Transforming productive reflection in the workplace into productive learning: a practical approach

Jacqui McManus
Senior Lecturer, Faculty of Law
University of New South Wales

Abstract

This paper introduces a practical approach to developing and nurturing reflective practice in the workplace in a way that will more often eventuate in productive learning (Hager, 2001 and 2003) and ultimately improved work performance and outcomes. The approach is based on the concept of organic learning (Dewey, 1896 and 1916; Beckett, 2000; Beckett & Hager, 2000) but draws on a wide range of literature related to learning and learning in the workplace from philosophical, theoretical and practical perspectives.

As a practitioner concerned with training and developing professionals the author has been more recently called upon to help develop and enhance not only technical skills but what might be referred to as tacit knowledge and skills, colloquially known as, “nous” (Polanyi, 1972; Benner, 1984) within professionals. In response, careful consideration of the ongoing dialogue amongst educational philosophers, theorist and practitioners has provided the material for building a framework which can be used to customise a program to address the needs of the professionals requiring development, particularly in terms of ‘nouse’ or tacit knowledge and skills for learning in the workplace.

The framework is underpinned by the theory of embodied learning (Maturana & Varela, 1980; Horn & Wilburn, 2005) and based on a number of assumptions drawn from the literature, especially Beckett & Hager’s work regarding learning know-how in the workplace (2002). The key assumptions are that: learning is innate; learning is organic; learning, including learning in the workplace, takes many forms; learning is not necessarily used positively or productively; and that the ability to learn can be enhanced.

The approach developed has been tested in practice on tax professionals, using this framework, and has proved successful (see for example, McManus, 2006). The approach has two main elements. The first element is learning. This involves drawing awareness to: learning (which is happening naturally and ‘informally’ all the time in the workplace); and learning skills, reflective practice at the core. This element aims to provide workers with an increased ability and motivation to learn. The second main element focuses on using learning in the workplace. More specifically, workers must be made aware of how to and why they should use learning productively within their organisation, in terms of job and organisation performance. This second element aims to provide workers with the skills, desire and confidence to use learning in the workplace productively. This is critical in transforming reflection and learning into productive learning. These two elements were brought together in a
ten day program which provided the space for workers (offline) to consider the issues outlined in the elements above in the context of their work and practice them.

This paper will present the new framework, tested in practice, which was used to develop and enhance productive reflection in the workplace and take it to the next level, transforming it into productive learning at work. In particular, the paper will include discussion on how the development of the framework has confirmed the underlying assumptions used in this approach.

Introduction

Learning in the workplace occurs all the time, without prompting or training. ‘An essential element in this learning is reflection in and on work being carried out’ (Boud, Cressey & Docherty, 2006, p. 4). This is referred to as ‘productive reflection’. What is learnt, by whom and how it is used however are usually random. As a result, learning bad habits, learning on a needs basis, the lack of learning (or sharing that learning) which causes issues and problems to re-occur are all common in a workplace. Nurturing and facilitating productive learning in the workplace can overcome these problems and maximise the benefits of learning. Productive learning is not simply learning, it involves application of what is learnt to a positive end – at work this is achieving the organisation’s goals (also refer Hager, 2001). Productive learning at work ‘is a matter of design not evolution’ (Ellström, 2006, p. 43). The benefits of productive learning can include improved performance, improved workplace environments and improved financial results for the organisation but also mastery of the workers’ life (Boud & Garrick, 1999).

The question is, ‘how do you design productive learning in the workplace’? The literature on learning in the workplace explores relevant issues from a range of perspectives. Much of it focuses on what is learnt and the relationship between work and education or training. An overwhelming surge of recent research however is developing the idea that learning in the workplace should be more about learning how to learn than information or skills (Boote, 1998; Cornford, 2000; Cross & Quinn, 2002; Rademacher, 2004). This concept bears its credibility and strength in what is referred to as organic (Dewey, 1896) or a holistic approach to learning (Beckett, 2000; Beckett & Hager, 2000). This approach recognises that learning involves not only intellect but also emotions, values, experience and daily practice.

