

Conceptualising Organisational Learning System Model And Innovativeness

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ABSTRACT

The connection between organisational learning, organizational innovativeness and performance is very profound in the literature. Performance especially is examined from the very comprehensive perspective, including dimension like financial performance, sales, profitability, service quality etc. Given that, this research focuses on collective learning aspect and the connection between organizational innovativeness and performance. Organizational Learning Systems Model (OLSM) focuses on organizational learning as a social system and how it learns to survive in the environment. Emphasis on organization learning based like Parsons (1968) general theory of social action has linked performance and learning element (Gorelick, 2005) in order to measure organizational performance. The Organizational Learning Systems Model (OLSM) grounded from the Parsonian social system perspective which is active in nature help identifies the importance of functioning and learning process of modification. Organizational learning here is drawn from behavioural dimensions; knowledge acquisition, information distribution, data interpretation, and organizational memory based on Huber's (1991) work (Jiménez, 2008). Evidence has shown that organizational performance increases when learning occurs in an organization. Organisational innovativeness has shown the relationship with learning. This study seeks to assess the relationship between organizational learning systems model, organisational innovativeness that leads to positive output for organization. This work sought to bestow to the empirical research needs in the future.

Key Words: Organisational Learning System Model, Innovativeness

OVERVIEW

There have been many studies relating Schwandt's learning systems model in studies relating knowledge management, innovation, learning capabilities and also information technology. However studies are limited in relating healthcare

approach and quality performance. Looking into the analogy that every learning accompanied by actions or performance, this research emphasis on how may these actions significantly affects service quality performance. The OLSM aims to give a continuous solution towards learning and performance from theoretical perspective. The organizational learning here acts as an action based which involves organization as social system where employees work collectively, share experience and knowledge. When learning action takes place, action in the form of performance happens simultaneously. Thus, both learning and performance make ends meet in the form of collective action in organizations. The Schwandt Learning Systems Model applied specifically perspective on the important dimension as organizational learning, innovation and performance. Organizational learning is “a system of actions, actors, symbols, and process that enables a firm to transform information into valued knowledge, which in turn increases its long-run adaptive capacity” (Johnson & Bailey, 2010: 7; Schwandt& Marquardt, 2000). Organizational Innovativeness is defined by Wang and Ahmed (2004:304) as an overall organization’s innovative capability in introducing new products to the market or to open new markets, through a combination of strategic orientation, innovative behaviour and process.

Further to this, innovation increases in a learning organization. (Hult, et al.,2003; Camisón&Villar-lopez, 2011;Calantone et al., 2002). Firm innovativeness has shown mediating role and show relationship with quality performance (Zuhir,et al., 2012). Many literature support innovation as a source of competitive advantage, however little research done on the organizational learning and organizational innovativeness relationship (Jiménez, 2008) though there are positive relationships found between and organizational innovativeness (Vakola&Rezqui,2000). Additionally, organizational innovativeness has a positive effect on organizational learning and organizational performance (Kuo, 2011). Numerous studies tried to identify what drives innovativeness (Rhee, et al., 2010).

The study will attempt to look into the organizational learning perspective by applying the Organizational Learning System Model (Schwandt,1997) which is grounded from Parsonion social action theory (Schwandt& Marquardt,2000). This concept is attempted to relate to the term innovativeness.

Organizational Learning Definition and Theoretical Model

Parsons work comes along the line of modern sociologist Weber and Durkheim (Barber, 1998). According to Barber, the termed social institution was used prior to ‘social system’. Parsons pioneered work was ‘The structure of social action (1937) and in 1947 he published The Theory of Social System and further with ‘General Theory of Action’. Barber concludes Parsons’ theory contribute to extension of ‘scientific sociology’. This concept supports learning in an organization which developed by Schwandtz as an organizational learning system model (OLSM) from the AGIL framework of Parsons. Schwandt argued that even Parsons theory was not plausible to explain the dynamic and nonlinear nature of micro interactions. The

AGIL model was also criticised as empirically limited (Barber, 1998). Social action associated with learning and performing for transformation change takes place and the cycle continues and vice versa. Performing and learning is exploitation and exploration (March, 1991).

