

# **A Review of the Concept of Organisational Learning**

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## Abstract

This paper reviews the conceptual framework of individual and organisational learning, and identifies five focuses of the concept and practices of organisational learning within the existing literature. In line with current industrial contexts, this paper tentatively redefines the concept of organisational learning. The aim of this paper is to provide a clarified understanding and an updated definition of organisational learning.

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## A review of the concept of organisational learning

### Introduction

The concepts of organisational learning and learning organisation did not emerge until the 1980s, but their scientific background and principles can be traced back into many perspectives of management (Garratt, 1999). The idea of organisational learning is accredited to the creation of the 'action learning' process (Revans, 1982), which uses small groups, rigorous collection of statistical data, and the tapping of the group's positive emotional energies (Garratt, 1999). This technique is also reflected in Deming and Juran's quality control system using quality circles, SPC (statistical process control) and PDSA (plan-do-study-action). A few works contributed positively to open up the debate of organisational learning and subsequently the popularity of the concept. These include Argyris and Schon's (1978) double-loop learning notion, Senge's (1990) the 'Fifth Discipline' and Pedler, Burgoyne & Boydell (1991) learning company model.

Today, the concept of organisational learning and learning organisation has flourished and been defined in a wide range of literature (Levitt & March, 1988; Senge, 1990; Cohen & Sproul, 1991; Argyris & Schon, 1996). However, the definitions bear some concurrent criticism. First, the concept of organisational learning and learning organisation is "excessively broad, encompassing merely all organisational change ... and from various other maladies that arise from insufficient agreement among those working in the area on its key concepts and problems" (Cohen & Sproul, 1991 p. 1). Similar criticism has been raised by many other researchers such as Daft and Huber (1987), Dodgson (1993), Garvin (1993), Hawkins (1994), Huber (1991), Miller (1996), and Popper and Lipshitz (2000). Secondly, most of the definitions appear to be complementary rather than fundamentally original or conceptually different (Matlay, 1997). This provides overwhelming, but unclear, information to both researchers and practitioners. Finally, the prevailing concept of organisational learning and learning organisation bear a strong bias towards the traditional scientific approach to management, and stress the importance of systems thinking and continuous improvement. A few researchers have identified the limitations of the existing framework in current industrial contexts (Lorente, Dewhurst & Dale, 1999; Kim & Mauborgne, 1999; Wang & Ahmed, 2001). Therefore, there is a need to review the existing literature of the concept of organisational learning to explicate understanding of the organisational learning concept and practices and essentially upgrade the concept to conform to the requirements of current industrial developments.

### The concept of learning

Learning starts from individuals. A learning organisation is founded on the learning process of individuals in the organisation. It is essential to understand the individual learning process to facilitate understanding of organisational learning. However, individual learning does not necessarily lead to organisational learning (Ikehara, 1999). It is the task of the learning organisation to integrate individual learning into organisational learning.

The concept of learning is understood from various perspectives, and mainly developed in the psychological field over a long evolutionary history. The application of learning at the organisational level did not come into industrial practices until the 1980s, and was primarily conditioned as a collectivity of individual learning, training and development. The process of individual learning has a significant impact on the concept and practices of organisational learning. The most widely recognised approaches to individual learning are the Behavioural Theory, Cognitive Theory, Social Cognitive Theory, and Gestalt Theory, purporting to a wide range of learning modes (see Table 1).

**Table 1.** Summary of individual learning modes

	<b>Model</b>	<b>Focus</b>	<b>Main learning modes</b>
<b>Behaviourism</b>	S-R Stimulus- Response	Reinforcer	Experiential learning
<b>Cognitive</b>	S-S Environmental Cues – expectancy	Mental act	Rational learning
<b>Social cognitive</b>	S-O-R Stimulus- Organism- Response	Symbolising Forethought Vicarious Self-regulatory Self-reflective	Observational (modelling) learning; Enactive (experiential) learning; Self-efficacy
<b>Gestalt</b>	Patterns of wholes	'Balance' of cognitive, physical, emotional, and spiritual factors	Experiential learning

### **Behavioural Theory**

The Behavioural Theory is an overall guideline to understand principles by which human behaviour is learned and maintained. There are four main sub-theories contributing the whole domain of Behaviourism: Pavlov's classical conditioning, Skinner's operant conditioning, Wolpe's reciprocal inhibition, and Eysenck's incubation theory.

