

# Affordances and Constraints on Informal Learning in the Workplace

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The workplace is increasingly recognised as a legitimate environment for learning new skills and knowledge that enables workers to participate more effectively in ever-changing work environments. Within the workplace there is the potential for continuous learning to occur not only through formal learning initiatives that are associated with training, but also through informal learning opportunities that are embedded within everyday work activities. This paper reports the findings of an empirical study that examined workers' personal experiences of informal learning, and how, when successful, these contributed to better participation in their regular workplace activities.

## 1. INTRODUCTION

The workplace is changing. Globalisation, technological and social changes, economic shifts, and organisational restructuring are just a few examples of how workplaces are continually evolving. Today, co-workers are constantly faced with challenges that affect both the way they perform their job and their participation in everyday workplace activities. They are expected to continually modify and update their work practices in order to sustain competitive advantage, remain employable, and perform well. For this reason, the workplace is increasingly recognised as a legitimate environment for learning new skills and knowledge that enable workers to better participate in everyday work related activities. If learning through life is essential to the labour market, then workplaces and workers themselves are crucial in supporting, valuing, and developing opportunities for learning. Therefore, learning has become important on many organisational agendas. However, there is no clear or consistent definition of workplace learning, and although often confined to learning that takes place in the workplace, definitions can be broad and include other types of work related learning which support work roles.

Consequently, workplace learning appears as a somewhat confusing concept in the literature. The growing body of literature related to this topic shows that it is becoming more widely researched empirically and that the field is in conceptual development. On the ground, the ways in which workers and their organisations refer to workplace learning can, however, be very different. This is perhaps, as Hager (2001) suggested, because the term 'learning' is used in so many different ways, including either the process or the product of learning, or both.

The present study focuses on the experience of informal learning in the workplace (Marsick and Watkins, 1990, 1999; Marsick and Volpe, 1999; Hager and Halliday, 2006). The major aim was to

gain insight into how informal learning takes place in regular workplace activities, from the perspective of both new and established workers. A second aim was to establish the conceptual usefulness of the sociocultural concepts of affordances and constraints for understanding how informal learning is enabled or inhibited.

## 2. LEARNING IN THE WORKPLACE

Learning in the workplace has become a common feature in contemporary organisations and is represented by a variety of strategies for how co-workers learn as part of their everyday experiences at work. One definition of learning in the workplace was provided by Marsick during the 1980s. Marsick's definition focused on the way individuals learn and respond to changes in the organisational environment that in turn influences "...the way in which people construct meaning in their personal and shared organisational lives" (1987, p. 10). Other definitions of workplace learning consider learning processes. For example, Holliday and Retallick referred to workplace learning as "...the processes and outcomes of learning that individual employees and groups of employees undertake under the auspices of a particular workplace (1995, p.7). Work related learning has also been conceptualised as the process of acquiring knowledge, skills and feelings (Agashae and Bratton, 2001; Marsick, 1987) that enable co-workers to learn social and technical knowledge required to perform their job successfully.

In the workplace, learning can also be described as situated in the context of social practice (Lave & Wenger, 1991) in which the work setting provides an opportunity for co-workers to acquire knowledge that connects theory to practice in a realistic and efficient way (Billett, 1996). Workplace learning also includes experience-based learning, incidental and informal learning (Marsick and Watkins, 2001; Marsick and Volpe, 1999; Foley, 1999; Hager and Halliday, 2006), self-directed learning (Foley, 1999), as well as, formal organisational learning

(Senge, 1990). Learning new skills and knowledge makes it possible workers to manage change, perform well, and be satisfied with their work. For this reason, work and learning occur simultaneously as experiences accumulate in the course of everyday participation in work activities.

Learning in everyday settings, such as the workplace, has also been coined situated learning (Lave and Wenger, 1991, Billett, 1996). Situated learning emphasises the dynamics of everyday learning and interaction, and focus on the interactive relationship between co-workers and their work environment. Situated learning provides models of learning in context, and highlights how learning does occur in the workplace context (Lave and Wenger, 1991, Billett, 1996). For example, Billett suggested that “workplaces and educational institutions merely represent different instances of social practices in which learning occurs through participation” (2001, p. 1). An important part of situated learning is the construction of knowledge within the social and cultural circumstances in which learning occurs, namely the social context.