There are several definitions for organizational learning from literature on encoding and modifying routines, acquiring useful knowledge, increase organizational capacity, interpretation and sense making, developing knowledge about action-outcome relationship and detection correction and error (Edmondson and Moingeon, 1996:18). Organizational learning somewhat can be defined as 'an information management strategy that consists of systematic efforts to transfer knowledge throughout an entire organization' as there is no universally agreed definition (Spector & Davidsen, 2006:64). Organizational Learning is important because it is the source of competitive advantage (Edmondson and Moingeon, 1996). Organization Learning consists of individual learning attributes which learning is an ongoing change. The nature and extent of changes is important to see whether learning has occurred (Spector & Davidson, 2006). Collective learning process involves all actors in the organization (StiofánDeburca, 2000).

Spector and Davidson (2006) concluded from Orthner et al. (2006); Barlas & Yasaran (2006) and Lick (2006) that three analogous uses in assessing organizational learning, namely goal formation process, information process aspects, cognitively based information processing model. Peter Senge (1996) co-founder of the Organization Learning Center argued when a group of people decided to enhance their capacity to produce desired outcome is what called as Organization Learning (Spector & Davidson, 2006). They concluded three critical aspects of Organization Learning, namely collective preferences, which being satisfied collectively and the means that increase satisfaction (Spector & Davidson, 2006:66). They concluded that measurable aspects of Organization Learning are actions, goal formation process, leadership engagement, reflective activities, sentiment (reflected in attitudes and preferences), team process, tolerance for errors (Spector & Davidson, 2006). Sense (2011) identified that organizational learning has three broad perspectives compiling from numerous researchers:

1. Cognitive-knowledge/understanding/insights
2. Behavioural /organizational action, and
3. Sociological-collective social practice from meaning, action and learning.

By understanding how learning takes place or practice in social orientation seem to be the new unit of analysis to look for (Sense, 2011). Sociological organizational learning by Sense (2011) has parallel support with the Schwandts learning model as learning is actually a systematic social activity especially in project based task. Organizational learning system has been illustrated as descriptive (culture, experience, core competence) and normative (best practices, common process) (DiBella, Nevis & Gould, 1996: 42) (Table 1.0). When we study how organizations learn, it involves social system adaptation, change and process the

input. Organizational level of analysis involves behavioural theories whereby the role of routines to role of interpretive involve organizational learning (Edmodson and Moingeon, 1996:7).

Table 1.0: A Model of Organizational Learning

Descriptive (What and where learning occurs)	Normative (What learning promotes)	
Learning orientation, which comprise learning style	Facilitating factors	= Organizational Learning System
Based on: culture, experience, core competence	Based on: best practices, common process	

Source: DiBella, Nevis & Gould (1996)

'Organizations with condition of uncertain, changing or ambiguous conditions need to learn' (Edmodson and Moingeon, 1996:7). The theory of organizational learning emerged in the past decades. In the 1960s it was found that individual goals are not the same as organizational goals (Schwandt & Marquardt, 1999) as this triggered to understand deeper the learning fit in organization need to be examined which is beyond organizational context. The root of understanding organizational learning is from sociology and psychology (Schwandt & Marquardt, 1999). There were many theorist who has look into the concept of OL for the past 50 years. The perspective of OL is tabled in Table 1.1.

Table 1.1 Compilation Organization Learning Approaches

Theorists	OL Approach
Katz and Kahn(1979)	Psychology and sociology
Weick(1979)	Systems theory
March and Olsen(1977)	Classic model of complex cycle of organization choice
Argis and Schön(1970)	Single, double and deutero learning
Marsick and Watkins(1996)	Workplace learning
Shrivastava (1983)	four approaches of organizational learning and organization as a social phenomena
Fiol and Lyles(1985)	Cognitive or behavioural changes
Daft & Huber(1975)	Systems structured and interpretive perspective.

