

Informal Workplace Learning:  
A Critical Literature Review

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By

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### Abstract

Informal learning in the workplace is a wide-ranging topic that has only begun to be explored extensively in the literature in the last few years. It is important because the vast majority of learning that happens in the workplace, up to 80-90%, takes place informally. Traditional literature on the topics of workplace learning and management have perhaps missed this mark by focusing almost exclusively on formal learning and training. Presented in the form of a literature review, this paper explores the background and history of scholarly literature and classic definitions of both informal learning and workplace learning. It then attempts to define some key terms, concepts, and theoretical constructs that are especially important to the burgeoning field of informal workplace literature. Then, some key findings from published practical research are presented, followed by a series of practical recommendations for supervisors and managers seeking to increase the importance and effectiveness of informal learning in their workplaces.

## **Introduction**

The purpose of this paper is to examine the phenomenon of informal learning by individuals and groups in the workplace, as presented in recent literature. Informal learning is a relatively new phenomenon as presented in the workplace learning literature, so as such, this paper will attempt to present a comprehensive review of all recent studies, with a look back at seminal works driving the theory behind current publications.

Informal learning is the first form of learning that human beings engage in when they are toddlers and young children, before beginning formal schooling programs (Davies, 2008). People then engage in informal learning for all phases of life, and its importance cannot be understated. Formal learning is presented in school environments and training programs in the workplace, and its formulaic structure is very familiar. The “sage on the stage”—that is, the instructor or teacher— attempts to present knowledge that has been collected and generated by experts over time. It takes time and costs money to do formal learning. Informal learning lacks the “sage on the stage”; instead, intrinsic motivation is required by the learner who must decide what to learn and how to learn it. The child must *want* to learn to walk, talk, eat properly, or ride the bicycle. There is no effective formulaic way to teach children these things. They learn by instinct, by copying others, and through lots of practice and trial-and-error. The way adults learn in the workplace is often quite similar, as this paper will show. Informal learning is the main form of learning for adults in work and in life (Misko, 2008).

### **Informal Learning in the Literature**

The term “informal learning” was first used extensively in scholarly published literature in the 1950s by Malcolm Knowles in his book entitled “Informal Adult Education” (1950). In fact, much of the work in the field of adult education at the time described adult learning as informal.

Even earlier, the works of Lindemann (1926) and Dewey (1938) discussed the idea of the self-direction of adult learners, a concept which is key to the forms of informal learning to be discussed in this paper. The evolution of present-day thought on the topic of informal learning in the workplace continued to evolve after these earlier works. There was a boon of explicit writings on the topic of informal learning in the 1980s (Le Clus, 2011). As well, interest in the topic of workplace learning has expanded considerably since the beginning of the 1990s (Päivi, 2008). Interest in the topic of informal learning in the workplace specifically started to expand greatly in the late 1990s.

### **History of Work and Learning**

Historically, work and learning have been linked in various ways. In the pre-industrial era, work and learning were closely linked with the ubiquity of apprenticeships. The rise of formal schooling as a normalized practice for the common person did not occur until the rise of the industrial era. Because of this, it can be said that informal learning in the workplace has been of importance to workers for far longer than formal schooling has (Nieuwenhuis & Van Woerkom, 2007).

Along with the emergence of formal schooling as a ubiquitous practice came the rise in popularity, during the early industrial era, of the principles of scientific management known as the Taylorist approach. In this view, learning serves the purpose only of preparing the worker to do a specific job. There is a serial relationship between work and learning in which they are viewed as separate activities, and where training and education are viewed primarily as preparatory to work. Also, "...in Tayloristic work organizations, work is intentionally designed with a minimum of learning opportunities for shop-floor workers because learning implies

running the risk of a loss of routine, stability, and efficiency; therefore such opportunities might lead to lower productivity and higher costs” (Nieuwenhuis & Van Woerkom, 2007, p. 66).

However, in recent decades, particularly since the beginning of the 1990’s, it’s become increasingly clear that “companies offering their workforce excellent training programmes were losing competitive advantage” (Chivers, 2011, p. 169). The traditional ideas of knowledge management, generation, and sharing in the workplace had begun to change (Li et al., 2009; Watkins & Marsick, 1992). The traditional focus on the idea of workplace learning being defined by management is being superceded by a new focus on lifelong learning as defined by the adult learners themselves, with workplace learning as perhaps a major component (Kyndt, Dochy, & Nijs, 2009; Li et al., 2009). Skule (2004) states that “within the business community..., new strategies to improve organisational learning capacities increasingly favours approaches emphasising experiential, informal and self-directed learning, thus facilitating personal as well as organisational development” (p. 9). The bulk of this paper will demonstrate how and to what degree this approach has worked in the past, or might work in the future.

### **Close Linkage of Work and Learning**

The relationship between work and learning is recognized by many writers as one that is very close and even interchangeable. They can be said to reinforce one another, and indeed workplace learning is a critical component of lifelong learning (Cairns, 2011). Learning from experience, which arguably is the bulk of learning that takes place in the workplace, represents a cornerstone of adult learning theory (Watkins & Marsick, 1992).

The workplace’s importance as a site of adult learning has long been recognized by many writers in the field (Høytrup, 2010; Li et al., 2009). Päivi (2008) discusses the type of learning that takes place in the workplace and divides observable learning in any environment into three

categories that Päivi refers to as *metaphors* for learning: knowledge acquisition (as in formal schooling), participation (as in communities of practice), and knowledge creation. Päivi concludes that of the three, “the participation and knowledge creation metaphors better describe workplace learning” while the knowledge acquisition metaphor only describe a portion of workplace learning at best (Päivi, 2008, p. 150).

### **Most Favored Workplace Learning Strategies Are Informal**

Studies have consistently found that among employees, the most favored workplace learning strategies are informal (Eraut, 2004; Hicks, Bagg, Doyle, & Young, 2007; Chivers, 2011).

**Versus formal workplace learning.** Studies consistently show that informal learning has a strong, if not exclusive, influence on learning at the workplace. In a study on low-level workers in the retail sector, it was found that although the workers had no opportunities for formal training on the job, they were able to find creative ways of learning on the job, and even learned through the process of problem solving (Roberts, 2012). Even in professional workplaces where formal learning is offered and encouraged or even mandatory, employees find much more value in informal learning methods (Taber, Plumb, & Jolemore, 2008; Eraut, 2011). A study on teachers’ formal in-service experiences found that they had little impact on the teachers’ practice (Jurasaitė-Harbison & Rex, 2010).

**Versus formal education credentials.** Päivi (2008) discusses the gap between what is learned in formal schooling, particularly in higher education, and the knowledge, attitudes, and skills are required to be successful in the workplace. He concludes that while there is evidence that theoretical knowledge and practical skills often transfer well into the workplace, formal schooling often does not produce the kind of methodologic knowledge and general knowledge

about the occupation needed for workers to be successful in their chosen profession. Päivi concludes that colleges and universities can overcome this obstacle by partnering with industry to offer practicums for the purpose of learning both formally and informally in the workplace. These kind of partnerships will be explore later in this paper as one way that informal learning happens in the workplace.

**Despite time and money spent on formal learning.** In one study of Canadian accountants working at various firms, it was found that a not insignificant amount of time and money was spent by management to provide formal training opportunities to accountants on staff. Yet, when interviewed about their experiences, these accountants confided that they rarely took advantage of these formal training opportunities unless mandated; indeed, they spent most of their time learning informally on the job and found that learning in this way was far more valuable (Hicks et al., 2007). Formal learning has merit in the workplace, though it is costly and often is not justified by a return on investment. Developing formal training take time and money, and additional costs are generated when employees must spend time away from the workplace (Mahony, 2011; Lukosch & de Vries, 2009).

**The 70 to 90 percent rule.** An accumulation of research on informal workplace learning has produced an oft-cited statistic that 70 to 90 percent of the learning that occurs at work is of the informal variety (Chivers, 2011; Eraut, 2011; Jeon & Kim, 2012; Lewis, 2011; Lukosch & de Vries, 2009; Watkins & Marsick, 1992). This statistic has made it seem all that much more unreasonable that companies spend the time and resources they do on formal training when these would be better spent on ways to foster and encourage informal learning.