If learning occurs as part of everyday experiences and participation, then it has the potential to occur in many different ways. This includes informal strategies, as well as, formal learning initiatives that are associated with training. Research by Enos, Thamm Kehrhahn and Bell (2003) and earlier by Bell and Dale (1999) suggested that most of the learning that takes place in organisations is informal and forms part of everyday work activities. The importance of informal learning focuses on the interplay between informal learning activities, the environment where they occur, and the characteristics of those engaged. Learning in the workplace, from the perspective of informal learning, is meaningful everyday learning and participation in work activities. It involves making sense of the daily learning that occurs in organisations and involves examining embedded knowledge and encouraging learners to be self-directed and reflect on their learning experiences. Informal learning provides a straightforward contrast to formal learning and suggests greater flexibility for adult learners. However, Eraut suggests caution on the use of dichotomies, which he sees as “indicators of lazy thinking” (2004, p. 250). He describes informal learning as learning that comes closer to the informal rather than the formal end of a continuum and which includes learning that is implicit, unintended, opportunistic and unstructured.

Informal learning draws attention to the learning that takes place in the spaces surrounding people, activities, and events in the workplace. Boud and Garrick (1999) acknowledged the informal interactions with work colleagues as a predominant way of learning in the workplace. Such forms of learning, however, are often considered ‘part of the job’ and therefore not acknowledged since not formal learning (Boud and Middleton, 2003).

Examining informal workplace learning has the capacity to offer insights into valuable forms of learning. The informal learning literature (e.g. Coffield, 1999; Cofer, 2000; Bell and Dale, 1999; Marsick and Volpe, 1999; Marsick and Watkins, 1990, 1999) represents the way “... in which people construct meaning in their...shared organisational life” (Marsick, 1987, p. 4). According to Marsick and Watkins “...people learn in the workplace through interactions with others in their daily work environments...” (1990, p. 4). Boud and Garrick (1999) later described informal learning as learning from others. According to Marsick and Volpe, informal learning involves both action and reflection which involves “looking back on what we have done, measuring it against what we wanted to achieve, and assessing the consequences” (1999, p. 7). The problem, however, is that reflection is difficult to recognise (Marsick and Volpe, 1999) and so workers and their organisations may not recognise or be able to identify informal learning experiences. Despite this difficulty, examining how informal learning occurs, in authentic work settings is important to contribute to current debates surrounding the notion of workplace learning.

### 3. LITERATURE REVIEW

Four bodies of literature are directly relevant to this research: adult learning, organisational learning, informal learning, and a sociocultural perspective on learning.

The *adult learning* literature provides a useful foundation for understanding the way adults learn in the workplace and more generally. Adults spend a significant amount of their time at work and are often required to learn new skills and knowledge in order to adapt to change and remain competitive in the marketplace. A common theme in the literature is that adult learning is based on experience and learner preferences. Knowles (1970) described adult learning as a process of self-directed inquiry and contributed to current theorizing about adult learning. He argued that adult learners have a need to be self-directing, decide for themselves what they need to learn, and become ready to learn when they experience a life situation where they need to know something new. Mezirow’s (1977; 1981) development of the role of critical reflection in the process of adult learning built on Knowles’s earlier work. For Mezirow, occurring simultaneously with self-directed learning, the notion of critical reflection refers to the adult learner’s awareness of learning, knowing and evaluating.

Over the next two decades, the focus on adult learning shifted and became linked to productivity and coping with technological, political and social changes of the time. In response, the *organisational learning* literature emerged during the 1990s from within management circles and emphasises the benefits of learning for both employees and the organisation. This body of literature was reviewed given its popularity in mainstream management

circles where terms like workplace learning, organisational learning and the learning organisation have become a general 'language' about workplace learning. The term organisational learning can be traced back to Schön's (1973) notion of 'the learning society' which recognised the relationship between change and the need for learning. Schön wrote at the time that "the loss of stable state means that our society and all of its institutions are in continuous processes of transformation...we must...become adept at learning" (1973, p. 28). One of Schön's greatest contributions at this time was to explore the extent to which organisations were learning systems. However, the main criticisms of the organisational learning perspective are that management style, power relations and conflicts of interest shape how learning occurs in the workplace. Furthermore, the literature does not consider how adults learn, and in particular *how* adults learn in an environment that is not formally designed for learning.

