are groups of people that come together because of a common purpose, possibly encouraged, but not directed by the organisation. If a group of people is brought together through some form of policy or organisational direction then a team is formed. The members of a team have an individual role and work toward achieving the aims and goals of the organisation, whether that meets the needs of the individual or assists with minimising the alienation of the individual is a separate issue.

Access. A novice may gain the authority to enter the community of practice, but, at least initially, is allowed only superficial access. A novice will not be able to penetrate the inner sanctums of the community of practice until she/he has proven worthy. People may progress quickly, particularly if they have higher level skill sets and/or have previous experience with similar environments.

If novices do not live up to the values of the group and/or are at odds with the way the community of practice does business they may find it difficult to progress. The novice will be pushed to the periphery and struggle to move closer to mastery because the members of the community of practice will keep the novice at arms length. The authority to participate is threefold and hierarchical. The novice is employed by the organisation in the particular role; the novice’s direct supervisor introduces the novice to the community of practice; and finally through values and behaviour the novice is accepted by the group and is then allowed to participate freely in the group.

Acceptance. The first actions that indicate acceptance are through the sharing of stories. Albert said that he was told that he should “never get here late because the boss will tear you a new one, …[and]…it leads to penalties under the contract”. Well, it does not lead to penalties and the boss is likely to be lenient if there is good reason, but the novice is beginning to see the importance of starting on time. Barry said that he was told that he should “always get to the security office early on the first Monday of the month or you will get mixed up with all the cleaning contractors and you will be late”. Initially stories are prolific, cover many areas and are the richest learning resource provided by those with experience in the community of practice. The stories are not necessarily wholly accurate, do seem to be based in fact, and are valued by the members of the community of practice because they demonstrate the point the teller is trying to impart.
Mentors. In this community of practice a novice will be assigned a mentor and the person assigned will most likely be the least experienced member of the community of practice and low in status, that is, the least important and the closest to understanding the novice’s plight. A novice will move up and down in status as she/he demonstrates understanding or makes mistakes but, under the guidance of a mentor, novices generally proceed upward in status. Occasionally there is someone who does not ‘fit’: for example, someone who cannot see the importance of arriving at work on time in opposition to the group values. This person will be guided by his/her mentor, ‘counselling’ by the group and indoctrinated in the ways of the community of practice. If she/he does not measure up she/he will be guided to the edge and allowed a low level of interaction with the community of practice. The thinking appears to be that the person guided to the periphery may feel ostracised; will learn the values of the community of practice; or will simply go away. The person while ostracised and at the periphery was always accorded respect.

Structure. The participants are aware of a structure to their learning experiences that are simple and straightforward and that provide a logical pathway for learning. The structure is for people to work from the simple to the complex and allows for construction of knowledge through activity and with intervention by mentors and the more experienced people in the community of practice. ‘Simple to complex’ as a description of structure sounds simplistic, but it is certainly not simplistic when seen in practice. There is a maze of paths novices might follow and a myriad of potential disasters they might discover. The mentors and the more experienced people in the community of practice guide the novices down the right path, consistent with their level of experience, and decide when a crisis or dilemma is a learning experience or a path to be avoided. This is the single most controlled area in the community of practice and many paths are travelled only after rigorous assessment.

Assessment. The community of practice has a complex assessment procedure. A new member of the community of practice will not be allowed to work unsupervised unless he/she has been assessed as capable of performing the task to the satisfaction of the community of practice. There is an ongoing muttering among the ‘masters’ and more experienced members of the group about the new member’s progress. At some point a ‘master’ will offer the opinion to the others that the new member is ready to work unsupervised, initiating a discussion that will provide a consensus of opinion. This consensus of opinion is then passed to the supervisor who will allow the novice increased responsibility with some form of risk management. David said that he started working alone after he was asked, “There is not much happening next week; would you like to open the building?...[and complete the startup procedure]...I will be here, so if the worst happens I can always help”.