**Often ignored.** Despite the 70 to 90 percent statistic, informal learning is often ignored by employers. They will often consider informal learning to be simply a part of doing the job, or

as a mechanism for accomplishing work, thus rendering it invisible (Boud & Middleton, 2003). They ignore the importance of this learning at their own peril, given the often marginal effectiveness of the formal learning programs that they *do* attach importance to.

### **“Knowledge Work” and the New Economy**

“Knowledge is [*sic*] taken place of capital as the driving force in organizations,” writes Li et al. (2009). In today’s economy, the importance of a versatile workforce with an evolving set of skills and the ability to constantly learn has become more apparent than ever. No longer is the Tayloristic approach sufficient for companies to survive in today’s “complex and dynamic environment” (Else Ouweneel, Taris, van Zolingen, & Schreurs, 2009, p. 28). It makes more sense for employers to develop and encourage the informal learning skills of employees than it does to spend time and money on formal learning programs to develop skills that may be out of date almost as soon as they are learned and that may not be applicable to employees’ jobs.

### **Detrimental Effects of Formal Workplace Learning**

Up until now, this paper has discussed the ineffectiveness of investing too heavily in formal learning in the modern workplace, but what about the actual harm it can do? Roberts (2012), in his article about low-skilled workers in the retail sector, concluded that existing formal learning opportunities served not to offer opportunities for advancement but instead wasted employees’ time and effectively demoralized them. These “training opportunities”, in most cases, did not even help workers become better at their jobs. If it wastes employee time and is demoralizing, why spend the money on formal training when workers can be better at their jobs for less money by simply learning on the job (Kyndt, Dochy, & Nijs, 2009).

### **Informal Learning Effectiveness**

Informal learning is more likely than formal learning to deliver exactly what is needed, when it is needed. Human resources departments have been slow to catch on to this fact. Doornbos, Simons, & Denessen (2008) note that “the field of human resource development has a relatively rich history of examining formal work-related learning programs, such as mentoring, learning projects, and coaching” (p. 130). Chivers (2011) argues that HR departments must pay as much attention to informal learning as to formal learning or risk becoming obsolete. Pankhurst (2010) argues that ignoring informal learning can be equivalent to ignoring basic human nature:

Whilst the metaphor of human capital usefully conveys the idea of human abilities as a set of abilities that yields a stream of future output, the conception of it as exogenously acquired during formal education and the measures of it as the capitalised value of a stream of earnings from paid work are abstracts at variance with the nature of individual human learning and the abilities that are acquired (p. 116).

Informal learning’s importance is ignored at great risk to companies.

### **Research Methods**

I began my research on the subject of “Informal Learning in the Workplace” by using Google Scholar to search the term “informal workplace learning” for articles published from 2007 to 2011. I also used the “Lion Search” tool on the PSU library website for articles, using the same search terms and publication dates. I searched specific databases available through the PSU library’s website. I searched the Eric database using the keywords “informal learning” AND “workplace learning” for books, journal articles, and dissertations published from 2007 to 2012. I searched the ProQuest education database using “informal learning” AND “workplace learning” as general search terms for journal articles published from 2007 to 2012. I also searched on ProQuest using the terms “informal learning” AND “workplace learning” in a subject search for

journal articles published during the same time frame. As I read through these journal articles, I made notation of pre-2007 works which were referenced often and perceived by me as seminal earlier works. I then searched for, retrieved, and read these earlier works. I occasionally included other post-2007 works which were not discovered through these search methods, but instead were referenced in the papers that I did find through online search.

### **Defining Informal Learning**

Before getting into describing the findings in the literature on the topic of informal learning in the workplace, it is useful to begin with definitions of informal learning as it is contrasted with definitions of formal learning. It is also useful to describe the many terms and descriptions that pertain to types of informal learning that occur in the workplace, as well as to describe theoretical foundations pertaining to informal workplace learning as they have evolved over the years. These definitions and descriptions are referred to frequently in recent literature, although authors use different and often contradicting ones.

Formal learning, for the purposes of this paper, consists of training arrangements in which the learner has little or no control over the learning objectives. Formal learning events in the workplace usually involve a lot of planning and resources. The person conducting the training may or may not have familiarity with the trainees' actual work environment and requirements. Training events are usually of the "one-size-fits-all" variety, and are not necessarily applicable to an individual's needs. Nieuwenhuis & Van Woerkom (2007) state that "although ultimately training and education are intended to lead to the application of knowledge on the job, in practice, learning in education and training tends to be more targeted to learning goals." Some definitions of formal learning only include learning outside the workplace in credentialed

programs such as in universities or trade schools (Misko, 2008), but for the purposes of this paper, we are primarily considering the formal learning that takes place within the workplace.

### **Definition of Informal Learning**

Informal learning, in the most basic sense, “refers to learning that is acquired through everyday work and life” (Misko, 2008). It is normally unstructured and unplanned, and takes place outside of formal learning structures (Watkins & Marsick, 1992). It does not typically lead to any kind of certification or formal recognition (Skule, 2004), although “it may be used to acquire full, or components of, formal qualifications” (Misko, 2008, p. 13). Informal learning “may be intentional, but is in most cases non-intentional” (Skule, 2004, p. 9).

The nature of informal learning is often difficult and elusive to describe, as it encompasses multiple methods and behaviors, and occurs in practically an infinite number of situations in adults lives. Contextual reasoning is a prominent feature of informal learning, producing implicit and tacit knowledge as well as competency is that situation-specific (Lukosch & de Vries, 2009). The primary feature of informal learning is its basis in experience, that is, in the way people make sense of their daily lives (Watkins & Marsick, 1992; Eraut, 2004). Informal learning lacks design imposed by others. It is marked by a process of inquiry which happens in the form of a “reflective conversation with the situation” (Watkins & Marsick, 1992, p. 295). Intrinsic motivation is a very important feature of informal learning, probably more so than with formal learning (Evans & Waite, 2010). Informal learning “... is more under the control of the learner than formal learning... and can be planned or unplanned” (Hicks et al., 2007, p. 63). Informal learning often has a social dimension to it. Informal workplace learning involves praxis; that is, the process of action and reflection taking place in a continuous feedback loop (Eraut, 2004). Finally, the process of informal learning in general can be thought of as part of the process of

growing and maturing as an adult. Learning in general is an experience of the transformation of identity (Taber et al., 2008).

### **Comparison of Formal and Informal Learning in the Workplace**

Definitions of formal learning and informal learning are useful, but it is most helpful in understanding both terms to look at them side-by-side to see the differences and even the similarities. It will be demonstrated that it is not always useful to think of the two terms in terms of a strict dichotomy, since learning often falls on a continuum between the two.

According to Marsick and Watkins (1990), informal learning is present in just about all situations in the workplace, whether it is realized by the learner or not. Informal learning emerges when people have the “need, motivation or opportunity for learning” (Eraut, 2004). Since it is so pervasive and present in just about any situation at work, it can easily be deduced that because of informal learning’s ubiquity, informal learning may have more importance than isolated workplace formal learning events and opportunities. Lukosch & de Vries (2009) stated that “informal learning is a cooperative action while formal learning often takes place as an individual (or lonely) activity” (p. 40). Indeed, much of the recent literature on the topic of informal workplace learning discusses its social nature. Blåka & Filstad (2007) discuss learning in terms of “relations” in both formal and informal learning. Formal relations include trainer-trainee and mentor-mentees. Informal relations include the often unplanned relationships with colleagues in communities of practice. Schulz & Stamov Roßnagel (2010) and Eraut (2011) describe the two forms of learning in terms of place, with informal learning taking place on the job, and formal workplace learning taking place off the job. Høystrup (2010) describes forms of learning in the workplace that include both formal and informal characteristics including “mentoring arrangements, learning from mistakes, and learning through individual or collective

reflection” (p. 151). An interesting way to describe the contrast between formal and informal learning comes from Päivi (2008), who describes formal or school learning as characterized by the manipulation of symbols, with informal learning characterized by contextualized reasoning: “for example, in everyday mathematics people may use real objects as a part of their calculating process, whereas school mathematics operates purely with numbers” (p. 133). Päivi (2008) also gives many contrasting features of both formal learning and workplace learning, which the author seems to equate with informal learning. Learning in formal education is intentional, and sometimes unintentional, while learning in the workplace is unintentional, and sometimes intentional. Formal learning is focused on mental activities, while workplace learning is focused on tool use as well as mental activities. Learning outcomes are predictable in formal learning, while they are not always predictable in workplace learning. Formal school learning takes place on an individual basis, while workplace learning is generally collaborative.