The problem for many organisations is that learning occurs in ways other than formal training, workshops or team meetings. Much of the learning that occurs in the workplace happens on a daily basis and may be spontaneous, haphazard, unplanned and unintentional. An individual may learn from observation, watching someone else, trial and error, or as a by-product of everyday activities. The place and value of this type of learning needs to be better understood and is a critical aspect of this research. The fact that learning occurs as part of everyday experiences and activities in the workplace leads to the significance of examining informal learning in the workplace.

The literature on *informal learning* highlights how workplace learning is not always linked to organisational strategies, as often suggested by supporters of organisational learning, and from management circles. This body of literature conceptualises informal learning as an essential and most valuable part of working life. In contrast to structured learning, informal learning occurs through social interaction, observation, mentoring and trial and error. Incidental learning is then identified as a sub-set of informal learning, which emphasises that learning, can also occur as a by-product of other everyday activities in the workplace. Over the last three decades, a number of researchers have started to show an interest in non-formal types of learning (e.g. Marsick and Watkins, 1990, 1999; Boud and Garrick, 1999; Bell and Dale, 1999; Boud and Middleton, 2003; Conner, 2003). During the early 1990s, Marsick and Watkins (1990) offered a theoretical framework to define and describe informal learning. According to Marsick and Watkins (1990) informal learning may include self-directed learning, networking, mentoring and trial and error and can occur anywhere and at any time. Informal learning can be planned but is often spur of the moment. Informal learning may occur through networking with other employees, or a

particular person may be identified as being an 'expert' in the area and helps contribute their knowledge. Interaction between co-workers may initiate social and personal relationships that contribute to the well being of other co-workers and the organisation. Most of this learning is tacit and situated within social situations and therefore co-workers may have little control over when or where the learning occurs.

The *sociocultural perspective* on learning was chosen as the main interpretive framework for the present empirical study. Three key components emerge from the sociocultural perspective. The first, situated learning focuses on the early work of Lave and Wenger (1991) which highlighted how learning occurs through everyday participation in social activities. It is a theory about the nature of human knowledge, where knowledge is conceptualised as dynamically constructed within social activity in a given social context. Lave & Wenger (1991) stressed the idea of situated learning which sensitises individuals to learning as a social practice and to how opportunities to participate within workplace cultures influences whether we learn and how that learning takes place. The literature on situated learning provides a useful means for analysing learning and how it relates to how individuals acquire new skills and become members of communities of practice. The second, participation in social practice, extends the concept of situated learning to show the significance of participation as a key concept to understand learning. It has highlighted how the social environment is assumed to influence how individuals construct and use knowledge, and is useful in understanding workplaces as environments for learning. Within a shared setting of participation in social practice, learning facilitates opportunities for individuals to participate in collective activities (Rogoff, 1995; Lave & Wenger, 1991). The workplace is one example of a shared setting in which co-workers participate in everyday activities. While the works of Vygotsky (1978), Engeström (1990; 2001), Lave and Wenger (1991), Rogoff (1990, 1995), Argyris and Schön (1996), and Wertsch (1991) continue to be cited in writings on the sociocultural perspective on learning, the potential and applicability of the sociocultural perspective on learning at work remains under-developed.

The third, workplace culture and socialisation, stresses how social relationships in the workplace can afford or constrain learning in the workplace. The quality of the relationships between established and new co-workers<sup>1</sup> has the potential to afford or constrain co-worker participation and how informal learning occurs in the workplace. As everyday learning is taking place in social practices, the way newcomers and oldtimers interact has the potential

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<sup>1</sup> In this study, the term established co-worker refers to someone who has worked in the organisation for more than ten years.

to influence participation, socialisation, and learning practices. Knowledge about the work group, the job, and group members can be transmitted from oldtimers to newcomers. If the newcomer is accepted by the work group, oldtimers are willing to share their skills and knowledge, however, some oldtimers may transmit knowledge that is incorrect or may choose not to interact with the newcomer at all. The fact that oldtimers may withhold or restrict the type of knowledge they share with newcomers raises some interesting issues about how informal learning occurs in the workplace. Despite the attention given to the relationship between oldtimers and newcomers by Levine and Moreland (1991; 1999) much of the empirical research has focused on the newcomer experience (e.g. Choi and Levine, 2003; Filstad, 2004).