Nurturing and facilitating productive learning in the workplace then perhaps requires a holistic approach to learning. A worker must be a learner before they can productively learn. And the learning will be most productive when the learner knows why they are learning, how they are learning and what to do with their learning. Essentially, this will require an understanding of the learning that is occurring, the weakness and strengths of that learning and what is causing them, the barriers to learning. Then the most effective strategies to foster productive learning can be determined, developed and implemented. A framework that can be used in practice to accomplish the nurturing and facilitating of productive learning in the workplace on this basis is presented below.

Literature review

The literature on workplace learning and learning in the workplace has grown considerably in recent times. The increased consideration of different aspect of
learning in the workplace begs careful consideration of the ongoing dialogue amongst educational philosophers, theorist and practitioners in the quest for practical measures for designing strategies for nurturing and facilitating productive learning in the workplace.

Learning in the workplace in my view takes many forms. The concept of ‘workplace learning’ however is conceptualised by different researchers in different ways. For example, workplace learning based on situated cognition (Brown, Collins & Duguid, 1989; Lave & Wenger, 1991; Wenger, 1998); socio-cultural approaches (Wertsch, 1998); and activity theory (Engeström, 1999, 2001). “Many researchers construct their model/conceptualization/theory of learning, with the explicit claim or implicit implication that it might adequately cover all aspects of workplace learning, in all contexts.” (Hodkinson & Hodkinson, 2004, p. 261). An alternative and more likely view is tendered by Hodkinson & Hodkinson (2004, p. 261). They suggest that “…no one theory, at least none yet fully developed, can adequately deal with all its aspects.”

No one theory completely explains workplace learning. To understand learning in the workplace, it seems you need to understand the worker as a ‘whole person’. This is not a phenomena that has emerged as a result of technology or other world developments, these ideas where the basis of Dewey’s explanations of learning as early as 1896. Dewey (1896) argued against the earliest theories of learning based on a stimulus-response model by reasoning that they ignored the co-ordinated nature of the cognitive event. Dewey described learning as organic and environmentally embedded.

The concept of embodied knowledge has evolved from Dewey’s early ideas. It is a theory of knowledge production that ‘depends on being in a world that is inseparable from our bodies, our language, and our social history’ (Varela, Thomson & Rosch, 1991, p. 149). It begins to provide a synthesised view of learning, combining the extreme schools of thought on learning based on scientific research and post-modern theory. And the concept of embodied knowledge has been extended to a concept of embodied learning (Horn & Wilburn, 2005), which is concerned with self-awareness, the ability to reflect and consequently the ability to know how to learn.

Beckett (2000) and Beckett & Hager (2000) recognise the value of the holistic approach and the ‘whole person’ concept and its importance in terms of learning in the workplace. They argue that learning is ‘holistic’ or ‘organic’, meaning it engages the whole person. This involves not simply their intellect but also emotions, values, experience and daily practice. These dimensions have been considered in different research on learning in isolation, although Beckett & Hager, like Hodkinson (2005), see the separation of these dimensions as artificial (2000, p. 304) and have begun a renaissance of the holistic approach.

Other researchers more recently in the context of learning in the workplace also support the concept of holistic learning, albeit expressed somewhat differently and perhaps unwittingly (see for example Guile & Griffiths (2001, p. 116); Tuomi-Gröhn & Engeström (2003); Billett & Pavlova (2005); Hodkinson (2005, p. 1); and Hager 2005, p. 655).

The importance and relevance of the concept of embodied learning and holistic learning is not simply about the convergence of the dichotomy of learning theories that it presents. The relevance here lies in its ability to inform us on how to best nurture and facilitate productive learning in the workplace.
Beckett (2000, pp. 45-47) demonstrates that activities such as mentoring, project management, and competence assessment are structures in the workplace that can develop (and are developing) ‘whole person’, or organic, capabilities for purposeful action” (p. 52). This is a good start. However, nurturing and facilitating productive learning in the workplace is more complex than setting up master/novice relationships. Engeström, Engeström & Kärkkäinen (1995) propose that expertise has been traditionally defined vertically, in terms of the stages a person passes as they becomes more expert in a specific domain: an expert chessmaster, an expert ditch digger, etc. but argue there is also a horizontal dimension to expertise:

In their work, experts operate in and move between multiple parallel activity contexts. These multiple contexts demand and afford different, complementary but also conflicting cognitive tools, rules, and patterns of social interaction. The criteria of expert knowledge and skill are different in the various contexts. Experts face the challenge of negotiating and combining ingredients from different contexts to achieve hybrid solutions. (p.319)

The multi-dimensional, complex nature of learning in the workplace demands a comprehensive approach. Furthermore, the diverse complex nature of what is learnt and the need for learning to be multi-directional indicates that it is the skill of learning that is paramount in the workplace - not information or work related skills which are changing all the time.