Source: Schwandt and Marquardt(2000)

There are some critics on other organizational learning theorist like Nonaka and Takeuchi (1995) highlighted the importance of tacit knowledge (Schwandt and Marquardt, 1999). Based on Schwandt and Marquardt(1999) work elaborated that development of Organisational Learning Systems Model (OLSM) was earlier has link with work organizational learning and environment (Hedberg, 1981), organizational transformation and learning cycles (Lundberg, 1989), organizational memory and storage (Ungson, 1991), knowledge acquisition , information distribution, interpretation and organizational memory (Huber, 1991). Organizational learning have been ontological, epistemological and terminologically difference perspective (Lakhani, n.d.). OLSM signifies empirical evidence from sociological perspective reconciles the gap of organizational theories (Lakhani, n.d.). Organizational Learning Systems Model (OLSM) focuses on organizational learning as a social system and how it learns to survive in the environment

(Schwandt & Marquardt, 1990). It is grounded from Parsonian theory which rooted from works of Pareto, Durkheim and Weber (Parsons, 1966). The OLSM comprise of subsystem, functions and output for each tabled as below.

Table 1.2 The Subsystems, Functions and Outputs of Organizational Learning Subsystem

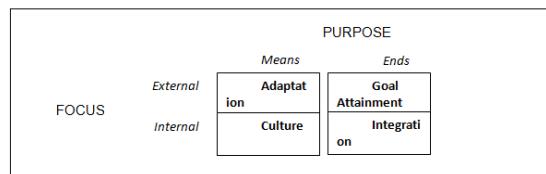
Organisational Learning Subsystem	Function	Output
Environmental Interface Memory/Meaning Dissemination and Diffusion Action/Reflection	Adaptation Pattern Maintenance Integration Goal Attainment	New Information Sensemaking Structuring Goal Reference

Schwandt & Marquardt (1990) finds that organisations are social system that change based on performance and learning (Gorelick, 2005). This is because on the Parsonian Theory of Social Action. Social Action Theory of Parsons is based on four integrated elements of social action (Gorelick, 2005; Johnson & Bailey, 2010) (Schwandt & Marquardt, 1990).

1. Actor/subject: an individual, group or collective
2. Situation: the physical and social objects which actor relates
3. Symbols: the means through which the actor relates to different situation and assigns meaning to them, and
4. Rules, norms, values: the guiding factors for the actors relations with the social objects in his/her environment.

The four functions of Parsons General Theory of social action are applicable at all level of analysis with integration of social, psychological and cultural element of organizational dynamics (Gorelick, 2005); (Johnson & Bailey, n.d.-a) (Schwandt and Marquardt, 1990) (Figure 1.1).

Figure 1.1. Parsons Four Functions



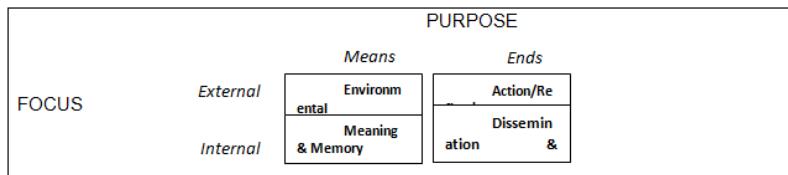
Later Schwandt (1997) emphasize the learning aspect of change in Parsons General Theory of Social Action (Figure 1.2):

1. Environmental Interface Subsystem(adaptation): information obtained requires to secure, filter and expel information [output: new information]
2. The action/reflection subsystem(goal attainment): creation of valued knowledge from new information, goal of learning system [output: goal referenced knowledge]
3. Dissemination/Diffusion(Integration): transfer the information and

knowledge within organization through informal and formal way [output: structuring]

4. The Meaning and Memory Subsystem(culture or pattern maintenance): establishment of criteria for judgment, selection, focus, control of organizational learning system. Beliefs, values, assumptions and artifacts - cultural component of organization.[output: sensemaking]

**Figure 1.2 Schwandt Learning Subsystem
(Schwandt& Marquardt, 2000)**



Organizational Learning is changing behavioural routine, addressing learning system that inhibits change (Hyland, et al. 2012). Recent years learning styled studied as stated by HoneyandMumford(1986) and Kolb (1984) of experiential learning (Hyland, et al. 2012).