In the last decade, this perspective has gradually become a major theoretical perspective underlying current research on workplace learning. From this perspective, the workplace is conceptualised as a social system. This social system, with all its co-workers, is assumed to co-regulate each other's learning opportunities. Social interactions therefore, are considered as creating a context in which informal learning is afforded or constrained in the workplace. A conceptual framework, grounded in the sociocultural perspective, was developed to address the issue of how informal learning leads to better participation in the workplace, and reciprocally, how better participation leads to continuous informal learning. The workplace was conceptualised as a complex social system in which co-workers are assumed to co-regulate each other's learning opportunities. In that system, social interactions are considered as creating a context in which informal learning is afforded or constrained. The framework developed for the study generated two main research questions: How do co-workers learn informally in the workplace? And how does the workplace, as a social system, afford or constrain informal learning in the workplace?

#### **4. THE STUDY**

The aim of this study was to better understand how informal learning takes place in the workplace. The methodology chosen for this study was consistent with key ideas from the sociocultural perspective, namely that individuals and their social context must be studied concurrently as learning is assumed to be part of a social practice where activities are structured by social, cultural and situational factors. It was assumed that within a shared social setting of participation in everyday workplace activities, informal learning opportunities are afforded or constrained by co-workers' interactions. Informal learning then, could be described as a phenomenon informed by individuals' everyday subjective experiences. For this reason, the approach was informed by a phenomenological inquiry within a qualitative research framework. The focus of the empirical inquiry was to elicit workers' experience of informal learning as part of their everyday work

activities, and their reflections on how that experience had been afforded or constrained.

The research site chosen for this study was a medium sized Australian government public sector agency. The organisation is divided into seven main directorates or work groups. For this study however, participants were only from three of the seven directorates: Science, Botanic Gardens and Operations. These three work groups were chosen based on the balance of new and established co-workers in those groups. A sample of five people from each work group was invited to participate. The sampling approach combined convenience sampling (the researcher knew some workers), purposive sampling (to maximise variation on a number of dimensions including age, length of service in the organisation, position in the work group and amount of authority in the work group) and snowball sampling to complete the recruitment process.

Semi-structured interviews were conducted with 12 co-workers. Five of these were new employees who had worked for the organization for less than five years, and the remaining seven had more than five years service. A general interview guide with open ended questions was used to maximise flexibility, and the opportunity to probe participants' accounts, experiences, reflections and feelings. The interviews took place during work time with the permission of the management of the organisation. Prior to the interview, participants were invited to read a document containing information about the research project, confidentiality, and contact details of the researcher, and if willing to continue their participation in the project, they were asked to sign a form of consent. Each interview lasted between 30 and 90 minutes. All participants gave their consent for the interview to be recorded.

The general interview questions were inspired by the key issues identified in the literature, and each interview capitalised on participants' personal experience of learning in the organisation and work group. The first set of questions encouraged participants to talk freely about themselves and their job in an attempt to create a comfortable atmosphere and build rapport. These questions were broad and related to their work, length of service, and general attitude towards the job. The second set of questions elicited information about the social context and the relationships that participants had with other co-workers. The third set of questions, designed to take the form of an informal conversation, explored participants' experience of informal learning in the workplace. One purpose was to determine the extent of individual differences among participants' accounts of informal learning. The interview questions that guided these conversations covered three broad themes: work, learning and change; the social context; and informal learning at work.