There is a “complete lack of agreement about what constitutes informal, non-formal and informal learning, or what the boundaries between them might be” (Hunter, 2010, p. 452). Indeed, there is a whole spectrum of ways that non-formal learning is described in the literature, including definitions that equate it with or share features with informal learning as we’re describing it for this paper. Misko (2008) describes non-formal learning as “learning in structured programs for developing skills and knowledge required by workplaces, communities and individuals. These do not lead to nationally or internationally accredited formal qualifications” (p. 10). This definition would seem to include a lot of the examples of formal workplace learning that we are using to contrast with informal workplace learning for this paper. Popularly, non-formal learning is described as learning that is organized and often includes learning objectives, but does not lead to formal qualifications (McNally, Blake, & Reid, 2009;

Kyndt, Dochy, & Nijs, 2009; Le Clus, 2011). Indeed, Misko (2008) equates non-formal learning with workplace training programs. On the other extreme are the authors who seem to use the term non-formal learning as an equivalent phenomenon to what we are considering informal learning in the workplace (Eraut, 2011). For the purpose of this paper, we will only be using the terms “informal learning” and “formal learning” in describing learning in the workplace.

### **Workplace Learning Defined**

Workplace learning, whether of the formal or informal variety, is fundamentally different from the learning that takes place in formal schooling environments (Päivi, 2008). Päivi (2008) describes Hager’s 2004 emphasis on the “need to develop workplace learning research from its own starting points” (p. 131). The standard paradigm of learning focuses on the transparent aspects of learning, Especially the measurable learning objectives of formal learning. The standard paradigm views nontransparent learning and tacit knowledge that comes with informal learning to be somehow inferior. The emerging paradigm sees learning as action in the world. Workplace learning “involves the social contract among individuals who work together to achieve higher order organizational goals” (Watkins & Marsick, 1992, p. 292). Indeed, several authors view workplace learning as a fundamentally social process, or even consider it to be fundamentally informal in nature, using the terms “informal learning” or just plain “learning” and “workplace learning” interchangeably.

**Workplace learning as a social process.** Workplace learning “involves a social contract among individuals who work together to achieve higher order organizational goals” (Watkins & Marsick, 1992, p. 292). Workplace learning is often viewed as fundamentally a social process, situated in the context of social practice (supporting informal learning, 1999; relations between characteristics, 1999; informal learning in the workplace: a review, 1999; teachers workplace

learning, 1999; towards a theory of informal and incidental, 1999). Teachers workplace learning within informal contacts (1999) describes the workplace as containing “cultural webs of meaning” that position employees as learners within the culture of their workplace (300).

Some authors see a deep connection between workplace learning and informal learning or even just learning itself. They also see the workplace as a very important site for adult learning (the influence of the work environment on entrepreneurial, 1999), and make a case for distinguishing learning at the workplace from classroom learning, suggesting a discourse be used that is fundamentally different (supporting informal learning at the workplace, 1999). Learning by experience, work and productivity (1999) is workplace learning in the context of a very fundamental human response to life:

As both work and learning (whether in formal or informal institutions) are problem-solving, they are interconnected by a symbiosis between thought and action. Work, directed to satisfying needs that evolved from food, shelter and clothing to aesthetic, cultural and spiritual satisfactions, generates continuous change in learning since any action embodies a purpose that changes a person’s environment (Lorenz 1970). The mind learns by perceiving to what extent a change meets an intended purpose. Since wants are insatiable, human beings continue to modify their environment, and to develop the culture, the economy, the polity and society (pp. 113-114).

### **Theoretical Frameworks**

#### **Goal Rationalities**

Most modern theories behind learning in the workplace recognize that learning cannot often be defined simply as taking place via a single mechanism or with easily defined goals and outcomes. Nieuwenhuis & Van Woerkom (2007) introduced the concept of “goal rationalities”

to help explain the various frameworks within which learning related to work takes place. Each framework attempts to define the places, people, and purposes of the learning that takes place within it.

In the preparatory rationality, the purpose of learning is to meet predefined outcomes which someone has determined to be necessary to work in a certain field or workplace. Learning most often takes place formally within a university or trade school environment. The learning outcomes lead to learners becoming certified, and this certification is in turn required by workplaces. Often specific workplaces or industries will work with schools to help determine these learning outcomes.

In a personal goal rationality, learning goals and outcomes are determined by the individual worker/learner based on personal professional goals. Although managers and industry trends may help to determine these goals, ultimately, the success of learning depends on the agency of the worker/learner.

The 3rd rationality within which workplace learning is categorized is the optimizing rationality. Here, “learning is seen as a byproduct of working processes” (p. 68). In the previous two rationalities, learning is explicit and is defined by previously determined outcomes. In the optimizing rationality, learning is seen simply as a byproduct of the routine tasks and jobs that take place in the work environment.

Finally, in the transformative rationality, learning is seen as contributing to the long-term health and survival of the organization. With the optimizing rationality, workers learn directly from their tasks on the job, but in the transformative rationality, they learned additionally by questioning the assumptions behind the type of work and tasks they do on a regular basis and are actively involved in the constant redesign of their jobs. Nieuwenhuis & Van Woerkom (2007), in

fact, believe that the health of the learning culture in an organization can be directly correlated with the overall health of the organization: "...workplaces have a high learning potential when they offer workers opportunities for creativity and types of transformations that are more profound than mere improvement" (p. 74).

Nieuwenhuis & Van Woerkom (2007) also assert that learning often takes place within more than one goal rationality at once, and that the different goal rationalities often serve to support more powerful learning collectively than what takes place in any single goal rationality. For example, learning that takes place within the optimizing rationality may lead, over time, to learning within the transformative rationality when subtle cues eventually lead workers to question the assumptions behind their routine work. Often personal learning goals are integrated into transformative goals, and this can lead to innovative thinking. These two goal rationalities are in fact behind the learning of entrepreneurs. Finally, the preparatory and the optimizing rationalities may work together when, for example, an internship is part of formal schooling.

### **Social Learning and Communities of Practice**

Informal learning very often takes place within a social context, and in fact, many researchers and theorists believe that it is only through the social context that learning can be understood (Fuller, Unwin, Felstead, Jewson, & Kakavelakis, 2007; Marsick, 2009). Two metaphors for learning are "learning as acquisition" and "learning as participation", describing individual and social learning respectively. The general view guiding this research paper combines the 2 metaphors, viewing learning as taking place at the individual level within a broader social context. They support and feed one another and are equally vital within the workplace context.

**Communities of practice.** Both social and individual learning often take place within the context of communities of practice in the workplace. The concept of communities of practice was first introduced in 1991 by Lave and Wenger. described communities of practice as an environment in which a type of social learning occurred (Le Clus, 2011). A community of practice is defined as “I people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis ” (Wenger, quoted Cairns, 2011). Communities of practice are sometimes defined by the information technologies that enable them (Conrad, 2008), but in reality, there are a variety of technologies that enable communities of practice including face-to-face meetings. The people who participate in communities of practice are often self-selected and motivated to learn (Misko, 2008; Conrad, 2008). They often meet in informal spaces to discuss issues of interest to the group (Misko, 2008). Workers can be involved in more than one community of practice at a time; these communities of practice might pertain to different aspects of their jobs. People engaging in multiple communities of practice are sometimes referred to as “boundary spanners” (Conrad, 2008).

Traut (mentioned in Cairns, 2011) concluded through research on health professionals that the term “community of practice” is not useful in describing what is observable in the field in terms of workplace learning. Cairns (2011) reported that Eraut “suggested that Wenger’s three dimensions of participation, mutual engagement and joint enterprise could be identified within some of the examples he presented, they could be so discussed ‘without needing to refer to the problematic concept of a community of practice’.” (para. 31). Situated learning and learning as social participation are better concepts at capturing the underlying essence of the theoretical approach that names communities of practice.