Action in Parsons theory is dependant on situation of goal orientated: situation of means and condition, end/goal, norms and values, relating end to situation (Rocher,1975). The subsystem of actions is necessary for the social subsystem to function (AGIL). The AGIL has mutual exchange:

1. Adaptation to environment(A)
2. Allocation of resources and goal attainment(G),
3. Interaction of systems action(I)
4. Latent motivation patent (L)

The essence of Parsons theory sees that social system adapt to environment which comes from learning and performance action. This leads to knowledge creation and performance. This organizational innovativeness can be divided to performance system and learning system for theoretical analysis (Figure 1.4). This comes with the four prerequisites subsystem (AGIL).

Figure 1.3 Separation of the Social System of Actions into a Performing System and a Learning System (Schwandt, 2007)

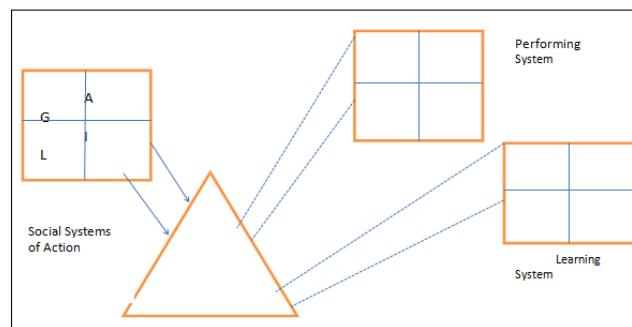
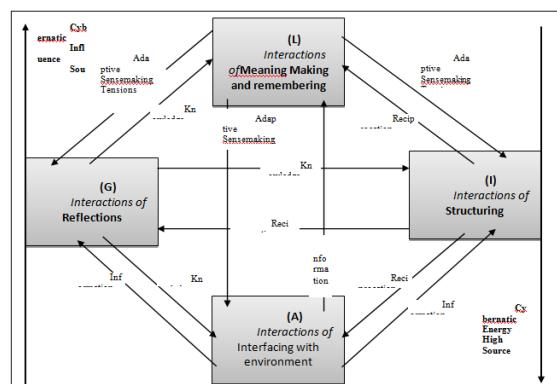


Figure 1.4. Collective Learning System Model: Subsystem Situated in the Cybernetic Hierarchy (Schwandt, 2007:32)



Organizational Learning and Learning Organization

Learning need to be explored as social and psychological process (StiofánDeburca,2000).

“...Learning is characterized as how (organizational members engaging in process designed to transfer and/or improve existing skills and routine) and why (organizational members inquiring into causality using diagnostic skills”(Edmondson and Moingeon,1996:27).

Learning involve changes involving abilities, attitude, belief, capabilities, knowledge, mental models, skills, etc. that tend to persist over time (Spector &Davidsen,2006: 67). Learning may not be effective always in achieving desired outcome whether continuous, intentional or unintentional (Spector & Davidsen, 2006).Learning organization is where organization able to establish clear goals,monitor progress towards goals and make appropriate judgment to the dynamics of situation as they evolve (Spector &Davidsen,2006:67). Organizational Learning is not may not be synonymous with learning organization ideas as the latter is the extent of activities or process reached by organization in learning (StiofánDeburca,2000). Organizational learning were analyzed based on knowledge acquisition, information distribution, information distribution and organizational memory (Jimenez,2008). Organizational Learning dimensioned into inquiry climate, learning practice, information sharing pattern and achievement mindset.

Learning result in new behavior(Argris&n Schön,1978;Fiol,1985) and such behavior related to performance of action (Schwandt& Marquardt,2000).Cyert and March(1963) on adaptive theory finds that individual and organizational learning is the same unlike Argyris&Schön state that OL is not self-productive rather integration of member knowledge (Wang et al., 2011). Duncan & Weiss (1975) idea agreeable as organizational learning is cognitive system that create collective learning and Fiol&Lyle(1985) sees as modification of knowledge system. Senge(1990) advanced it to adaptive learning and generative learning. As we

can see Schwandt's Organizational Learning Systems Model supports all the components of organizational learning. Organizations need continuous learning to be a learning organization. The process of this learning is what the research covers as organization learning.