The presentation of the results in the form of stories was inspired by the work of Connelly and Clandinin

(1990, 2000) work on narrative inquiry. The authors describe narrative as both phenomenon and method, calling the phenomenon ‘story’ and the inquiry ‘narrative’. In this paper, the intention was to present the data in a way that would immerse the reader in the phenomenon and provide enough concrete details that allow the reader to identify with the experiences of each participant. The stories generated on the basis of participants’ accounts and reflections were analysed from a phenomenological approach and using a sociocultural perspective. The method of analysis followed Feldman, Skoldberg, Brown and Horner’s (2004) process of interpretation, beginning with the identification of the story line, followed by that of sub-plots, or themes (e.g. trust), and finally the examination of the relationship between participants’ experience of social interaction, participation and informal learning. Co-workers’ everyday experiences of informal learning, and their participation in those experiences, are illustrated in each story<sup>2</sup>.

## 5. RESULTS

The results of this study highlighted how the nature of some relationships between new and established co-workers afforded opportunities for informal learning, while other relationships constrained such opportunities. The results are presented in two parts: The first part presents an analysis of two participants’ stories in an attempt to illustrate the conceptual usefulness of social affordances and social constraints to understand experiences of informal learning in the workplace. The second part discusses the results around the two research questions.

Illustrations of the conceptual usefulness of social affordances and social constraints

The two stories discussed below were created from the accounts and reflections of, respectively, one new co-worker and one established co-worker. The concepts of social affordances and constraints provide a sociocultural framework for understanding the complex and dynamic nature of the workplace as a social system, where co-workers’ play a critical role in each other’s informal learning.

Social affordances in informal learning

The first story, ‘A notebook for coping’, was chosen to illustrate the usefulness of the concept of social affordances for understanding how informal learning can be facilitated. This story describes the adjustment process experienced by a new co-worker, Amy, who joined the work group nine months ago after completing a plant science degree at university.

*‘A notebook for coping’*

*After finishing my plant science degree last year, I started looking for a rewarding job. I wanted a job where I could work with people with the same interests in plant biology and learn more about plant science. I had this place in mind, but never dreamed I would be lucky enough to work here. In my field, working here is considered very prestigious.*

*A few weeks later I started my new job here as a laboratory assistant. I’ve now been here for 6 months working in research. It’s different from the research I had been doing at uni. A lot of the work is new, and I have had to learn new skills. Safety is very important here, there is some equipment that could be dangerous if not used properly.*

*I was anxious to learn how things are done around here so that I could fit in. For the first couple of weeks, I shadowed the two people I work most closely with, who have been here for a long time. If I needed to learn something new, I would watch them do it first, and then do it myself. In some cases, my supervisors would describe to me how to do it, and then I’d have a go. I have found that observation and doing is the best way to learn. I like to have a go. I have a notebook that I write everything in. I look in my notebook if I can’t remember something. Sometimes my work can be boring. Much of it is repetitious but my supervisors always explain the relevance behind the work that is boring. Also, if I refer back to my studies, I am able to understand the experimental design and realise that the boring moments have the potential to lead to greater things in the future.*

*When I first started here, I was apprehensive about having too much to say. I was scared of making mistakes and looking stupid in front of my workmates. Thanks to the help and support from my workmates, I feel like I can now make an opinion or offer a suggestion without being anxious. It hasn’t taken that long for me to fit in.*

This story depicts the experience of a new co-worker, Amy, as she tries to learn new skills and knowledge, and her willingness to ‘fit in’ the new work environment. The social processes occurring between Amy and the existing work group reveal how learning opportunities were created through her interactions with this particular work group.

The story shows how Amy tried to seize opportunities for learning and her deliberate use of a notebook to record her learning experiences. Her account stresses the significance of the social environment in enabling her adjustment. The role of other co-workers appeared important as providing the means by which Amy was made to feel comfortable in the new work group. The identification of new learning opportunities emerged through participation, and were critical for her integration. Although Amy possessed the necessary technical skills and knowledge to fulfil the requirements of the job, technical knowledge was

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<sup>2</sup> As this paper is limited in page length, two from 10 stories have been chosen to illustrate informal learning in this particular workplace. The remaining stories are available on request.

perceived by Amy herself as only one element in her adjustment to the new work job. She said she learned new work procedures, some new technical knowledge, and in particular a lot of social knowledge. All this learning was achieved through participation in everyday experiences in that particular work group rather than through a formal induction process.