*The Classical Conditioning Theory (Pavlov, 1927);* attributes learning to the association or connection between stimulus and response, i.e. learning happens when a formerly neutral stimulus paired with an unconditioned stimulus becomes a conditioned stimulus that elicits a conditioned response. The classical conditioning represents reflexive behaviour, whose strength and frequency is subject to the frequency of the reinforcer that precedes the behaviour, and only accounts for a small part of total human learning.

*The Operant Conditioning Theory;* persists that "behaviour is shaped and maintained by its consequences" (Skinner, 1971 p. 23). Unlike the classical conditioning theory that the reinforcer is paired with the stimulus, the operant conditioning behaviourism believes the contingent works upon a response, and behaviour operates on the environment to generate consequences. Thus, the consequences define the properties with respect to which responses are viewed as similar. Environment plays an important role in shaping and maintaining behaviour. Behaviour operates on environment to produce consequences, but also is controlled or contingent upon the consequences produced by that environment. It is argued that the operant conditioning has a greater impact on human learning and behaviour. The consequences of organisational behaviour may change the organisational environment and affect employee behaviour. Learning occurs as a consequence of behaviour.

*The Reciprocal Inhibition Theory (Wolpe, 1958);* contributes to both the learning and unlearning process. Two elements are involved in the inhibition of a response during extinction: reactive inhibition, which describes an inhibitory state dissipating with time, and negative conditioning, which leads to a permanent decrease in response probability. Reciprocal inhibition involves eliciting a competing response in order to bring about a decrease in the strength of a simultaneous response. In other words, old habits are often eliminated by allowing new habits to develop in the same situation. In the organisational context, unlearning occurs when the organisation redefines old categories, develops new concepts and viewpoints, and even changes standards of judgement (Schein, 1999).

*The Incubation Theory (Eysenck, 1976);* observes that behaviour followed by negative consequences is not eliminated, which cannot be explained by the Operant Conditioning Theory. In many cases, extinction does not fail to occur. In addition, there is an incremental enhancement effect, so the unreinforced conditioned stimulus may produce increases in anxiety (conditioned

response) with each presentation of the conditioned stimulus. The Incubation Theory tentatively proposes four elements in the effect of learning: innate, preparedness, modelling, and classical conditioning. The main unconditioned stimulus generating fear responses is not physical constraint, but frustration or 'frustrative non-reward' (Eysenck, 1976).

In all, the Behavioural Theory believes that "learning is the process by which an activity originates or is changed through reacting to an encountered situation, provided that the characteristics of the change in activity cannot be explained on the basis of native response tendencies, maturation, and temporary states of the organism (e.g. fatigue, drugs, etc.) (Hilgard & Bower, 1966 p. 2). Therefore, learning involves both acquisition of and, in varying degrees, the retention of behaviours" (Nelson-Jones, 1996 p.182).

### **Cognitive Theory**

The Cognitive Theory recognises learning through association between the environmental cues and the expectancy (stimulus-stimulus) (Edward Tolman, *quoted in* Luthans, 1998). Learning occurs when certain cognitive cues associated with the choice point may eventually lead to a goal or a reward. This is argued to have a great impact on the early human relations movement. Programs were designed to strengthen the relationship between cognitive cues such as supervisory, organisational and job procedures, and worker expectations such as incentive payment for good performance. Workers would learn to be more productive by building an association between taking orders or following directions and expectations of monetary reward for their effort (Luthans, 1998, p. 226). The concurrent cognitive science focuses more on the structures and processes of human competence such as the role of memory and information processing, rather than on the acquisition and transition processes that have dominated learning theory explanations (Luthans, 1998).