One research on Indian power plant tried to identify an integrated scale for organizational learning through learning enablers, learning achieved and performance outcome (Jyothibabu,Farroq& Pradhan,2010). They argued that there is yet to have appropriate scale to be developed for OL which leads to conceptual confusion. In their study they used Watkins & Marsick's to measure the facilitator of organizational learning and Bontis, et al.(2004) learning outcome at individual,group and organization. Organizational size is the control variable as its large number of employees have more difficult time to share knowledge. Organizational level dimensions are employee empowerment,embedded system ,system connection and leadership for learning which found closely associated with each other. Organizational learning also directly contribute to performance than at an individual or group.The OLSM model used focusing on action/reflection(goal referenced knowledge) and meaning/memory(sensemaking) (Hazy, Tivnan&Schwant,2003).

Organizational Innovativeness

Innovativeness is 'capability to develop and introduce products or process' (Azadegan& Dooley,2010).

'...Innovativeness is also seen as ability of organization to novel ideas, to accept innovation and to support idea generation'(Hanvanich, Sivakumar, & Hult, 2006) Innovation can be a new product or service, a new production process, or a new structure or administrative system (Hult, et al.,2004). Innovation and innovativeness can be used interchangeably. Innovation measured by product, process and administrative(Manu,1992). It depends on how managers acquire and act on market intelligence. It was found that learning orientation has an effect on innovativeness (Hult, et al.,2004;Calantone,2000).

Organizational/Hospital innovation defined as 'the notion of openness to new ideas as an aspect of a firm's culture (Hurley & Hult,1998:44) as cited in Kunz et al.,2011). Kunz et al., (2011) further elaborated that 'organizational innovativeness reflects primary perceptions of internal stakeholders (e.g. employees and managers)'. Innovation relates 'to some form of specific change that is new and that leads to what is in some sense a better accomplishment of goals at a system level' (Ellström, 2010: 28). The underlying theories of innovation are logistical functional form and economic theories (Brewer,1980).

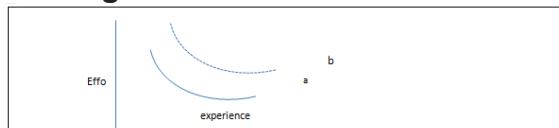
Kunz et al. (2011:817) further elaborated that organizational innovativeness reflects the primary perception of internal stakeholders (e.g. employees and managers). It was described that organizational behavior adopt new procedures when organizations face changes. The literature supports that innovation as

a source of competitive advantage, however, research is lacking in relating to organizational learning (Jiménez,2008).

One study on hospital innovativeness by Tabak and Jain(2003) innovation as constructed by Roger(1962) comes with initiation/sensemaking activities (and interpretation lead to the decision to adopt) perceptionand implementation (activities lead to ultimate usage of innovation). Adoption of new technology is important to acquire and adopting innovations.

Learning on systematic evaluation and observations improve innovations as it reduces errors, use of initial experience for efficient delivery, refine and improve procedural steps, determine how individuals can contribute to innovation (Brewer,1980:338). Evaluation innovation is determines the innovator successful or not. Based on learning model, effort to innovate increases when there less experience(case) and it becomes otherwise and eventually becomes constant. Curve 'b' takes place if any improvement anticipated in the curve replication.

Figure 1.5. Innovation Curve



Innovation may take forms like product, process, radical or incremental, technical and administration. Innovation is needed for long term survival and success (Wang & Ahmed,2004; Ellonen et al., 2008). Innovation dimension is varied and dynamic based on literature (Wang & Ahmed,2004; Ellonen et al., 2008). Calantone and Gracia (2002) identify the degree of newness and Johanesse et al., (2001) identified six different types; developing new products, new service, new method of production, opening new market, new source of supply and ways of organization. Subramaniam and Nilakanta (1996) found that organizational innovativeness involvea technical and administration functions. Later, a study conducted on a more narrowed perspective of innovativeness, Wang & Ahmed(2004) came up with, multidimensional conceptualization. However, Ellonen et al. (2008) based on their work claimed that product and market dimension by (Wang & Ahmed,2004) can be considered as single dimension. This is because their study was not extensively done. The underlying factors behavioral changes, process, strategic rather than only seeing product innovativeness based on Wang and Ahmed (2004) extensive work. They created work based on five dimensions of innovative capability for organizational product, market, process, strategic and behavior innovativeness.