When entering the new work group, Amy reported being faced with the major challenge of learning the social knowledge that was necessary to be accepted by other co-workers. This included learning new knowledge about how the job was done within this particular organization, and most importantly learning the norms and values of the local work group. 'A notebook for coping' thus illustrates how Amy, as a new co-worker, learned informally about both the content and the context of the job, and how this allowed her to perform the job well and 'fit in'. Although much of the work was reported by Amy as being 'boring' and 'repetitious', she recognised that it could lead to 'greater things', which suggests some ambition and a determination to do well in the new job. This is supported by Amy's reported anxiety to learn the social knowledge of the work group and not to make mistakes or 'look stupid' in front of other, more established co-workers.

In 'A notebook for coping', Amy also described the strategies she used to learn new technical and social knowledge, for example, shadowing and observing more experienced co-workers, and then 'having a go'. Her desire to 'fit in' was demonstrated by her apparent anxiety to assimilate into the work group culture and 'learn how things are done around here'. From Amy's account, this happened through an informal process of interaction and asking questions so that appropriate local knowledge could be acquired. Recording her new knowledge in a notebook allowed Amy to recall important information when needed. The notebook appeared to be an important feature of Amy's learning experiences, as it symbolised her determination to adjust and fit in.

'A notebook for coping' also illustrates how co-worker interactions can create opportunities for informal learning, and in turn everyone's better participation in the group activities. Social interaction seemed to have helped remove stress and tension from Amy's experience by providing her with the opportunity to understand and learn the skills needed for the job. This was illustrated in her account and reflection, 'thanks to the help and support from my workmates...it hasn't taken that long for me to fit in'. By interacting with other co-workers Amy reported that she was able to learn the expected norms and behaviour of the work group, and as she highlighted, learning how 'things are done around here' removed her anxiety.

In summary, 'A Notebook for coping' stresses the critical role of established co-workers in helping new co-workers adjust to the new work environment

and reciprocally how new co-workers can proactively facilitate this process through deliberate positive action (e.g. use of a notebook). One may wonder what happens when co-workers are not as willing as the person in 'A notebook for coping'? What if social and technical knowledge important to the job is withheld? If social affordances had not been made available to Amy, one can assume that her notebook would have been of limited use, and the transition process into the new job would have been quite challenging. The social affordances featuring in 'A notebook for coping' contrast sharply with the next story illustrating the concept of social constraints for informal learning.

#### Social constraints in informal learning

The second story, 'Suspicious minds', was chosen to illustrate the usefulness of the concept of social constraints for understanding how informal learning can be impeded. This story illustrates the experience of an established co-worker, Henry, who reported initial suspicion about the intentions of a new co-worker, felt threatened about his future in the organization, and subsequent reluctance to share his knowledge with newcomers. .

#### 'Suspicious minds'

*When it comes to meeting new people at work, I could be seen as stubborn. Those who are close to me say I'm a martyr to change. Even after twenty years in the same job, I find adapting to new people a challenge. I don't like it when someone new threatens my territory. A while ago, I was confronted with a new worker on his first day of work asking me 'Why don't you do it this way? It's not done like that anymore, things have changed'. In the 20 years I have worked here, I've done my job well. I wondered - how could someone new, on their first day on the job, tell me what to do. I began to worry about my future. 'Was this person being groomed to take over my job?' I decided that I would not share anything with this person. I've worked here for a long time and it has taken me years to know what I know. Why should I share this with other people? That day, I kept my distance. More and more anxiety filled my head. Why would they employ someone else to do a similar job to mine? Are they preparing for my retirement? Did they expect me to help this new person fit in? Am I just an oldie whose time is running out? As time went on, I realised that my work load was more manageable. The new person was very helpful and apart from my early doubts, I realised that I was not being replaced, yet. We were starting to get on well. Even though I may have been a little difficult at the start, I was prepared to accept him. I started to share my knowledge with him, but only a little bit. I'm still going to protect what I have. It takes time to build trust.*

This story illustrates how an established co-worker became reluctant to share his knowledge about the

job with newcomers. His apparent resistance to social change appeared to have significant implications on his social interactions with new co-workers and in turn on the expected process of knowledge transfer. For Henry, learning about the job had been a gradual process over 20 years. His reported incident of his work practice being criticised by a newcomer, 'someone new, on their first day on the job, tell[ing] me what to do', was perceived as unacceptable. This incident also triggered Henry's concern about his future in the organisation. He became suspicious that the organisation was bringing in new co-workers to replace those reaching retirement age, like himself, as evident in his question 'was this person being groomed to take over my job?'