Another common critique of the concept of communities of practice is that it is too rigid a way of interpreting the way that people learn socially at work. For example, from communities to communities of practice's idea that communities of practice can be captured and enabled by the use of information technologies is a rigid view of learning that Cairns (2011) critiques as not adequately explaining the way people learn informally at work. Cairns (2011) insists that rigid theories or models of informal learning force us to think in a dualistic way, when often what we observe is not that simple.

### **Drawbacks of Dualism**

Taber et al. (2008) argue that attempting to categorize workplace learning as either “formal” or “informal” is not necessarily helpful in differentiating learning that takes place in the workplace, since there are elements of formal and informal learning in almost every instance of learning that takes place (Hunter, 2010; Jurasaitė-Harbison & Rex, 2010; Päävi, 2008). They view the workplace, rather, as a place for emerging and participatory learning that can take place in a variety of ways. Many authors (Eraut, 2004; Le Clus, 2011; Jurasaitė-Harbison & Rex, 2010) believe that workplace learning exists on a continuum between the formal and the informal and that very little learning can be said to exist exclusively on one end of the spectrum or another. There is also a problem with viewing workplace learning with a dual lens of social versus individual learning (Cairns, 2011), since again, observable instances of workplace learning can be said to have elements of both.

It is perhaps useful, then, to consider a theory of learning in the workplace that encompasses both informal and formal ways of learning. Pankhurst (2010) states that “human learning is a search for generalizations, either in the form of formally stated theoretical principles or as practical guidelines” (p. 114). This establishes a very broad guideline for understanding

learning, wherever it takes place. Dualistic ways of interpreting learning have their roots in Western culture, while Eastern ways of interpreting learning (or any other phenomenon) seek to understand it in a much more holistic way (Cairns, 2011). There are problems associated with both dualistic/compartmentalized views of learning and with holistic views of learning when doing practical research in the field. These problems will be explored in the next section.

### **Difficulties in Doing Informal Workplace Learning Research**

Since work is purposive action and ipso facto problem-solving, any kind of paid and unpaid work is a source of learning but, since what is learned intuitively and collaterally spills over from one human activity to another, there can be no clear evidence of when or where or how a given ability, attitude or value was 1st learned and subsequently developed (Pankhurst, 2010, p. 118).

This statement represents the crux of the problem with doing any research on informal learning. Forms of informal learning are often not understood, nor are they necessarily recognized as learning by the learners. For instance, workers often think of learning as occurring only as the result of formal education and training, and they think of work as a separate activity (Eraut, 2004). In fact, learning on the job as part of day-to-day work is quite common (Le Clus, 2011). Often managers compound this problem by only recognizing the learning that takes place as a result of formal learning methods (Chivers, 2011).

As a result of the problem of workers and managers not recognizing or understanding informal learning, researchers have to carefully consider the sampling and data collection methods used in the field. Marsick (2009) in her literature review of previous research on informal workplace learning, found that most studies rely on qualitative research designs, with many based in grounded theory. It is very difficult to get meaningful data about informal

learning from traditional quantitative measures. Skule (2004) emphasized that “informal learning cannot be measured by means of indicators traditionally used in the field of education and training, such as participation rates, training hours, expenditures or level of qualification. Neither can indicators to measure informal learning be extracted directly from existing theories of learning. (p. 10)” Incorrectly measuring workplace related learning can have serious consequences in terms of national policies, which often overemphasize research using quantitative methods (Pankhurst, 2010). Since national policies around workplace or work related learning are usually formed for the purpose of economic growth, ignoring informal learning can cause policies to miss that mark.

It is very difficult or impossible to observe precisely when and in what context skills and attitudes are learned, when they are learned informally. As a result, many authors have suggested ways of overcoming challenges inherent in doing research on informal learning in the workplace. Fuller et al. (2007) suggest that in-depth interviews by experienced researchers can help to draw out learner’s tacit learning experiences. Interviewing as a method of qualitative data collection for this topic is also favored by Eraut (2004); Doornbos et al. (2008); Jurasaitė-Harbison & Rex (2010); and McNally et al. (2009). Eraut (2004) further suggests that interviewers should emphasize their roles as strangers in the workplace, to whom even “simple acts and circumstances may need to be explained (p. 249).” Jurasaitė-Harbison & Rex (2010) observed informal teacher learning in more than one workplace through the approach of an extensive ethnography, supplementing interviews with observations of teacher interactions and classrooms and document analysis. Indeed, the majority of modern research on informal learning in the workplace is qualitative in nature. Of the 32 journal articles used as references in this paper that were not editorials, opinion pieces, or comprehensive introductory material, over  $\frac{2}{3}$  (23) used

qualitative methods such as case study, ethnography, and grounded theory. The remainder largely used nonexperimental quantitative methods, with only one partially using an experimental method (Roßnagel, Schulz, Picard, & Voelpel, 2009).

### **Types of Informal Workplace Learning**

Informal learning takes many forms in the workplace. There are less visible forms of informal learning that are not necessarily recognized as learning by workers or by the researchers observing them. Then, there is learning of an informal nature that is deliberate in nature and thus recognized and describable by learners. There are types of informal learning described in the literature that have elements of both. This section will describe how researchers have chosen to name both the hidden and the easily observable types of informal learning that have been theorized to take place in the workplace.

#### **“Formalized” Informal Learning**

The more visible forms of informal learning usually have formal elements to them. They are intentional forms of learning that are easily recognized as learning by participants and observers.

**Mentorships.** Mentoring or “coaching” relationships are are formally or semi-formally recognized as such by the participants and often by the workplace at large. Though much about mentoring relationships is by nature informal, if a mentoring relationship is not formally recognized by the workplace, they run the risk of failing if they “do not have in-built special arrangements to support the relationships” (Misko, 2008, p. 26). These special arrangements should include guidance specific to the workplace, sufficient preparation for the mentor and mentee roles, and time set aside to devote to the relationship.

**Apprenticeships.** Apprenticeships are another way that informal learning is recognized formally in workplaces. Apprenticeships involve a transfer of knowledge between an expert or experts in a skilled field, and a newcomer looking to gain experience. Though apprenticeships, as mentioned earlier in this paper, represented an early preindustrial form of informal learning, the concept of the apprenticeship has gained recent attention in scholarly literature on work in the knowledge economy. The concept of communities of practice might have “rescued” the idea of apprenticeships (Cairns, 2011). Recent literature redefines apprenticeships as a way to describe the way newcomers are assimilated into their chosen profession via communities of practice. Instead of learning from a single master of their craft as in preindustrial times, newcomers are learning from communities of practitioners (Henschel, 2001).

**Intentional informal learning.** Intentional informal learning, also referred to as deliberative informal learning (Päivi, 2008), is “learning in which workers initiate and structure their learning” (Schulz & Stamov Roßnagel, 2010, p. 383). Learners themselves determine their learning objectives, the time and place of their learning, and the methods they will use to monitor their learning progress. Päivi (2008) describes deliberative informal learning as “situations in which there is a clear work-based goal with learning as a probable by-product” (p. 139). Hunter (2010) describes a form of informal learning that she calls intentional-incident, in which learners deliberately place themselves in situations at work in which learning is a likely by-product.

### **Unconscious Informal Learning**

There are many hidden forms of learning in the workplace that are often difficult for employers and workers to recognize as learning, leading to the research difficulties described

earlier in this paper. Following are ways that researchers have chosen to name this hidden learning.

**Incidental learning.** Incidental learning is most often viewed as a form of informal learning that is a byproduct of a work activity (Hicks et al., 2007; Høyrup, 2010; Le Clus, 2011; Watkins & Marsick, 1992). It can also be a byproduct of learning in a formal environment (Le Clus, 2011). Incidental learning is most often viewed as an individual activity, but it can be said to occur in social contexts. In fact, one author (Le Clus, 2011) talks about incidental learning as something that occurs exclusively as a result of social processes: “incidental learning occurs through work-related interaction and socialisation processes” (p. 368). Le Clus (2011) cites such competencies as “knowing how to learn, problem-solving, creative thinking, interpersonal skills, ability to work in a team, communication skills and leadership effectiveness” (p. 362), saying that they are learned incidentally through social interactions. Some authors go so far as to suggest that incidental learning is an activity separate from informal learning rather than a subset of it (Jeon & Kim, 2012; Le Clus, 2011). Watkins & Marsick (1992) take yet another stance, saying that “...informal and incidental learning takes [*sic*] place along a continuum of conscious awareness” (p. 291). They suggest that the degree of conscious awareness of learning determines where on the continuum learning sits. Incidental learning produces tacit knowledge, which forms an important role in practical intelligence, which in turn has great importance in terms of professional success (Päivi, 2008).