### **Social Cognitive Theory**

Social Cognitive Theory integrates both social and cognitive processes to understand motivation, emotions and action. A typical social cognitive model is stimulus - organism's mediating cognitive processes - response (Bandura, 1986). It recognises that humans possess five basic cognitive capabilities: symbolising capability - transforming experiences into symbols and process the symbols; forethought capability - anticipating consequences of their behaviour; vicarious capability - observing other people's behaviour and consequences; self-regulatory - self-evaluating their behaviour and self-consciousness - analysing experiences and evaluating the adequacy of their thought processes. The main learning modes that the Social Cognitive Theory purports are observational learning - to learn from models, enactive learning - to learn from experiences, and self-efficacy - self perceptions of own performance. It emphasises the interactive and reciprocal nature of cognitive, behavioural and environmental determinants.

### **Gestalt Theory**

The basis of Gestalt theory is "that human nature is organised into patterns or wholes, that it is experienced by the individual in these terms, and that it can only be understood as a function of the patterns of wholes of which it is made" (Perls, 1973 p.5). From the Gestalt viewpoint, humans do not perceive things in isolation, but organise them through their perceptual processes into meaningful wholes, i.e. "people configure the dominant need at a particular moment and attempts to meet this need by contacting the environment with some sensori-motor behaviour" (Ikehara, 1999 p. 66), through the interplay between 'figure', the focus of interest, and 'background', the setting or context. The interaction is dynamic, because the same background interplaying with differing interests and shifts of attention may lead to different figures, and a given figure may become a context, rather than remaining as a focus, when some details of its own becomes a figure (Perls, Hefferline & Goodman, 1951). The Gestalt Theory persists that mind and body are a united whole of the human organism, and mental and physical activity are inseparable. Meanwhile, an individual and environment are inter-related and co-exist as a whole. Learning happens on the 'whole' person level, and is an interaction between mind and body, between individual and environment, rather than merely on the cognitive level, the 'mental act' (Ikehara, 1999 p.63). "The whole is greater than the sum of its parts"

(Clarkson, 1989; Clarkson & Mackewn, 1993). It includes not only the cognitive level, but also emotional, physical and spiritual levels (Ikehara, 1999).

## **Implications of organisational learning practices**

The individual learning theories have a significant impact on the concept of organisational learning. Each theory has its particular focus on the process of learning: reinforcer as the focus of the Behavioural Theory; mental act as the focus of the Cognitive Theory; modelling, experience and self-efficacy as the focus of the Social Cognitive Theory; and, interaction amongst mental, physical, emotional and spiritual factors as the focus of the Gestalt Theory. Each theory reflects different degrees of human activeness in learning. The Behavioural Theory explains reactive learning, while the Cognitive Theory demonstrates responsive learning, and the Social Learning Theory indicates active, purposeful learning process (Luthans, 1998). Nevertheless, the theories in all contribute to the current practices of organisational learning.

### **Reward**

In spite of their different approaches, the learning theories all stress the same principle of learning: consequences, which is reward or punishment. It is commonly accepted that reward is the single most important principle of learning (Luthans, 1998 p. 227). The Behavioural Theory addresses consequences as a conditioned response of reinforcer, which presents a very high degree of reactivity in human learning. Cognitive and Social Cognitive Theory stress the preparedness and anticipation of consequences, and forecast of consequences can change the pattern of behaviour and therefore impact the learning process. This demonstrates a higher degree of activeness and even proactiveness in the learning process and reflects a large percent of the learning process in the organisational context. Programs, particularly in the early stage of organisational development, were designed to strengthen the link between performance and reward, such as monetary incentives, or promotion etc. Reward affects learning and is linked to organisational performance.

### **The impact of the mental process**

Thinking, or the mental act, plays a critical role in the learning process, and is the core of the Cognitive and Social Cognitive Theory. Humans receive inputs (stimulus and environmental contingent) and, through mental processing, produces outputs (response). Human competence, such as memory and the capability of information processing, is therefore essential to the learning process. In the organisational context, a critical task to implement organisational learning is the enhancement of organisational absorptive capability, i.e. the organisational memory, problem-solving and information-processing capability.

