

The Innovation Experience: towards an organisational learning perspective of innovation

Selen Kars¹, Doctoral Researcher
Lancaster University Management School
Department of Management Learning and Leadership
Lancaster, LA1 4YX United Kingdom
Tel: +44 (0) 7964047944 Email: s.kars@lancaster.ac.uk

ABSTRACT

The key to success and survival in constantly changing, volatile and turbulent competitive environments is to be able to learn as an organisation and adapt to this chaotic environment by constantly changing organisational strategies, operations, practices, routines and actions. Organisations however have persistent problems in adjusting themselves and implementing necessary actions before an existence-threatening crisis hits them, even though often they see what happens in their environment. This research examines these problems and details how organisational learning systems and mechanisms speed up learning and change. The paper also describes how interpretive schemes and perceptions create constraints on organisations' innovation and change efforts by creating habitual behaviours that are primarily nonadaptive and thus dysfunctional in constantly changing competitive environments. The research contributes to the ongoing debates on the subject of innovation by showing the role of organisational learning processes and managerial perceptions for improved innovativeness.

Keywords: organisational learning, innovation, organizational learning systems, learning mechanisms, perceptions and interpretations.

¹ Corresponding Author: Selen Kars, Lancaster University Management School, Department of Management Learning and Leadership, LA1 4YX Lancaster, United Kingdom. Tel: +44 (0) 7964047944. Email: s.kars@lancaster.ac.uk

Introduction

The dynamic and transformative powers of capitalism have changed markedly the face of global competitive environment in the last decades. Changes in the environments of organisations force organisations to continuously change themselves as previously proven and successful strategies may become inadequate and dysfunctional for organisational survival. The transformations in the organisations' environments create the necessity for organisations to scan their environments continuously and to make something new – new implying “generation, acceptance and implementation of new ideas, processes, products and services” (Calantone *et al.*, 2002: 517) –, to innovate, to change the way the organisation operates in order to maintain the degree fittingness of the organisation to the environment. In this respect, it is obvious that learning is closely related with innovation as change is evidence of some degree of learning (McGill *et al.*, 1992). Organisations cannot start immediately doing something differently after becoming aware of the change necessity; giving up habits and routines is a process that occurs over time and consists a series of learning activities. Coping with the continuously changing environment through change in organisation's behaviour requires significant amount of learning which gets on the job in various stages of the innovation process.

Although many scholars have stressed that organisations have to learn in order to change what they are doing – whether incremental or radical – (Crossan *et al.*, 1999; Rogers, 1962; Rothwell, 1994) and that organisational learning is one of the most critical intangible assets that an organisation has to own to improve and sustain its position in the market through innovation (Calantone *et al.*, 2002; Dodgson, 1993; Tidd *et al.*, 2005; Yeung *et al.*, 2007), it is surprising to see that there are few studies investigating the connection between learning and innovation in organisations and conceptualising how the changes in organisation's behaviours, routines among many other aspects come about. Even though the work of Zhang *et al.* (2006) does not leave the connection between learning and innovation unconsidered, as innovation is not the focus of the study it is not distinctively a study of innovation through a learning lens. On the other hand, numerous studies in the field of innovation tell the managers how they ought to innovate and what are the characteristics of innovating firms and which contingencies are more conducive to innovation but they lack to explain why these prescriptions are often failed to be achieved in practice. In my opinion, this situation requires empirical research to improve the knowledge about the way innovation and change takes place in organisation with a focus of processes, mechanisms, systems and barriers to the learning in organisations that ought to continuously change and generate actions in order to change and adapt themselves to their environments either reactively or proactively.

For this reason an exploratory research was designed and conducted in order to explain why organisations that have the capacity to innovate – according to the literature – fail to change and innovate and why some companies are more successful in these terms than other companies functioning within the same environment with an aim to reveal the role of learning. Many explanations are included in both organisational learning and innovation theories but I see the need to elaborate an understanding that links learning and innovation which regards four main issues: (1) What is the role of learning in shaping organisational responses? (2) Which type of organisational learning system (Shrivastava, 1983) has more

potential to conduce innovation? (3) How these learning systems exhibit themselves in practice? and (4) Which type of learning is more prevalent in successful innovators?