**Tacit knowledge.** Tacit knowledge is “taken for granted and hard to articulate” (Fuller et al., 2007, p. 747). Tacit knowledge is by nature a result of hidden learning, yet it is an essential component of an enhanced skillset and success in the workplace. It comes as a result of experience over time, and cannot be readily transferred to newcomers (Hunter, Spence,

McKenna, & Iedema, 2008). It is personal, contextual, and cannot always be articulated through language (Blåka & Filstad, 2007). Le Clus (2011) adds that tacit knowledge may be known consciously or unknown to the learner. Evans & Waite (2010) observe that tacit knowledge is often colloquially referred to as “know-how” and involves “complex linkages between skill formation and personal knowledge developed through experience” (p. 246). Tacit learning is a process of not only knowledge acquisition, but of the processing of knowledge (Eraut, 2004). Watkins & Marsick (1992) point out a weakness of tacit knowledge: “Tacit learning can easily result in error because inaccurate assumptions, inferences, judgements and evaluations are made that are never brought to light and examined” (p. 296). This brings to light one criticism of informal learning generally, more of which will be brought to light later in this paper.

Not all authors view tacit learning as strictly an individual activity. Pankhurst (2010) and Li et al. (2009) both talk about tacit knowledge as something that occurs at the organizational level. Tacit knowledge, in this framework, is knowledge within the organization which has not been captured in some way, such as email, documentation or a knowledgebase intranet. Once this organizational knowledge is captured, it becomes explicit. Eraut criticized this model (as cited in Pankhurst, 2010), asserting that what others were referring to as tacit knowledge at the organizational level was actually explicit knowledge at the personal level that had simply not been shared with others. This presents a paradox for researchers trying to observe or uncover tacit learning in the field; once a worker is made aware of learning, it is no longer tacit.

*Situated learning.* Situated learning includes tacit learning that is embedded in daily work activities. Situated learning is contrasted with formal learning, where learning is a separate activity from working and daily life (Nieuwenhuis & Van Woerkom, 2007). Learning is not designed in advance as a separate activity, but is instead a natural part of living.

*Collateral learning.* Collateral learning is tacit learning that comes from doing something else devoid of the intention of learning (Doornbos et al., 2008). The ability to acquire collateral learning translates across jobs and professions for any individual learner. In other words, someone with a refined ability to acquire collateral learning has potential for success in many working environments (Pankhurst, 2010).

### **Types of Informal Learning That Have Both Conscious and Subconscious Elements**

Researchers have also described types of informal learning that have both conscious and unconscious elements to them. Following is the terminology that is commonly found in the literature.

**Innovation.** Learning and innovation are acknowledged as having a very close relationship by many researchers, and most of the learning associated with innovation is acquired informally. Innovation at work often takes place as a result of the informal learning processes of workers seeking a better way to achieve their jobs. The importance of this learning and innovation is often overlooked, though, by employers who want employees to learn and do their jobs in a prescribed way. Opportunities for innovations in work practices only come about when informal learning is combined with cooperation with others to implement improvements (Evans & Waite, 2010).

Innovation can be further defined in the context of learning at work: “innovation can be seen as the embodiment, combination, or synthesis of knowledge in original, relevant, valued new products, processes, services, experiences and transformations. Innovation is in this sense closely connected with the perceptions, skills and behaviour of employees” (Høyrup, 2010, p. 146). An example of innovation as the embodiment of learning is that of the Japanese manufacturing industry, where suggestions from assembly-line employees are actively sought

out and are often implemented as innovations in the manufacturing process or products (Høystrup, 2010). Innovation.....

**Adaptive learning.** Adaptive learning is a corollary of learning in an environment of innovation; adaptive learning is a way of adapting to change in the workplace environment. Høystrup (2010) argues that adaptive learning and innovative learning are mutually supportive and do not counteract one another.

**Entrepreneurial learning.** Entrepreneurial learning is arguably quite similar to innovative learning, except that entrepreneurial learning takes place without the influence of an HR department, supervisors, or the kinds of policies and environmental factors that might be present in a corporate environment (Lans, Biemans, Verstegen, & Mulder, 2008). Lans et al. (2008) also write that “learning, and the possibility to learn, are at the heart of entrepreneurial activity: learning influences the opportunity recognition processes” (p. 596).

**Networked learning.** Networked learning is a term for an “emerging perspective that aims to understand . . . how people develop and maintain a 'web' of social relations used for their own learning and professional development” (Hanraets, Hulsebosch, & de Laat, 2011, p. 85). In the context of work, networked learning requires that employees recognize the professional strengths and capabilities of other network members. This kind of knowledge, that is, knowing where to look and whom to talk to for information, is referred to as a sort of meta-knowledge (Päivi, 2008). Networked learning is also credited with fostering innovations in the workplace, since exposure to new areas of expertise can often lead to new ideas. The types of network interactions that are not with day-to-day direct coworkers, and instead are with customers or experts in other fields, are referred to as “weak links”, and are often credited with leading to

innovations (Lans et al., 2008). Networked learning that takes place in an organized and purposeful way often takes place in what are referred to as communities of practice.

***Communities of practice.*** Communities of practice are deliberately organized groups of workers who share a professional domain or interest (Hanraets et al., 2011). The concept of communities of practice was first introduced by Lave and Wenger in 1991 (Blåka & Filstad, 2007). Lave and Wenger described it as a way for workers to move from newcomer to oldtimer. This process of moving from newcomer to oldtimer can also be said to establish a worker as a “fully fledged” participant in a community of practice (Cairns, 2011).

***Action learning.*** Action learning is defined by Misko (2008) as “a process in which a group of people come together more or less regularly to help each other to learn from their experiences” (p. 21). Action learning is one way that learning takes place within communities of practice.

***Praxis.*** Praxis is informed action; it is a continual process of both action and reflection (Smith, 1999). The idea originated with Paulo Freire, who also credited ethics and social responsibility as being important parts of praxis. In the context of informal workplace learning, praxis can explain a lot of the learning that takes place. Le Clus (2011) refers to a 1999 Marsick and Watkins paper which describes informal learning as a process of both action and reflection, with reflection often embedded in action.

***Expertise.*** The acquisition of expertise is a subject also discussed much in the literature on informal workplace learning. The act of acquiring expertise can be thought of as learning to think like a professional in one’s chosen field. It requires much tacit and incidental learning, as well as knowledge of the facts and procedures required for the particular profession (Watkins & Marsick, 1992). This tacit and incidental learning can lead to the ability to use the knowledge of

facts and procedures: "...that knowledge has been implicitly organized as a result of considerable experience for rapid, efficient and effective use" (Eraut, 2004, p. 254).

**Experiential learning.** Experiential learning is a term used by Lewis (2011) to describe learning in the context of action. She differentiates it from informal learning, which is a broader term for an learning that is not offered by educators.

**Needs assessment.** Informal needs assessment as a form of informal learning was described by Hunter et al. (2008). Informal needs assessment takes place when trainers assess the "skills, characteristics and idiosyncrasies" of new hires (p. 661). Hunter et al. (2008) argue that this is a "powerful and significant form of informal workplace learning" (p. 661).

**Knotworking.** Negotiated knotworking is a process that occurs within communities of practice and among departments and organizations (Päivi, 2008). It is "characterised by a pulsating movement of tying, untying and retying together otherwise separate threads of activity" (p. 136). People from separate work areas come together to solve problems and negotiate, then separate, regroup, and meet again, perhaps initiating the process once again with another group. The process has a benefit of vastly improving organizational as well as personal professional knowledge.

### **Informal Learning at Work: Practical Findings**

The purpose of practical research in the area of informal learning in the workplace is to discover correlations between environmental and personal characteristics and the learning outcomes that are observed or that can be deduced. As such, it is useful to ask the questions:

- Who is involved in informal workplace learning? What are the personal characteristics of learners?
- Where and in what context does informal learning take place?

- What is learned informally in the workplace?
- Why do people choose to learn informally in their jobs? What is their motivation?
- How does informal learning take place in the workplace?