### **People at the centre of the learning process**

People have been the centre of the organisation, since the rise of the humanistic approach to organisational design and management. People management has claimed an important position in the Japanese management approach and the new organisational paradigms, including the cultural approach and the learning approach to management. Simply, people are the body of thinking (i.e. the Cognitive Theory), and of experiencing and modelling (i.e. the Social Cognitive Theory). Current organisational learning has incorporated diversified perspectives of people management, including motivation and empowerment, aiming to stimulate the enthusiastic participation and contribution of individuals.

### **Environment as a contingent**

The learning theories address the environment as a variable in the learning process. From the Behavioural Theory, to the Cognitive and Social Cognitive Theory, the importance of environment as a contingent in the learning process is increasing. In organisational environments, the learning context such as structure, process, and culture, etc. has significant impact on the organisational learning process. It is commonly believed that internal factors such as flat, teamwork structure, bottom-up feedback system, cross-functional team, flexible working process, and employee overall

involvement, etc., and external factors such as networking and alliances contribute to the organisational learning process.

### **Interaction between all variables in the learning process**

The learning theories also address the interaction of people and environment. In particular, the Gestalt Theory makes significant contributions to understanding of the interactive process. It stresses the balance between mind and body, people and environment, incorporating four variables of mental, physical, emotional and spiritual. The Gestalt Theory is heavily related to the Japanese philosophy of learning and knowledge management, which emphasises “oneness of humanity and nature”, “oneness of body and mind”, and “oneness of self and other” (Nonaka & Takeuchi, 1995 p. 27). The Gestalt learning process therefore involves more about personal experience, interpersonal interactions, and is more subjective.

Learning cannot take place by means of merely theoretical thinking. It has to be achieved through bodily experiencing and recognition.

### **The prevailing concept of organisational learning**

The concept of organisational learning and learning organisation proliferated during the last twenty years. Its practices involve diversified perspectives of organisational management and recognise a wide range of variables determining the learning results, such as the aforementioned organisational absorptive capacity, problem-solving ability, employee participation, learning environment, etc. However, the influx of information has also caused confusion about the concept. To clarify the understanding, we identify five focuses of the concept through an extensive literature review: focus on collectivity of individual learning; focus on process or system; focus on culture or metaphor; and, focus on knowledge management and focus on continuous improvement (see Table 2).

#### **Focus on collectivity of individual learning**

Early research demonstrates a strong emphasis on the role of individual learning in organisational learning. At the extreme end, the organisational learning system is viewed as one depending wholly on individual learning as against practice of knowledge sharing for all the organisational members (Shrivastava, 1983).

The main stream within this focus of organisational learning considers individuals as ‘agents’ for organisations to learn (Argyris & Schon, 1978). “Organisational learning occurs when individuals within an organisation experience a problematic situation and inquire into it on the organisation’s behalf. They experience a surprising mismatch between expected and actual results of action and respond to that mismatch through a process of thought and further action that leads them to modify their images of organisation or their understandings of organisational phenomena and to restructure their activities so as to bring outcomes and expectations into line, thereby changing organisational theory-in-use” (Argyris & Schon, 1996 p.16).

A learning organisation evolves as a result of the learning and behaviour of its people (Honey & Mumford, 1992; Burgoyne & Pedler, 1994; Senge, 1990; Marquardt & Reynolds, 1994). The ability of a workforce in an organisation to learn faster than those in other organisations constitutes the only sustainable competitive advantage at the disposal of a learning organisation (De Geus, 1998 p.71). Organisational learning should be where the individuals consciously interact with others through the process of education and as a result of experience (Kolb, 1984; Honey & Mumford, 1992). Therefore, a learning organisation should primarily focus on valuing, managing and enhancing the individual development of its employees (Scarborough, Swan & Preston, 1998 p.2).

Under this viewpoint, organisational learning is in a sense the collectivity of individual learning within the organisation. Collective learning occurs in addition to the learning process at the individual level, and may even occur independently of each individual. However collective learning

cannot take place if all the employees in an organisation are prevented from learning (Romme & Dillen, 1997; Kim, 1993). Therefore it is claimed that a learning organisation can be defined or measured in terms of the sum total of accumulated individual and collective learning (Hyland & Matlay, 1997).