As a consequence, Henry started to feel threatened by any new people joining the work group. For this reason Henry referred to being stubborn when new people joined his work group and entering his territory. Henry's story illustrates how adapting to new co-workers can be experienced as a challenge.

In 'Suspicious minds', Henry claimed ownership of the knowledge and skills that he had developed over 20 years of service to the organisation, and became unwilling to facilitate newcomers' participation. His decision not to share knowledge with new co-workers illustrates the social constraints that his behaviour must have presented for new co-workers. It is only as time went on that Henry realised that the newcomer had in fact made his own job easier and more manageable. Henry admitted that the new co-worker was helpful, and once suspicion over job security had been lifted, the two co-workers worked well together, although Henry admitted he could not fully let go and continued to withhold some information.

Central to the 'Suspicious minds' story is therefore the issue of building trust, and this, as stated by Henry, 'takes time'. As illustrated by Henry in the story, 'I started to share my knowledge with him, but only a little bit'. However, he added, 'I'm still going to protect what I have', suggesting that the new co-worker's access to his knowledge would remain restricted. Henry's reluctance to fully share his knowledge and his tendency to continue withholding possibly important information about the job may have serious implications for other co-workers. The problem with withholding knowledge is that it implies a tacit expectation, and acceptance, that if a co-worker does not have access to that knowledge, then failure to do the job well will result, which is of great concern.

The story of 'Suspicious minds', therefore, illustrates how informal learning in the workplace cannot be taken for granted. If established co-workers can be prepared to prevent new co-workers from accessing important information about the job, then the new person will be unable to perform. How are new co-workers expected to learn the social and technical knowledge required for the job when there

is resistance, lack of knowledge transfer, and even perhaps inaccurate information being given? New co-workers' willingness to learn in order to fit in may therefore not be sufficient. Should they join an organisation in which some co-workers have their own agendas and filter critical information, their efforts may not succeed.

Discussion of the results around the two research questions

The first question was 'how do co-workers learn informally in the workplace. As expected, what and how new and established co-workers learnt informally in the workplace differed. New co-workers learnt informally important local knowledge and skills about the new job and the work group, which enabled them to 'fit in' and perform the job well. This took place through observing more established co-workers, daily interaction and participation with other co-workers, as well as through learning by doing, without explicit guidance. In contrast, established co-workers reported learning informally new skills and knowledge that allowed them to keep up with workplace changes and technological advancements. This took place through 'trying out new things', 'trial and error', 'hit and miss', attending conferences, and by communicating and interacting informally with other co-workers.

The second research question was 'how does the workplace, as a social system, afford or constrain informal learning in the workplace?' Participants' stories highlighted the complexity and dynamic nature of workplace interactions and participation, and how informal learning depended to a large extent on the nature of relationships between co-workers. Opportunities were afforded when established co-workers facilitated new co-workers access to workgroup practices and procedures, which required positive interactions and trust, as well as guidance and support. Established co-workers thus played an important role in establishing and maintaining work group culture and providing an environment conducive for informal learning. The cultural context in which informal learning occurred was significant for both new and established co-workers. These enabling processes, however, took place in a two-way interaction process, which was facilitated by new co-workers' enthusiasm, motivation and commitment to adjust and fit in.

Other relationships between new co-workers and established co-workers constrained opportunities for informal learning. A wide range of factors were found to affect the quality of relationship between workers, including lack of trust, suspicion, and threat about social change and one's own job security. As a consequence, full participation was denied to newcomers, through restricted access to important information. Afforded or constrained opportunities for informal learning appeared to be generally unplanned and unintentional, although

Henry's story shows that an initial unplanned reaction can become a standard response. Effective informal learning opportunities emerged when needed and were often unpredictable, spontaneous experiences that occurred just in time and were context specific.