The remainder of this section is organized by these questions. The idea to organize as such was modeled loosely after Hunter's (2010) "attributes of informality", which are ways of measuring the formality or informality of a learning situation. The four attributes used by Hunter (2010) are (a) process, which include "characteristics of learning associated with the planning, mediation, and pedagogy of learning"; (b) purpose, which describes "whether learning is the primary reason for the activity and whose needs the activity is meant to address"; (c) setting, which concerns "the location and contexts in which learning occurs", and (d) content, which focuses "on the nature of what is being learned and the outcomes expected" (p. 452). These attributes correspond roughly with the questions of how, why, where, and what posed in this paper. Additionally, we will explore the question of who is involved in informal workplace learning.

### **Who is Involved in Informal Workplace Learning**

The question of who is involved in informal workplace learning is not a straightforward one. Asking who learns involves issues of personality, demographic characteristics, roles, etc. Yet learning is powerfully associated with a sense of self and identity (Henschel, 2001), so the importance of the question of "who" cannot be understated. In our investigation of who learns, this section will also go beyond the limited view of learning as an individual activity. "Investigating learning solely as an individual action of knowledge construction neglects the multiple dimensions of learning that are of interest and must be considered in order to fully understand and foster learning in workplaces" (Lans et al., 2008, p. 600).

**Characteristics.** Personal characteristics can play a fundamental role in whether and to what degree informal learning leads to meaningful results for the individual or for the organization.

*Age.* The age of workers plays a role in the type and degree of informal learning that workers engage in. Common in the literature is the use of the terms “old-timer” and “newcomer” to refer to older and younger workers, respectively. Among the findings from the literature:

- Older workers tend to prefer individual forms of learning, whereas younger workers gravitate to social situations for their informal learning (Berg, 2008).
- In a study of firefighters, a new system of working in response to fire emergencies was introduced in the workplace. The newcomers demonstrated a significantly greater ability to adapt to this new system, while the old-timers demonstrated a greater knowledge of firefighting as a whole (Taber et al., 2008).
- It can be said that newcomers learn informally from old-timers through questioning and observation, and that in turn the old-timers learn from the newcomers through their mentoring of them (Taber et al., 2008; Päivi, 2008).
- Schulz & Stamov Roßnagel (2010) found that there was no significant correlation between age-related cognition and informal learning outcomes, though this might be due to the “healthy worker effect” where older workers (that had not yet left due to health concerns) still expected to be working for long enough that learning for future organizational and professional needs seemed worthwhile.
- In one study on Dutch police officers, it was found that police tenure was negatively associated with the frequency of learning activities (Doornbos, et al., 2008).

- A study of workers in investment banking institutions found that older investment bankers “could reflect more fully on issues of training and learning in investment banking”, while younger staff were “equally stimulating and insightful, because they were living through a period of rapid learning at an early stage in their careers” (Chivers, 2011, p. 166). Chivers (2011) also cited an additional reason for the enthusiasm of the younger staff for learning: “Because they had no particular reason to go home to an empty apartment after working hours on weekdays, they tended to congregate in the office in the evenings. Here there was much discussion about all aspects of their work, their work organisation, affairs of other banks, and the world of finance in general” (p. 167).

All in all, except for the study on Dutch police officers, it appears that there is not a significant difference in the quality or quantity of learning in older and younger workers. An interesting research question might come from looking at the effect of tenure on the informal learning of older workers.

*Attitude.* Attitudes can drive or hamper informal learning’s effectiveness. This is especially true for informal learning since the locus of control lies with the individual as opposed to with educators (Watkins & Marsick, 1992). Confidence that informal learning will lead to positive outcomes is a huge attitudinal factor (Evans & Waite, 2010). For example, workers that have confidence of a career ahead of them in their chosen field view both formal and informal learning as crucial to their success (Chivers, 2011).

*Motivation.* Intrinsic motivation is a necessary factor for informal learning’s success. There are several factors that can be said to cause this motivation. Workers can be said to have a learning goal orientation, in which workers learn primarily in order to expand their skills and

knowledge, or a performance goal orientation, in which learners seek primarily to demonstrate mastery of certain skills. The performance goal orientation's purpose can be cynically said to be, in part, to conceal a true lack of knowledge from colleagues (Roßnagel et al., 2009).

Motivation was described by Nieuwenhuis & Van Woerkom (2007) as being related to professional goals. Workers in today's marketplace can be said to be pursuing a protean career (possibly spanning many organizations) as opposed to an organizational career (staying within a single organization). The protean career is "based on self-direction and the pursuit of psychological success in one's work and requires a high level of self-awareness and personal responsibility" (Nieuwenhuis & Van Woerkom, 2007, p. 76)

Berg (2008) conducted an extensive statistical study in which specific factors were ranked according to their effectiveness in cultivating informal learning behavior. The rankings are as follows:

- 1 Interest in current field
- 2 Computer access
- 3 Personality
- 4 Professional capability
- 5 Relationship with colleagues
- 6 Job satisfaction
- 7 Job itself
- 8 Work environment
- 9 Physical proximity
- 10 Monetary rewards (p. 237)

Of note is the fact that the least effective factor in stimulating informal learning was “monetary rewards”. Instead “interest in current field” was the most effective motivator for informal learning.

*Social behavior.* Learning cannot be said to always take place solely at the individual level, and is instead understood to often have a social dimension (Cairns, 2011). Workers who interact with others in communities of practice who perhaps have different areas of expertise, thereby opening new areas of informal learning potential. Also, professionals who are not aloof and insular, and who are instead open about sharing their ideas and knowledge, can be described as “visionaries” who enact change because of their extensive networks and bridging efforts (Päivi, 2008). In contrast, “employees who cannot network with others to share and construct knowledge will fall visibly behind their peers” when it comes to learning and enacting change (Päivi, 2008, p. 135).

*Education level.* The literature on the effect that formal education level has on informal learning is inconclusive. Misko (2008) and Fuller et al. (2007) indicate that those with lower education levels in their backgrounds had fewer opportunities at work for both formal and informal learning, and therefore did not benefit from it. However, Berg (2008), found through statistical analysis that no such difference exists.

*Personal characteristics.* Personal characteristics such as “desire for autonomy, social independence, tolerance of ambiguity, and a propensity for risk-taking and anxiety” can also be associated positively with innovative or creative achievement (Nieuwenhuis & Van Woerkom, 2007, p. 75). Hicks et al. (2007) cited “being curious” as a factor in informal learning. Personal characteristics important to informal learning can also include “perceived level of competence and the individual’s value of work-related learning” (Doornbos et al., 2008).

*Learning orientation.* Saying that someone has a “learning orientation” is simply a way of saying that they have a genuine interest in and curiosity about learning (Schulz & Stamov Roßnagel, 2010). People with a strong learning orientation are generally able to set their own learning objectives and learning and evaluation methods.

*Gender.* Gender is not a factor that has been explored much in the literature on informal learning. The only relevant finding comes from Skule (2004) who found that at the time, “for all levels of education, men had more learning intensive jobs than women, but the difference is much larger at the lower educational levels” (p. 12).

**Roles.** The roles that people play in organizations can be important in terms of informal learning, too.

*Training professionals.* Training professionals, despite their traditional roles as formal learning coordinators and teachers, can play a role in the informal learning culture and informal learning practice in organizations. They can do this by viewing themselves as “change agents” or “culture change consultants” rather than simply trainers (Chivers, 2011).

*Managers/supervisors.* The role of managers and supervisors in creating the climate for learning in an organization cannot be understated. Leaders in these positions must demonstrate a commitment to learning, by both demonstrating a personal commitment to their own learning (walking the walk) and “encourag[ing], support[ing], and reinforc[ing] the importance of developing others (talking the talk)” (Ellinger & Cseh, 2007). The literature on management has been deficient in discussion the need for informal learning in the workplace; there is not much discussion of “supporting the learning of subordinates, allocating and organizing work, and creating a climate that promotes informal learning” (Eraut, 2004, p. 271).

It is important to note the study by Jurasaitė-Harbison & Rex (2010), which was an ethnographic study that looked extensively at the informal learning of teachers. In that study, it was demonstrated that despite the learning orientation of managers and the learning climate they provided, teachers still found significant ways to learn informally on the job.