It is worth noting that individual learning is not necessarily positive or contributive to the organisation, because employees may learn something negative to the organisation, or may learn to improve themselves, rather than benefit the organisations (Field, 1997). On the other hand, the individuals' learning activities, in turn, are facilitated or inhibited by an ecological system of factors that may be called an organizational learning system" (Argyris & Schon, 1978). Thus, the learning-based interaction between individual employees and the organisation that employs them is emphasised (Morgan, 1986; Hedberg, 1981). Matlay (2000) further notes that the relationship between individual and collective learning is a most important aspect that distinguishes learning organisations from one another.

However, if a distinction between the organization and the individual is not made explicit, a model of organizational learning will either obscure the actual learning process by ignoring the role of the individual (and anthropomorphizing organizations) or become a simplistic extension of individual learning by glossing over organisational complexities (Kim, 1993 pp. 42-43).

### **Focus on process or system**

Another stream of organisational learning research focuses on organisations themselves and refers an organisation as a 'learning system' (Revans, 1982). Organisational learning is the process whereby organisations understand and manage their experiences (Glynn, Milliken & Lant, 1992).

Different perspectives are stressed within the learning process: leadership (Revans, 1982; Popper & Lipshitz, 2000); personal mastery, mental models, shared vision, team learning and systems thinking (Senge, 1990); and 4I processes: intuiting and interpreting at the individual level; interpreting and integrating at the group level; and integrating and institutionalising at the organisational level (Crossan, Lane, White & Rush, 1994 p. 6).

The system view of organisational learning has taken mainly from the information processing perspective (Cyert & March, 1963). Organisations are referred to as information processing systems, acquiring, interpreting, distributing, and storing information within the organisation, and therefore four components of the organisational learning process are proposed: knowledge acquisition, information distribution, information interpretation and organisational memory (Huber, 1991).

There are two sub-streams within the system view: organisations as a closed system or an open system. Under the view of organisations as a closed system, organisational learning is restricted within an organisation itself, which is a reflex of the classical approach to organisational management (Burnes, 2000). The viewpoint of organisations as an open system takes into account the situational factors and includes inter-organisational learning as an important part of the whole organisational learning system. Knowledge is acquired widely both within and outside of the organisation. The open system viewpoint reflects the Contingency approach to organisational management and some practices from the new organisational paradigms. In a learning organisation, the highest stage incorporates three aspects of learning: adapting to their environment; learning from their people; and, contributing to the learning of the wider community or context of which they are a part (Pedler, Burgoyne & Boydell, 1991). However, there is lack of emphasis on flexibility, interaction, innovativeness and creativity within the system view, and these factors become increasingly important for an organisation to survive and succeed.

### **Focus on culture or metaphor**

Within the organisational learning literature, there is a strong emphasis on the cultural perspective of the learning organisation. Culture serves as a sense-making mechanism that guides and shapes the

values, behaviours and attitudes of employees (O'Reilly & Chatman, 1996), and it is through values that behaviour flows and is guided (Simon, 1976). An organisation's culture imposes "coherent, order, and meaning" and enables the institutionalisation of an appropriate sense-making structure to facilitate interpretation of unfamiliar events (Weick, 1985 p. 384).

Drew and Smith (1995) comments that a learning organisation should be viewed as a metaphor rather than a distinct type of structure, whose employees learn conscious communal processes for continually generating, retaining and leveraging individual and collective learning to improve performance of the organisational system in ways important to all stakeholders and by monitoring and improving performance.