6. Group One: A Community of Practice

The electronic technicians in group one have developed an enviable ‘learning culture’, actively working towards gaining the most value from learning experiences that come from day to day workplace activity. Analysis of the study data indicates that a ‘learning culture’ exists but does not show a link between that ‘learning culture’ and strategies, aims or goals important to the hierarchy of the organisation. The workplace community of practice has facilitated the knowledge and skill development of the individuals who make up that community of practice. The action of the community of practice was not based on any recognised theory or models but on the knowledge and experience of the senior members of the community of practice.

Individuals in group one, in this study, are aware they belong to a group bound together by a common purpose. The members of the community of practice were brought together by the common purpose to improve individuals’ work skills while participating in day to day
activities in an environment where a formal learning pathway or resources do not exist. They see great value in being a member of this community of practice because it supports informal learning at work, which they perceive as directly linked to their skill levels, personal performance and self-esteem. The performance of the organisation is kept at arms length; it is either unimportant or assumed to be tied to the performance of the individual. This certainly distinguishes between a community of practice and a team when it is considered that the community of practice exists outside the organisation’s aims and goals.

This community of practice works; it is not *ad hoc* or unstructured and is certainly not limited in value because it was formed informally. It has structure, strict rules and guidelines; there are obvious mentoring arrangements; and there are rigorous assessment procedures. A researcher can be forgiven for looking for a sophisticated level of thinking (theory) behind this process, expecting to find some strategy that the organisation’s hierarchy may have provided or something an individual might have brought to the community of practice. It is not apparent. This community of practice has constructed an enviable learning culture without the guidance and supervision of the organisation’s hierarchy. In fact the participants say that the learning culture was not only achieved without, but was achieved *despite*, the guidance and supervision of the organisation’s hierarchy.

7. **Group Two: Managerialism**

In group two a managerial elite is the power that directs all operations of the group. Group two believe that the line manager considers that “any problem can be resolved through efficient management practices” (Rees, 1995, p. 15). The line manager is described well by Edwards (199-?, p. 1) who says that managers, in a managerialist environment, are not risk takers because taking risks may lead to failure. Instead managers tend to maintain the status quo, are reluctant to change and tend to control the activities of their workers through strict procedures and guidelines. Edwards (199-?, p. 1) goes on to say, “Thus, traits associated with managerialism are much the same as those normally associated with the negative stereotype of bureaucracy including such pathologies as over-emphasis on hierarchical relationships and control mechanisms, resistance to change, risk averseness, turf protection, lack of creativity, rule-mindedness, and so on.” This is what the individuals in group two call ‘micro-management’.

When I asked participants in group two about barriers to informal learning at work I was told that the focus of the line manager was on key performance indicators and learning was an overhead that was not tolerated. Brian complained that he was told to stop reading a technical manual and get back to work. He found this upsetting because, during earlier system fault rectification, he had been “abused” by the line manager for not being able to bring the system back to operational status in a much shorter time and he was attempting to improve his understanding of how the system functioned. Basil complained that he and a couple of his workmates were completing a “wash up”, that is they were discussing the action taken in repairing a system in an effort to understand what happened and how to improve performance next time. The line manager broke up their “needle work session” and put Colin to work on a menial task. These incidents are not isolated and the impact of this and like incidents reaches deeply into the psyches of the people involved. When these barriers to learning are combined with apparent lack of basic respect and a lack of respect for the level of skills and knowledge of individuals in the group, the individuals experience a lowering self worth, tend toward learned helplessness, are disconnected from the organisational product and become alienated from their labours.

If workers are not encouraged to think and are not empowered to solve problems the need to acquire knowledge is managed out of the worker. Incidentally, lack of encouragement to learn
and not empowering the individual are likely to lead to worker dissatisfaction, high staff turnover, lower wages, confrontation and conflict. Sadly, this is an accurate description of group two where workers must adhere to strict and comprehensive procedures, are not happy, feel demeaned and regularly resign and move on, seeking more satisfying employment. P. A. Danaher (May 2003) in a personal communication said, in response to my description of group two, “It sounds like learned helplessness” and that is certainly so.