*Coworkers and colleagues.* Discussions and interactions with colleagues are often critical for the synthesis of informal learning at work (Hicks et al., 2007). Anyone can be a learning facilitator; those who have built networks with colleagues know who to go to to seek particular kinds of expertise (Ellinger & Cseh, 2007).

### **Contextual Factors Influencing Informal Learning**

This section answers the question: Where does informal learning occur, and how does this environment affect it? Learning that is useful or valuable in the workplace often takes place outside the workplace. Life skills are constantly gained and upgraded by adults throughout their working life and beyond, and these life skills are quite often acquired in the home or community environment. In turn, such life skills can be invaluable for success in the workplace (Roberts, 2012). Pankhurst (2010) describes extensively the integration of informal work-related learning with non-work-related informal learning. Though it does not happen as much with workers with repetitive, low-level, low-paying jobs, Pankhurst (2010) gives examples of workers who are able to integrate learning from their hobbies, interests, and activities outside of work into their jobs.

However, this section will focus on informal learning that can be identified as taking place within the workplace. Place is very important: “Learning is rooted in action in the organization and culture of the workplace” (Høyrup, 2010, p. 143). Context “permeates every phase of the learning process” (Ellinger & Cseh, 2007, p. 437), and so it is often difficult for researchers to define. Contextual factors that can influence informal learning can include the

cultural, social, and physical factors that are present in the workplace (Roßnagel et al., 2009; Jurasaitė-Harbison, 2009; Lans et al., 2008).

**Policy or institutional factors.** The European Union (EU) has a policy for workforce development that includes three segments (the “knowledge triangle” by EU parlance): research, innovation, and education (Høystrup, 2010). The EU views the knowledge triangle as being a crucial contributor to economic development since the intention is to lead to innovations at both the company/firm and country/government levels.

Unfortunately, not much practical research currently exists on the effects of government- and sector-level policies on informal learning’s ubiquity and effectiveness.

**Organizational factors.** Organizational factors relate to how work organizations are structured (whether they are hierarchical or more flattened, for instance), what kind of reporting arrangements there are, and what kind of climate exists as it relates to learning. They can include expansive vs. restrictive environments, where learning and innovation come from the ground up and the top down, respectively (Misko, 2008; Fuller et al., 2007; Høystrup, 2010; Roberts, 2012; Päivi, 2008); elements of the work culture (Hanraets et al., 2011; Jeon & Kim, 2012; Le Clus, 2011; Päivi, 2008; Jurasaitė-Harbison & Rex, 2010; Lans et al., 2008); the job-demand control model, which looks at job demand and the control that workers have over their own work methods and goals and how a balance between the two stimulates informal learning (Ellinger & Cseh, 2007; Else Ouweneel, Taris, van Zolingen, & Schreurs, 2009); work organization, that is, whether the workplace is organized by a top-down hierarchy or by some other scheme (Fuller et al., 2007; Berg, 2008; Else Ouweneel et al., 2009; Boud & Middleton, 2003; Päivi, 2008; Jurasaitė-Harbison & Rex, 2010; Lans, Biemans, Verstegen, & Mulder, 2008); protocols and procedures (Taber et al., 2008); and training climate (Schulz & Stamov Roßnagel, 2010).

**Personal factors.** Though personal characteristics and social factors have already been considered, there are personal environmental factors that are also important, such as technology, space, and flexible or structured time.

**Job satisfaction.** Though it can be difficult for researchers to separate these factors from those of the already-explored attitude factors, the factors explored here are those that are not intrinsic but rather can be controlled by supervisors and managers.

Other personal contextual factors include job design (Misko, 2008); task variety (Hicks, et al., 2007; Nieuwenhuis & Van Woerkom, 2007; Jeon & Kim, 2012; Watkins & Marsick, 1992); physical space (Jurasaitė-Harbison & Rex, 2010; Chivers, 2011); technology (Fuller et al., 2007; Eraut, 2004; Mahony, 2011; Li et al., 2009); workload (Eraut, 2011); and compensation and monetary rewards (Berg, 2008).

### **What is Learned**

The answer to the question of what is learned informally in the workplace is an important one to anyone planning learning and training for future needs of an organization. Päivi (2008) cited a 2004 study by Eraut and colleagues, who developed a typology of learning outcomes that can be visible and measurable in the workplace:

- (1) Task Performance, including sub-categories such as speed and fluency, range of skills required and collaborative work;
- (2) Awareness and Understanding, involving understanding of colleagues, contexts and situations, one's own organization, problems risks, etc.;
- (3) Personal Development with aspects such as self-evaluation and management, handling emotions, building and sustaining relationships, and the ability to learn from experience;
- (4) Teamwork with subcategories such as collaborative work, and joint planning and problem solving;
- (5) Role Performance, including prioritisation [*sic*],

leadership, supervisory role, delegation, crisis management, etc.; (6) Academic Knowledge and Skills, such as assessing formal knowledge, research-based practice, theoretical thinking and using knowledge sources; (7) Decision Making and Problem Solving, involving, for example, dealing with complexity, group decision making, and decision making under conditions of pressure; and (8) Judgement, including quality of performance, output and outcomes, priorities, value issues and levels of risk. (p. 134)

Since formal learning includes learning assessment as an important part of the formal process, it's relatively easy to measure such work-related outcomes when learning takes place as part of a formal mechanism. When learning is acquired informally, it's more difficult. This is an area of informal learning in the workplace that has not received much attention, as evidenced by Hunter's (2010) description of content attributes, which she describes as tending to be more formal.

### **Why Informal Learning Takes Place**

This section will explore the question of why and for what purpose informal learning occurs. Though Hunter's (2010) definition of purpose attributes of learning defines them as being more informal in nature, there is a distinct lack of literature that examines purpose attributes specifically. The following purposes have been discovered and examined in the recent literature.

**Intrinsic motivation.** Intrinsic motivation is a primary reason for why informal learning occurs. Evidence from companies that rely exclusively on research and development (R&D) divisions for organizational and product innovations are often missing out on an untapped resource: innovation coming from the informal learning of other employees. Those other employees, in turn, seeing that they are not sought after or respected for their ideas, lose much of

their intrinsic motivation to think creatively and innovate (Høyrup, 2010). A perception of a low level of competence and a desire to live up to the expectations of peers can also be a great motivator for learning (Doornbos et al., 2008).

***To bring about change.*** Work and life are in constant states of change, and learning can be a response to or a driver of that change. Learning can be said to be an embodiment of change:

As both work and learning (whether in formal or informal institutions) are problem solving, they are interconnected by a symbiosis between thought and action. Work, directed to satisfying needs that evolve from food, shelter and clothing to aesthetic, cultural and spiritual satisfactions, generates continuous changes in learning since any action embodies a purpose that changes a person's environment (Lorenz 1970). The mind learns by perceiving to what extent a change meets an intended purpose. Since wants are insatiable, human beings continue to modify their environment, and to develop the culture, the economy, the polity and society. (Pankhurst, 2010, p. 113-114)

***To fulfill an unmet need.*** Sometimes informal learning can make up for where formal learning comes up short in the workplace. Høyrup (2010) states that “existing formal educational systems do not work in a way that produces the type of learning and innovative competence that are needed for today's society” (p. 144), and that workers are motivated to make up the difference.

***To gain marketable, transferable skills.*** Workers are quite often motivated by the idea that the skills they're learning will be transferable to other workplaces and work situations. Pankhurst (2010) provides case study evidence that collateral learning of general cognitive abilities is greatly improved by the knowledge that outcomes will lead to an improved professional resume.

**Work pressure.** The study on Dutch police officers (Doornbos et al., 2008) found that increased work pressure seemed to lead to increased informal learning in the workplace. Nevertheless, other studies have found that too much pressure can negatively affect learning in the workplace by leaving too little time for it. It seems that a balance should be sought between boredom and lack of challenges and the overwhelming situation of too many day-to-day tasks.

### **How Informal Learning Takes Place**

The final problem to consider when examining the literature on informal workplace learning is the question of how that learning takes place. We will be looking at attributes of learning that roughly meet the qualifications of Hunter's (2010) process attributes, which address "whether learning is the primary reason for the activity and whose needs the activity is meant to address" (p. 452). We'll also look at the mechanisms and methods behind informal learning as it takes place in the workplace. It helps to think of the methods of informal learning in terms of learning competence: "Learning competence comprises processes such as assessing one's specific learning needs, setting learning goals, choosing effective learning strategies, and monitoring learning progress towards learning goals" (Schulz & Stamov Roßnagel, 2010, p. 383).