Traditional hierarchical cultures are anti-learning and anti-training, and undermine the ability of organisations to match and survive increasing competition in the global marketplace (Jones, 1996). In the new economy, knowledge is not reserved for people in managerial or professional positions. Every worker will need to be a knowledge worker. However, having a company where the majority of employees are knowledge-workers is not sufficient to guarantee success against strong competition. The culture has to be right to enable their full contribution. Organisations need to change to a collaborative team culture in order to escape the no-training and waste-training traps (Jones, 1996) and focus on the process and involvement of people within the organisation (Mintzberg, 1994). Every member of the organisation must be able to positively contribute. The same has been stressed by Jones (1996) that, "in addition to the full utilization of the technical skills and knowledge employees, a team approach is essential for the effective acquisition of new knowledge and skills. Team skills are inextricably linked with effective learning. It is the learning and motivation which a team approach enables that forms the mainspring of quality, innovation, service, etc." Torbert (1991) names it 'the liberating culture', which is a means of overcoming barriers that limit organisational learning.

The linkage between culture and organisational performance has been tentatively defined by researchers (Denison, 1990; Gordon & DiTomaso, 1992). Culture, as an independent and internal variable (Smircich, 1983), has become a critical tool for strategists to design organisations. Culture enables an organisation to best utilise its knowledge and experience for establishing and achieving desired goals and learning about wisdom as the process of discerning judgments and action based on knowledge (Bierly, Kessler & Christensen, 2000). This type of learning is associated with the 'third-order learning' or triple-loop learning by Bateson (1972), Berman (1981), McWhinney (1992), and 'the spirit-action connection' by Rothberg (1993). However, within the existing literature, there is still general restriction to validate the association between adoption of a learning culture and improvement of organisational performance. There is a need of larger-scale empirical research to understand the linkage and relationship.

### **Focus on knowledge management**

Organisational learning and knowledge management are two parallel-developed concepts in the new economy and are often referred to each other in their definitions and practices.

Organisational learning is referred to the changes in the state of knowledge (Lyles, 1992, 1988), and involves knowledge acquisition, dissemination, refinement, creation and implementation: the ability to acquire diverse information and to share common understanding so that this knowledge can be exploited (Fiol, 1994 p. 404), and the ability to develop insights, knowledge, and to associate among past and future activities (Fiol & Lyles, 1985 p. 811). Bierly, Kessler and Christensen (2000 p. 597) define "learning is the process of linking, expanding, and improving data, information, knowledge and wisdom". Organisational knowledge is stored partly into individuals in the form of experience, skills and personal capability, and partly into the organisation, in the form of documents, records, rules, regulations and standards, etc. (Weick & Roberts, 1993). Part of knowledge between an organisation and individuals is complementary and part of it incongruent to each other's belief systems. Organisational memory maintains the organisational knowledge-base, acts as the foundation of knowledge accumulation and creation, and reflects the absorptive capability of the organisations.

Therefore, to create a learning environment between individuals and the organisation to facilitate interaction and strengthening of each other's knowledge base becomes the main task for management (Adler, Goldoftas & Levine, 1999).

Only recently has organisational learning been essentially linked to knowledge creation. The understanding of the impact of organisational learning on knowledge management can be taken from the "ontological dimension" of Nonaka and Takeuchi's knowledge creation model, which is the process of knowledge transfer among individual, group, organisational and inter-organisational levels (Nonaka & Takeuchi, 1995 p. 27). It is increasingly important that the learning process move onto a higher level of triple-loop learning, which, combined with organisational unlearning, leads to knowledge creation.

### **Focus on continuous improvement and incremental innovation**

Current literature on organisational learning has a bias on continuous improvement (Pedler, Burgoyne & Boydell, 1991; Buckler, 1996; Scarbrough, Swan & Preston, 1998). The learning organisation is a state which is continuously being striven for (Hodgkinson, 2000) and is more an aspiration for a continuous process rather than a single product (Garratt, 1999). A learning organisation is viewed as one where "people continuously expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning how to learn together" (Senge, 1990 p. 3). A similar definition is given by Pedler, Burgoyne and Boydell (1991): a learning organisation should consciously and intentionally devote to the facilitation of individual learning in order to continuously transform the entire organisation and its context (Pedler, Burgoyne & Boydell, 1991; Morris, 1996; Scarbrough, Swan & Preson, 1998). In this sense, the adoption of TQM is a milestone towards a learning organisation.