Sampson, Cohen, Boud & Anderson (1999, p. 63) also adopt the view that it is important to develop skills within workers for ‘learning how to learn’ and emphasise that, ‘making decisions about what to learn, how to learn effectively and monitoring and assessing one’s own learning becomes more relevant’ in the current work environment.

‘Learning how to learn tends to focus on areas of clearly defined skill development or knowledge acquisition, and ignore emotional intelligence or the development of emotional intelligence’ (Burns, 2002, p. 256). Holistic learning approach however identifies the complexity of learning and indicates that there is no one model of how a person learns. So much is involved in the learning process, so many factors regarding the learner, their history, the environment in which the learning takes place and the type of learning that there is no such thing as a single definition or theory of learning.

Indeed, the quest for understanding learning has been somewhat like a search for the Holy Grail. The fruits of this search however provide an overwhelming impetus for the development of a greater understanding of learning within the learner. We don’t need to explain how learners learn in every situation, we need people to know they are learners and acknowledge their learning so it can be used productively.

Knowing how to learn will enable a worker to perform to the necessary standard and maintain a level of competence required and possibly more. For example, Boud (2003, p. 8) found that although workers felt that a staff development day was a ‘complete waste of time’, it was ‘simultaneously…regarded as an extremely valuable means of networking’. If workers don’t perceive or label the acknowledgement of the value of networking as learning, ie meeting other workers and finding out what they do and how they do and what impact that has on their work then that is fine. But the fact is they are learning.

Other examples of learning in the workplace by another name include: systems audits, internal benchmarking processes; and research projects. These might be considered tasks that can be separated from daily work and as such ‘learning forums’ (Garvin,
however in many workplaces these are an integral part of daily work. Contextualising the learning and making it relevant to immediate work needs and clarifying the value for future work is the task that can be taken when workers resist being identified as learners (Boud, 2003, p. 8; Docherty, Boud & Cressey, 2006, p. 202) or are faced with other barriers to learning (Burns, 2002, p. 97). This may take time depending on the workers and all the surrounding factors. The next section outlines a framework developed to assist employers achieve this, productive learning, in practice.

A new framework

The central theme and key idea underpinning the framework put forward in this paper is that we can think about learning in terms of the learner, the learning environment and the learning output. Each of these factors or elements of learning is relevant and influential to the learning but often to varying degrees depending on the circumstances. They are also interdependent on each other. Without considering all these aspects of learning and how they interrelate, a complete understanding of learning in the workplace cannot be achieved and consequently strategies to nurture, enhance and facilitate productive learning will not be optimal. These ideas illustrate the relational, holistic and organic view of learning espoused above.

Although the categorisation or consideration of aspects of the learner, the learning environment and learning output might appear to be perpetuating the dualisms that offend the concept of holistic learning, the approach in fact provides a means for coherently collating what we know and understand about learning. Realistically all the variables cannot be considered and analysed in detail at once. The holistic approach practically then involves firstly the recognition that all the variables are relevant and important, and after consideration of them in isolation, a subsequent assembly of them in their entirety.

Consequently, the framework allows employers to analyse learning in the workplace first in terms of the elements of learning but also by highlighting that these elements are interrelated (and in fact represent different dimensions of learning). By overtly identifying the inputs and understanding their role in producing an output, learners, facilitators, educators and policy makers can more easily identify the variables they wish to influence, identify the variable that they can control, and highlight areas for further investigation and research. That is, this process provides a framework for understanding learning in the workplace in such a way that helps identify and develop strategies to nurture and facilitate productive learning. This approach should assist in producing the best possible learning results using the least resources. A broad overview of each aspect of the framework is set out below.