8. Group one Versus Group Two

The difference between group one and a community of practice versus the group two and the managerialist approach can be reduced to according individuals respect for their skills and knowledge and valuing the development of those skills and knowledge. Communities of practice are a way for individuals to perceive that they are respected for their skills and knowledge and those skills and knowledge are valued. Managerialist approaches have worked in the past and if the line manager in this case had accorded his subordinates basic respect then there would be less of a problem. If the manager had sought and listened to the advice of subordinates, showing respect for their skills and knowledge, then they would have felt a part of the process and maybe the potential for alienation would be reduced. Certainly performance at work would have improved. If the manager had encouraged people to form communities of practice and acknowledge the power of informal learning at work by allocating resources to extend learning experiences, the potential for alienation would be minimised.

9. Informal Learning at Work

Organisations have become interested in developing knowledge and skills and the management of knowledge and skills because they are known to be linked to competitiveness and competitive advantage. It has been demonstrated many times that, in a competitive environment characterised by a global economy and a high rate of change, not looking after the knowledge that is embedded in the workplace may lead to failure of the organisation or at least reduced performance. Davenport and Prusak (1998, p. xff) cite a number of incidents where organisations have ignored knowledge management and have “made costly errors”. My personal experience and reading have shown that organisations acknowledge that they need: a ‘learning culture’; to put ‘knowledge management’ strategies in place; to establish communities of practice; or to assess the return on investment in training. This at least confirms the understanding that there is a direct link between skills and performance and informal learning at work.

The participating technicians in group two indicate some sort of barrier to their informal learning at work. Davenport and Prusak (1998, p. x) say, “Many firms are now struggling to gain a better understanding of what they know, what they need to know, and what to do about it”. I can only emphasise this by saying that it is apparent in this study that some workplaces are providing barriers, unwittingly maybe, to informal learning at work as they are struggling to come to grips with changing existing ways of doing business and measuring performance. This negates a move to understanding that knowledge is embedded in the people and in the processes in the organisation and how that knowledge may be grown.

It is paradoxical that an organisation may be aware that informal learning is a major and important part of a knowledge management concept and then present barriers to informal learning at work. Organisations need to shift their value calculations from what they own and their productivity figures to what they know and have learned. The instances in the group two workplace where workers feel punished for actively learning at work are even more difficult to understand when the same supervisor often blames the lack of knowledge and skills of workers
for poor performance. This study raises the question: managers and supervisors might say they understand that informal learning at work is important - but do they walk the walk? This in turn evokes “The challenge of management clarity and consistency: the mismatch between behaviour and espoused values” (Senge, Kliener, Roberts, Ross, Roth, & Smith, 1999, p. 27).

10. Conclusion

Communities of practice are an important part of the contemporary workplace. Communities of practice promote informal learning at work, they address the needs of the individual and, when combined with a healthy relationship with the organisational hierarchy, they are a powerful force in improving workplace performance. The skills of the worker are tied closely with the organisation’s performance and competitiveness. Much is written about the importance of learning in the workplace and this paper proposes that communities of practice and the improvement in skills of knowledge that come with being a member of a community of practice reduce the potential for alienation of the individual.

Managers and supervisors appear to understand that informal learning at work is important and that informal learning is a major part of skill development. In my study I found a community of practice at work that had managed to encourage knowledge and skill development despite the organisational hierarchy. I found a workgroup that was fragmented and performed poorly because of an inappropriate management approach that did not accord individuals basic respect and promoted learned helplessness. Individuals who made up the two groups were very similar - in background, level of knowledge and skills - but the difference in the two groups’ performance was marked. I find that the reason for the marked difference can be reduced to group one feeling they were accorded respect as people and for their skills and knowledge, while group two felt demeaned and not accorded basic respect.

Managers and supervisors must accord workers basic respect and encourage individuals to apply and develop their skills and knowledge, not only to improve workplace performance but also to minimise the potential for alienation of the individual. A community of practice is a way to achieve such a result. This is not offered as a revelation or as a panacea and it is not ‘pie in the sky’. It is offered as a key to understanding the benefits of communities of practice and the informal learning that comes form day to day activity in the workplace. How to promote communities of practice when they are something that forms through a perceived common purpose is another question. In my experience, efforts to promote such things often seem to meet with resistance, or lose momentum and are certainly an area worthy of focus in my workplace and future research.
11. References