TQM's main tenets is the pursuit of continuous improvement. Practiced both as a philosophy and a set of techniques, TQM enables organisations to focus on meeting and satisfying customer needs by improving processes, understanding the internal customer concept, involving each individual employee, implementing organisational wide training and development and concentrating on improvements in cost, quality and customer satisfaction (Evans & Lindsay, 1999; Luthans, 1998; Flood, 1993). It has been thus argued that TQM and learning organisations are mutually dependent (Ford, 1991). Organisational learning is an intended outcome of TQM, and there is a correlation between process improvement and organisational learning (Barrow, 1993). Continuous improvement is aimed to achieve incremental innovation, therefore, a learning organisation dedicates to incremental innovation through effective learning mechanisms.

### **Redefining organisational learning**

There is lack of literature focusing on the impact of organisational learning on quantum leap innovation and creativity. Creativity and innovation is a core organisational competency in the new knowledge economy world. Organisations relying simply on the traditional competence in cost and differential advantage find it increasingly difficult to survive and succeed. For example, a strategy of continuous improvement is not necessarily beneficial to organisations who operate in hyper-dynamic markets, such as the high-risk investment sector like pharmaceuticals, and the high-tech sector like microprocessors, etc. Total quality management, continuous improvement and incremental innovation become the basic admission requirements for an organisation to enter the contest arena. Organisational learning will have to expand its function to focus on quantum leap and breakthrough innovation in order to enable the organisation to compete for a leadership position. (Kim & Mauborgne, 1999; Mascitelli, 2000; Kambil, Eselius & Monteiro, 2000; Wang & Ahmed, 2001).

Current organisational learning practices are maintained at the single and double-loop level. Single-loop learning is connected to error detection and correction, which is the main mechanism of quality control. The process involves knowledge accumulation, dissemination, and retention. Double-loop learning moves to a higher level and demonstrates a certain degree of proactiveness by focusing on error prevention and dedicating to zero-defect quality. Coupled with knowledge refinement and

knowledge creation through incremental changes, double-loop learning leads to total quality. Quality control and total quality are main mechanisms to continuous improvement. Therefore, both single and double-loop learning contribute to the continuous improvement approach to quality and innovation. Radical innovation can be achieved through accumulation of incremental changes (Wang & Ahmed, 2001). Current practices of organisational learning present some restrictions in the real competition:

First, learning is based on systems thinking and stresses the process of linear-sequential thinking. Every single process follows a plan-do-study-check circle and pursues a scientific problem-solving or information-process system. This stereotype contains a certain degree of deficiency in terms of flexibility, proactiveness, innovativeness and energetics, specially in business environments featured by hyper-dynamics, uncertainty and chaos. Secondly, there is little evidence of creative input in the learning process. Efforts are made toward how to make improvements based on the existing product ranges, processes, and systems. However, the dynamic changes in technology have shortened the product life cycle. Holding to existing product ranges and systems may become a disadvantage in the real business world.

**Table 2.** Summary of the organisational learning concept and practices

Focus	The concept of organisational learning	Practices
Individual learning	“Organisational learning occurs when individuals within an organisation experience a problematic situation and inquire into it on the organisational behalf” (Argyris & Schon, 1996 p. 16)	Staff training & development
Process or system	Organisational learning is the process whereby organisations understand and manage their experiences (Glynn <i>et al</i> 1992)	Enhancement of information processing and problem solving capability
Culture or metaphor	“A learning organisation should be viewed as a metaphor rather than a distinct type of structure, whose employees learn conscious communal processes for continually generating, retaining and leveraging individual and collective learning to improve performance of the organisational system in ways important to all stakeholders and by monitoring and improving performance” (Drew & Smith, 1995)	Creation and maintenance of learning culture: collaborative team working, employee empowerment and involvement, etc.
Knowledge management	Organisational learning is the changes in the state of knowledge (Lyles, 1992, 1998). Involves knowledge acquisition, dissemination, refinement, creation and implementation: the ability to acquire diverse information and to share common understanding so that this knowledge can be exploited (Fiol, 1994) and the ability to develop insights, knowledge, and to associate among past and future activities (Fiol & Lyles, 1985)	Facilitation of interaction and strengthening of knowledge base
Continuous improvement	“A learning organisation should consciously and intentionally devote to the facilitation of individual learning in order to continuously transform the entire organisation and its context (Pedler <i>et al</i> 1991)	The adoption of TQM practices
Innovation and creativity	In the hyperdynamic business context, organisation learning is the process by which the organisation constantly questions existing product, process and system, identify strategic position, apply various modes of learning, and achieve sustained competitive advantage	Facilitation of triple-loop learning and knowledge creation; focus on creative quality and value innovation