**Learner**

To assess, and where necessary develop, the desired qualities within workers, workers will need to be interviewed; their behaviours observed; and their performance assessed. There is no one template for this activity. It will depend entirely on the circumstances, for example the number of workers, the type of work performed and the type of learning outcome sought. The aspects of the targeted worker, ie the learner that would typically be investigated include their:

- **awareness** of the need to learn;
• **ability** to learn and reflect and their learning style or preferred approach to learning in various circumstances;
• level of **intent** to learn ie whether they choose to consciously learn;
• reasons or **motivation** to learn; and
• sense of self and the **identity** they perceive themselves to have both at work and otherwise (if this is different) and the impact this has on their learning. This includes investigating the learners’ understanding of the impact their experience, beliefs and values have on their learning.

Much of the literature on learning would stop here, focused on the individual. The traditional model of workplace learning assumes the individual is the unit of analysis (Engeström, 2001). However the holistic learning approach requires we build upon this element of learning. Whilst the individual is the learner, everything that affects the individual, impacts on the learning.

**Learning environment**

In compiling a holistic understanding of learning, the environment in which the learner is learning must be layered on top of the profile compiled of the learner. The framework directs exploration of this dimension of learning, relative to the identified workers, by reference to:

• differences in learning based on the level and type of **instruction** in the learner’s environment (often expressed as formal, informal or non-formal);
• the specific **situations** in which the learner is learning and an understanding of factors in the environment that impact on the learner’s learning and how to turn those factors to their advantage;
• different **strategies** available to encourage and facilitate learning and the learners’ receptiveness to them; and
• the broader **context** in which the learner exists.

Understanding the learner and how to address their needs in the workplace however cannot be complete without contemplating the third element of the framework, learning output.

**Learning output**

The third element of the framework requires consideration of types of learning, quality of learning and how to measure learning and confirm the attainment of abilities relevant to the group of workers targeted.

The literature indicates that some of the key issues in terms of learning output include:

• the different learning **outcomes** that might arise and the differences between them;
• the different types or variation in **quality** of their learning and what causes them; and
• the options for assessing and/or measuring learning.

In terms of understanding learning in the workplace, an examination of the third key element of learning, learning outcomes, highlights how it impacts on and can drive the first two. Depending on how learning is measured and/or rewarded, learners will
react differently. The environment in which the learning takes place will also impact on that outcome.

The framework presented takes the concept of holistic learning to a practical level and considers how the literature might be used to understand and operationalise it. It illustrates the relationship between the elements of learning: the learner, the environment and the learning output, which can be used to formulate a holistic picture of a worker as a learner.

Using the framework outlined above, one can systematically identify the key areas of strength and weakness amongst its workers, understanding the learning environment in which the learners are working and the impact this has on the learning, and clarifying and articulating the learning output and determining how it might be measured, if at all. That is, the employer will constantly be learning about its workers and be guided on how to develop them into worker-learners (Solomon, 2003).

Developing, enhancing and maintaining the required qualities within workers will require a customised approach. Whatever the combination of needs however, the response should be focussed on contextualised learning skills and applying that learning productively. In most cases a ‘development program’ for targeted workers will be required to achieve this. This was the case for the Australian Taxation Office (ATO) with respect to a group of its compliance officers (tax auditors). This case is outlined below and some findings relating to the use of the framework in this case follow.

**Research design**

Given the limits imposed on this paper is not possible to detail the full application of the framework to the ATO case. Suffice to say a ‘development program’ was created and delivered to a group of compliance officers working for the ATO. This was considered designed based on the results of an assessment of the group based on the framework presented above. Applying the framework in this case revealed that the workers lacked learning skills, motivation to learn and awareness of the learning that was taking place in the workplace and how it was relevant to their work. The program was created to help targeted workers review and develop learning and associated skills. To that end the program included information about and the space to practice a range of learning skills in the context of their work. Contextualising the learning skills was essential in achieving the productive application of learning. Awareness, ability and even motivation to learn are not enough if workers do not know how to or why they should apply that learning in various different contexts they work. For further details on the ATO development program refer McManus, 2006.