One notable finding of the study was that all participants spontaneously came up with stories, sometimes multiple stories, but most importantly that all stories highlighted the criticality of relationship between co-workers. Overall, relationships emerged as the most critical factor in the generation of affordances and constraints for informal learning, with some personal and organisational factors co-contributing. Although the particular organization used as the research site did not have a formal management strategy or induction program to assist new co-workers, a few organisational features were mentioned as enabling informal learning, such as requests to established co-workers to show new co-workers around, to help new co-workers form relationships with other co-workers and adapt to the new surroundings.

One important characteristic of the concept of relationship is its reciprocal and dynamic nature. This was illustrated in many stories, with new co-workers demonstrating enthusiasm and readiness to learn being met with established co-workers' willingness to share their 'tricks of the trade'.

One other notable finding was that informal learning is not always afforded in the workplace. In this study, it was found that not being accepted as a full member of the group, new co-workers overstepping the boundary, problems of trust and grappling with social change were all significant relationship factors that had an impact on how knowledge was shared among co-workers. Established co-worker's past experiences of what happens when new co-workers enter the work group also influenced work group dynamics, where the social system had an affect on how informal learning occurred in the workplace. If an established co-worker had negative experiences, or felt threatened by new co-workers, they were reluctant to share their knowledge and understanding of how the job had to be done. In turn, the new co-worker experienced a difficult transition into the new job. Overall, relationships between co-workers emerged as the key to affording or constraining opportunities for informal learning. Personal and organisational factors tended to contribute to this process in a dynamic way with possible implications in the long term.

## **6. CONCLUSION**

This study used sociocultural concepts to understand and interpret the way new co-workers and established co-workers learned informally new skills and knowledge in the workplace. The relationship between new and established co-workers emerged as a key factor influencing the type and quality of informal learning that occurred as part of their everyday activities in the workplace.

Common across stories of informal learning was the emphasis on interactions between co-workers. The quality of relationships was determinant in the generation of affordances or constraints for informal learning.

This study drew two major findings. The first is that informal learning does take place as part of everyday work activities and tends to be spontaneous, unplanned, and ad hoc. There was evidence of valuable informal learning for most co-workers. What differed between new and established co-workers however, was the purpose of that learning. New co-workers learned informally important knowledge and skills about the job and the work group that helped them 'fit in' and perform the job well. Established co-workers learned informally new skills and knowledge that allowed them to keep up with workplace changes and technological advancements. For both new and established co-workers, informal learning enabled better participation in workplace activities.

Informal learning was found to represent a natural process of trying to better participate in workplace activities. This involved new and established co-workers being well integrated, able to identify social and cultural practices, and acquire the specific technical skills and knowledge required in that particular workplace situation. The findings highlighted that informal learning is the key for better participation in workplace activities, and given participation takes place in a complex social system, it is possible that the social system can afford or constrain this gradual informal learning process towards fuller participation. This leads to the second key finding that emerged from this study.

The second major finding of this study is that relationships between co-workers played a critical role by affording or constraining informal learning. The way new and established co-workers participated and interacted in the workplace revealed important sociocultural processes that influenced the effectiveness of informal learning. The process of successful informal learning was seen through participation, interaction and cooperation between co-workers, and therefore reflected reciprocity. These processes were influenced by how these co-workers interacted, and more importantly, it was the social system that was central to how informal learning occurred. The complexity of participation and interaction in the workplace was highlighted in all the stories. The implication is that knowledge and opportunities for informal learning are created through participation in social practices, which continuously creates affordances and constraints for informal learning of participants. As previously discussed, the quality of relationship between participants is what generates social affordances or constraints for informal learning to occur.

More in-depth qualitative research is needed on the nature of relationship between new co-workers and



established co-workers and how the nature of relationship co-contributes to informal learning and in turn better participation in the workplace. A major limitation of the present study was the use of self-reports. Future research should try to combine co-workers' accounts with observations and other sources of data. Yet, as stated by Marsick and Volpe "informal learning can be enhanced with facilitation or increased awareness by the learner...while much is known about these pervasive forms of adult learning, much remains to be learned" (1999, p. 32).

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