To succeed, organisations need to switch to focus on triple-loop learning. Triple-loop learning involves constantly questioning existing products and systems by strategically asking ‘where the organisation should stand in the future marketplace’ and how to superpose organisational competency to create value in the target market. Triple-loop learning is accompanied by organisational ambition, wisdom and courage, and involves knowledge creation. The triple-loop learning process incorporates a higher degree of creative input and organisational unlearning, and is an interactive and iterative process. People do not tend to abandon current beliefs and methods as long as they seem to produce reasonable results (Kuhn, 1962), and until incontrovertible evidence, usually in the form of failures,

convinces them to accept new paradigms (Petroski, 1992 pp. 180-181). The insistence on existing beliefs and methods inhibits learning, therefore, organisational learning is often accompanied with certain degree of organisational unlearning. In fact, organisations have to learn to discard things done previously. They have to plan to abandon rather than try to prolong the life cycle of a successful product, system, or policy (Drucker, 1993). In a sense, organisational learning is more about organisational unlearning in order to create quantum leap.

In the new knowledge economy where organisations face vigorous challenges, we feel it necessary to update the concept of organisational learning and learning organisation in line with requirements of organisational development. We therefore propose a new definition:

In hyperdynamic business contexts, organisation learning is the process by which the organisation constantly questions existing product, process and system, identify strategic position, apply various modes of learning, to achieve sustained competitive advantage.

A learning organisation should dedicate to improve the learning context, strategically strengthen organisation competency and create marketplace-based competency.

Continuous improvement is still important to a learning organisation because it is the foundation of a learning organisation, and the basis of organisational capacity. To move onto the higher level of triple-loop learning, a learning organisation needs the strong backup based on single and double-loop learning, which involves continual improvement in management techniques. Similarly, knowledge creation is based on the existing knowledge base and the absorptive capability of the organisation, which is enhanced through continuous improvement. Therefore, incremental changes are in fact more important than ever to a learning organisation. However, encountering the current business environment, a learning organisation has to strive to achieve breakthroughs in terms of both organisational competency and competitive edge in the marketplace. Value innovation through the creative quality process will be the only sustainable competitive advantage in the future. Organisations will have to focus on creativity and innovativeness to make quantum leaps in order to become a market leader.

## Conclusion

The concept of organisational learning has borrowed and developed from the individual learning process, which is commonly believed to be very sophisticated and involves all aspects of the human nature and the interaction with the environment. Understanding the individual learning process is a good starting point to understand organisational learning, but not the whole picture. Organisations are in a more complicated context than an individual to the environment. For example, organisational learning is not simply the collectivity of individual learning processes, but engages interaction between individuals in the organisation, and interaction between organisations as an entity, and interaction between the organisation and its contexts. The vast area of interest in the organisational learning field has created diversified understanding of the concept of organisational learning. To explicit the understanding, we identified five focuses of the concept and the associated practices. Although these focuses of organisational learning are evident, they in one perspective or another overlap each other and do not fundamentally exclude one from another. Successful implementation of organisational learning requires an effective blend of focuses according to the organisation's specific situations. In addition, we feel the concept is still evolving to include aspects that will facilitate organisations to create and maintain competitive advantage in current business contexts. The focus of organisational learning needs to incorporate the perspective of creativity and radical innovation, as a strategic orientation to sustained competitive advantage, on top of five other perspectives of organisational learning.



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