Research into the success of the ATO program had two underlying purposes: firstly to test whether participants’ awareness of learning has increased; and secondly whether participants had learnt how to use new knowledge or skills (learning) in the workplace (ie apply it productively). A range of instruments were designed and used to achieve these research goals however the main source was the consolidated learning records. (Note that the success of the program was considered to be positively related to the framework as the ATO program was the product of the analysis of targeted workers undertaken by reference to the framework.)

Participants’ were required to summarise what they had learnt during the training program. These were compiled by participants on the last day of the program
(referred to as consolidated learning records) using the learning journals they had created at the end of daily learning conversation with their learning partners. An advantage of using this data collection approach was that the response rate was 100%. An additional benefit of collecting data in this way was that it was possible to determine what kind of learning took place, the participant’s understanding and self-awareness of that learning and the impact it might have on their work without directly asking or leading their responses.

The program was run with new groups bi-annually. At the time of writing this paper, approximately 700 participants (in five cohorts) had attended the program over two years (2003-2005).

The key findings reported in this paper focus on the data collected from the consolidation learning records as noted above, which provided rich data on what and how learning had been improved and could be better used back in the workplace. Anecdotal evidence from management also supports these findings, including stories of promotions, improved quality of work, and general increase in confidence of certain participants of the program.

**Findings and discussion**

The key assumptions upon which the framework presented in this paper is built are derived from the literature on learning and learning in the workplace. These are that: learning is innate; learning is organic; learning, including learning in the workplace, takes many forms; learning is not necessarily used positively or productively; and that the ability to learn can be enhanced. These underlying assumptions drove the extensive consultation process (directed by the framework presented above) which led to the eventual development of the ATO program.

Research shows that applying the framework confirmed the assumptions upon which it was built in various ways. Firstly and foremost there is evidence that the workers’ ability to learn has been enhanced. Furthermore there is evidence of improved awareness of learning and understanding of why it is important and how learning can be used productively in the workforce. A brief discussion of this evidence is set out below.

The fact that the workers responded to the ATO program in the anticipated and desired way also indicates that the framework used to design it was effective and that the assumptions that underpin the framework are valid.

*Evidence of improved ability to learn and awareness of learning*

As noted above, there was no specific question asked of participants in the ATO program regarding the process of ‘learning how to learn’ or their awareness of learning on purpose so as not to lead participants’ responses but clearly it emerges as an outcome in the data collected. Participants explained what they had gained from the program with reference to learning styles; and they acknowledged the use of other participants and workers (including networks) as a learning resource. Examples of comments made on these points include:

- Different learning styles means different people learn in ways, at different paces. Understanding this helps me to be more effective in communicating ideas to clients and other ATO officers.
Discovered that others with different values and backgrounds are valuable as a resource in the workplace.

Reflection [on learning] with others prompted improved understanding of my own personality, perceptions, focus and reaction to situations.

Additional quotes can be found in McManus, 2006 and a more detailed discussion of the participant’s learning points can be found in Collier & McManus (2005). In summary however, the data collected clearly indicates that participants increased their awareness of learning and improved their ability to learn through their participation in the ATO program.

At this point it is acknowledged that this data on learning recorded by participants in the consolidated learning records is a subjective form of evidence, however it is noted that it is difficult to measure learning (especially learning skills and future learning) in a more objective way (Boud & Falchikov, 2004). It is recognised that,

…learning how to learn involves an awareness deeper than simply knowing how one scores on a cognitive learning style inventory; or what one’s typical or preferred pattern of learning is. Rather, it means that adults possess a self-conscious awareness of how it is they come to know what they know; an awareness of the reasoning, assumptions, evidence and justifications that underlie our beliefs that something is true (Burns, 2002, p. 256).

Consequently the evidence collected is considered a good indication of success in the first instance. Perhaps more compelling and interesting however is the impact this learning has on the participant compliance officers’ work practices. As a result, other measures of success of the program have also been sought back in the workplace. And although there is the risk that these measures are influenced by more than participation in the program, the evidence referred to was gathered within a reasonable short time (usually 3 months) after completing the program. Therefore a link between the program and the improved work performance is made with relative confidence.