Schumpeter(1934) has identified product, market, process and Miller and Friesan (1983) identified four dimensions product, process, behavior and strategic used in Wang and Ahmed (2004) in validating innovation scale. Schumpeterian theory of innovation consists of new product, market, organization and technology (Anderson,2009). 'Innovativeness refers to corporate environment that promotes and supports novel ideas, experimentation and creation process that may lead to

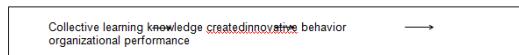
new product, techniques or technologies' (Weerawardena, 2003:5).

Organizational Learning and Organizational Innovativeness

Organizational Learning and Organizational Innovativeness looked into a strategic relationship to promote organizational entrepreneurship found that organizational need to learn to innovate and generate higher performance (García-Morales, Llorens-Montes, & Verdú-Jover, 2006). Finding show that organizational learning foster innovation and even high. Performance of organization is mediated by innovation with the relationship of organization(Jiménez,2008). Organizational memory and learning capabilities are the antecedent of non-technical innovation to achieve sustained competitive advantage in a 159 companies in Spain (Camisón& Villa-López,2011).

Organizational Learning facilitate product innovation (Hyland, Gieskes& Sloan, 2001). In order to compete organizations need to have internal diversity strategic, structure and people and process to facilitate innovation(Hyland et al., 2001). There have been various theory of innovation that explains performance (Anderson,2009). According to Bach(2004) resources for innovation in the form of information and knowledge play important roles in term of ability to contribute to organization. Thus, we can concur that knowledge is one of the resources that a firm could have to innovate and to meliorate performance (as in Figure 1.6)

Figure 1.6 Innovation and Performance



Calantone et al.(2002),Gracia-Morales et al. (2006),Hult et al. (2004), Keskin(2006), Lee and Tsai(2006) are some of the important authors whom linked performance and innovativeness (Rhee,et al.,2010). Ability to innovate is one of the important factor to influence performance (Hurley & Hult,1998). The degree of innovativeness increases with the extent of learning has occurred and whereby the knowledge has been explored (Rhee,et al.,2010). OLSM is parallel to this idea (Schwandt& Marquardt, 2000). The ability to create new knowledge is a prerequisite for organizational transformation and that knowledge creation and result social action of human collective and cognitive structure (Gorman,2005). Knowledge structure includes content and structure. This involves environmental change.The ideas and empirical findings identified that organizational learning has direct effect on organizational innovativeness.

Research on learning helps organization learn, adapt and develop to competitive advantage. A study done by Hurley & Hults(1998) of 9648 employees from 56 orgnization in United States supports the statement by affirming higher levels of innovativeness in the firm culture are associated to higher ability to adapt and innovate. The culture in their research described as learning,development and participative decision making. Learning orientation is one of the aspects function

as an antecedent to innovation orientation. The innovation to innovate and the capacity to implement innovation that determines organization performance and learning is the antecedent. Innovativeness is a prerequisite and determinant of performance (Cooper, 2010). Study by Rhee et al.(2009) examining the drivers of innovativeness with mediating effect towards learning orientation. Learning as part of organization culture allow employees to receive new ideas Rhee et al.(2009). Further, they explained, apart from it innovation is seen as action base capacity to create new ideas thus it related to learning action. Studies show that learning orientation which have significant relationship with innovation. (eg. Sinkula et al., 1997;Calantone et al.,2002;Hult et al.,2004;Keskin,2006;Garcia Morales et al., 2006; Liu,2002; Hult, et al., 2003).

Based on the above analyses the link between learning and innovativeness is so far obvious. The learning model like the learning system require more emphirical research on the relationship study and assessment on the outcome on organization. These, therefore will give a comprehensive understanding for policy implementation and theory contribution.

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