The methods discussed in this paper are organized by the simultaneous general processes of learning discussed by Høyrup (2010): "belonging (to a social unit), becoming (developing skills), experiencing (the meaning of a common work task) and doing (practical action contributing to the common work task)" (p. 150).

**Belonging.** Belonging (to a social unit) methods of informal learning include:

- Participating in communities of practice and social networking are processes by which learners in organizations get up to speed with the norms in their profession and the

cultural factors of their organization. (Blåka & Filstad, 2007; Hanraets et al., 2011; Taber et al., 2008)

- Learning a professional culture by gaining an understanding of the language and jargon used (Blåka & Filstad, 2007).
- Facilitating a social network or community of practice (Hanraets et al., 2011).
- Mentoring or “buddying” are methods of one-on-one learning and interacting that can be effective means for newcomers to achieve informal learning (Hunter et al., 2008).
- The modern concept of apprenticeship can also contribute to belonging: “apprenticeship is actually quite widespread, is usually deemed to be successful, and—very important—usually works because it requires becoming a member of a cohesive, informal community that goes beyond one master or mentor” (Henschel, 2001, p. 3).

**Becoming.** Becoming (developing skills) methods of informal learning include:

- Job rotation is a concept that can include altering existing jobs or having staff “fill in” or act in different roles for a time period in order to increase understanding of skills and talents within an organization, and to spur innovation (Misko, 2008).
- Transfer of formal learning is a form of informal learning in itself. Through repetition and practice, skills become an ingrained part of practice (Evans & Waite, 2010).

**Experiencing.** Experiencing (the meaning of a common work task) methods include:

- Learning from experience is known to be a powerful and effective form of learning (Hicks et al., 2007), but critical reflection on tasks and skills learned from experience is required: “[To bring learning from experience under critical control] requires considerable self-awareness and a strong disposition to monitor one's action and cross-

check by collecting additional evidence in a more systematic manner with greater precautions against bias” (Eraut, 2004, p. 254-255).

- Metacognitive strategies, also referred to as control strategies, can be used to plan, regulate, and evaluate the process of learning. Employees with strong metacognitive skills are usually very effective informal learners (Schulz & Stamov Roßnagel, 2010).

**Doing.** Finally, doing (practical action contributing to the common work task) methods include:

- Innovation as a result of experimenting and trying new things (Evans & Waite, 2010; Høyrup, 2010; Jurasaitė-Harbison & Rex, 2010).
- Synthesis of professional learning in the form of research papers and conference presentations (Chivers, 2011).

### **Recommendations for Practice**

“The new work of managers is all about creating the enabling conditions for continuous learning” (Henschel, 2001, p. 5). There are several specific recommendations for management that can come from the findings in this report. A workplace with abundant opportunities for informal learning will lead to innovations and retention of talent. Too much emphasis on formally acquired knowledge can be a waste of time and money as it is not always an effective way of measuring the talent and performance of employees. Directors and human resources departments looking to cultivate increased job-related informal learning can undertake any of several actions:

- Take “informal approaches such as work allocation and rotation, fostering a sense of curiosity and providing informal networking opportunities are all avenues for human resource departments to promote and to assist managers and partners in providing a

workplace environment that encourages these avenues of informal learning for themselves and the trainees” (Hicks et al., 2007, p. 73)

- Monitor workloads to ensure that there is time in employees’ work weeks for informal learning.
- Ensure that there is tolerance for failure as well as success. Ensure that there is consistent sharing of successes and failures so that everyone benefits from understanding “lessons learned”.
- Create an environment that allows for close collaboration so that employees can learn from one another, although one study did find that employees thought that “having access to computer technology would be a more important factor [to informal learning] than having physical proximity to their colleagues” (Berg, 2008, p. 239).
- Encourage flexibility in work routines and allow employees to experiment. Encourage the curiosity that will lead to new learning. Empower employees to “quarantine” times in their workdays or weeks to learn and experiment.
- Encourage the formation of communities of practice within the workplace while also encouraging participation in broader communities of practice beyond the workplace. Identify talent capable of leading these communities of practice and encouraging participation in them.
- “Job redesign, job rotation and restructuring career pathways are also examples of how companies extend learning for employees and integrate it with work” (Misko, 2008, p. 8)
- Ensure that any coaching and mentoring relationships have built-in special arrangements to support the relationships. “They can fail if the type of guidance and strategies used do

not meet the workplace requirements, both parties have not been adequately prepared for their roles, and enough time is not devoted to the relationship” (Misko, 2008, p. 26).

- Encourage a sense of personal responsibility for learning, and a sense of respect and appreciation for the learning process.
- Recognize the roles of management in supporting or suppressing a learning environment.
- Implement or encourage training programs in which participants “learn how to learn”.  
Examples include teaching communications, problem-solving and research skills.
- Job rotation or job shadowing are innovative approaches that can broaden the skill set of employees while increasing organizational knowledge and knowledge of what others in the organization do.
- Tasks that work to strengthen an employee’s marketable skill set will increase motivation and learning in a way that tasks specific to organizational needs will not.
- Don’t assume that tasks are definable in such a way that they can always be solved by training measures. Recognize the complexity of the work and the need for responsiveness to an ever-changing industry.
- Change management must not be approached from the common angle of viewing employee adjustment to change as partly a problem of attitude and partly a process of learning new explicit knowledge. Instead, time must be allowed for new routines and tacit knowledge to be learned, and management must exhibit the same tolerance for failure as they would with new employees.
- Newcomers and those serving in new or significantly changed positions need to have their workloads carefully balanced with the need to reflect on and learn from new tasks.

Assigning them too much only induces coping strategies and does not produce an environment where learning can occur.

- Communications and constant feedback on employee performance are important. Inadequate feedback can lead to lack of motivation and commitment to the organization (Eraut, 2011).
- Before initiating any fundamental changes in workplace practices, it is wise to ensure there is buy-in from upper management (Mahony, 2011).
- “Add learning and teaching responsibilities to job descriptions” (Mahony, 2011, p. 5).
- Encourage employees to become members of professional organizations (Mahony, 2011).
- Consider IT solutions that can increase employee informal learning, such as knowledge bases and social networking. These might include solutions that simplify aspects of the job and save time, so that employees have more time to devote to informal learning.
- Recruiting criteria could include more emphasis on the quality and variety of past experience than on formal credentials.
- The learning conditions framework developed by Skule (2004) can be used to assess the existing learning environment in order to identify areas of improvement.
- Ensure that the climate is respectful of all without respect to factors like race, gender, creed, disability and age. This will ensure a favorable learning climate.
- To guard against the negative aspects of tacit learning discussed in the Critique section, it is necessary to balance informal learning with support for effective formal learning programs, in the forms of both formal education and planned learning situations or training programs in the workplace. With smart support for formal learning, it is possible to “exploit informal learning effectively, turn tacit knowledge into explicit knowledge

and integrate conceptual knowledge and practical experience, which is the foundation for the development of expertise” (Päivi, 2008, p. 140).

- Space is an important consideration in creating an environment that is conducive to informal learning. This includes physical space as well as mental and emotional space where learning is free to occur. It also includes temporal space in the form of flexible scheduling. This more general concept of space is referred to in Japanese philosophy as *ba* (Päivi, 2008).
- Don't assume that every problem can be solved through the hiring of additional staff. Consider that learning initiatives and the cultivation of a learning environment might align existing staff with future business needs.
- Don't fall into the trap of describing or thinking of hired talent as capable self-starters, who already have what it takes to perform their jobs in the present and future, without paying attention to learning needs. Such overconfidence can lead to the demoralization of staff who increasingly use coping strategies to deal with their job demands.
- HR professionals and those responsible for training should be aware of the importance of informal learning, even as they exhibit expertise in formal learning and training.
- Formal meetings, such as regular team meetings, can be great opportunities for informal learning to take place. Informal interactions are important too.
- It is very important to encourage the recognition of tacit norms in practice within the workplace. Recognition renders these norms no longer tacit, which allows people to question them and perhaps advocate for better ways of doing things.



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