Evidence of improved ability and desire to productively apply learning

Evidence of participants’ improved ability to perform tasks has been demonstrated in various forms. Some of the participants were able to make the link at the end of the program between their increased awareness of and ability to learn through participation in the program and how that would reflect in their performance at work and how they were better able to link theory and practice. For example participant wrote (refer McManus, 2006 for additional quotes):

[working with others] helped reinforce this [my learning] from a third party, and the experiences gave examples that I can use to become a better auditor, and do my work better.

That I remember more after hearing the theory and putting the activity into practice. That I need to hear, see and do something to fully understand something.

Many of the improvements reported to date have also been confirmed, after the participants returned to work and realised that they were using new skills they had developed on the program. This evidence has been received anecdotally by both the participant and their team leaders (supervisors) both during impromptu conversations
with the ATO program consultation team members and with the author at certificate ceremonies approximately 6 months after completing the program. The main common contributing factor to the reported successes is an increased level of confidence and an increased awareness of the value of learning.

The main tangible form of evidence of improved ability in the workplace however has been through the ATO’s Quality Assurance process where it has been noted that cases completed by participants of the program are being completed more efficiently, with more audit adjustments and with improved quality (by the standards used for all similar case work).

Other indications of productive learning have been linked to successful internal promotions since completing the program. In these cases claims have been made by past program participants that it was the skills, motivation and confidence gained from participation in the program that got them through the promotion process. This usually involved extensive written tests and interviews.

Evidence of improved learning from and with each other has also transpired through the mentoring system which has been launched in connection with the ATO program. This mentoring system and the other forms of evidence noted in this section have been documented by the ATO and continue to be assessed.

The competition for and desire to participate in the program also indicates that compliance officers that work with graduates of the program have noted the difference in work practice and confidence and wish to join the ranks.

Whilst the evidence mounts, confirmation of the success of the program is most notable in the support the ATO has provided for it. In 2006 the program will be delivered to the sixth cohort of participants. At the completion of that program approximately 800 compliance officers working for the ATO will have participated in the program, with every indication the program will continue. Furthermore the program outcomes are being used to benchmark the capability of compliance officers.

Finally, the development of strategies to capture more evidence in the future is currently under way. These are likely to include critical incident interviews (See for example, Cohen, Manion & Morrison, 2000, p. 310; and Benner, 1984) and focus groups.

Conclusions

Learning in the workplace is not a new phenomenon. It happens all the time, regardless of whether we are aware of it or what we call it. The learning that takes place however may not be ‘good’ learning, it may not be used effectively, or it may not be occurring to the degree possible. Additionally this learning at work is often invisible. It is not separable from normal work activities, behaviours and socialising. It is suggested in the literature that these features are best explained in terms of learning being organic and that a holistic approach is required when designing

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1 A certificate of completion was awarded to ATO program participants after an assignment has been satisfactorily completed. The time given to complete the assignment, marking time and feedback and resubmissions accounted for the time period between completion of the program and the certificate ceremony.
strategies for enhancing learning in the workplace. Furthermore it is suggested that to support learning and facilitate it (perhaps to speed up the process) we need to ensure workers know how to learn and how and when to apply that learning productively. Guidance on nurturing and facilitating productive learning however is required in practice.

This paper provides a framework for using the literature to assist in operationalising the concept of holistic learning in a way that will nurture and facilitate productive learning in the workplace. The general list of issues or aspects of learning that make up the framework directs one to consider the learner and their attributes, their learning environment and the desired learning outcome in a systematic way that can be most easily managed. In doing so, the framework helps one use the literature to inform them on how best to nurture and facilitate productive learning in the workplace for a given group of workers and to produce the desired outcomes (i.e., organisational goals).

Successful use of the framework and the subsequent development of a program to develop and enhance workers’ learning skills and the ability to apply learning productively have occurred in the case of the ATO. Evidence indicates that as a result of the analysis undertaken through the direction of the framework presented above, the workers demonstrated increased learning skills, increased motivation to learn and an increased productive application of learning. The success of the program confirms the value and practical use of the framework and the assumptions underlying it.
References