THEORETICAL ASSUMPTIONS

Assumptions about Innovation

In this study innovation is defined in the widest possible way meaning *introduction of new products, adoption of new processes or enhancement of new services by an organisation; new meaning "new to the organisation"*. This definition is incongruent with many studies in the field of innovation investigating new product, service or technology development processes which devise the criteria of being new or unfamiliar to the market and to the users. But in my opinion, at least for the purpose of this study, innovation should be defined in this wider sense because innovation is not something that exists out there, independent of people and managers of an organisation. First of all, innovation does not exist independent of the people that are faced with it, because the reaction of an organisation or a user to something new and unfamiliar to her is what makes the experience unique and troublesome. To give an example from organisational life, ISO 9000 quality management system is definitely not an innovation as it exists in the market for decades but the experience of an organisation that is faced with ISO 9000 is the same as if ISO is something new to the market. For that particular organisation ISO is an innovation because it signifies change in their behaviour, their structures, their routines; it is a "new" experience for them. Secondly, the degree and type of support given to innovation in one organisation is a result of managers' mental models and interpretations heavily shaped by their background and past experiences. Innovation from this sense is a socially constructed phenomenon limited with the accounts, interpretations and theories of people that are actually triggering or preventing innovation to happen through their plans shaped by their hopes and frustrations.

Assumptions about Organisational Learning

In line with the social constructionist view that this study adopts, the traditional viewpoint of learning assuming that through learning accurate information and knowledge about a truly given outside world is rejected. From a constructionist viewpoint, this study sees knowledge and learning as a construction of the outside world. Organisations build reality constructions based upon the experience that the organisation possesses, and the goals and expectations of individuals that have a power in shaping the business activities of the organisation has a significant influence on the selection and exploitation of the knowledge sources available to the organisation bounding the form and content of the learning experience. The repertoire of structures, systems and mechanisms that an organisation accumulates and institutionalises over time guides organisational actions. Based on these repertoires organisations selectively attend their environments and adapt their goals and strategies respectively. It can be questioned, if organisation's prior experiences and existing repertoires limit the knowledge that it acquires and the outcome of learning, then how organisations can actually "learn" in a way that involves fundamental changes in their theories-in-use (Argyris, 1976) which will bring organisational survival and alteration of frames of reference within which future learning and change proceeds. I assume that the key to this is communication. Individuals modify their beliefs about reality continuously as a consequence of socialisation into the organisation (March, 1991) and individual knowledge and perceptions that they acquire from a variety of sources. Through communicating and sharing their understandings of the

organisations' external environment and organisations' internal problems individuals influence each other's views (Ford and Ford, 1995) and in the course of this spiral of communication, negotiation and validation the organisational constructions are changed and altered.

RESEARCH METHODS AND ANALYSIS

Case study research from a social constructivist approach was carried out in six Turkish mature, medium-sized companies operating in three different sectors (agricultural, manufacturing and tourism). A total of 42 semi-structured interviews that lasted on average around an hour were conducted with people working in different functions at different positions in these six companies.

Selection of Cases

The important criterion for selection of cases is the opportunity provided by unique cases to learn more about the research problem (Stake, 1995). In line with this criterion, my cases are "purposefully selected" (Creswell, 2003: 185) to fill some categories that will help me to understand the research problem better. Although Stake (1995) argues that finding accessible, helpful and collaborative cases is the most important criterion to consider as the aim of case study research is to understand a unique case, in this study this was the second important criterion. Rather, I went for a strategy that Burgess (1984) calls judgemental sampling in which the participants are selected according to their fittingness to a set of criteria established by the researcher. The priority was to find a heterogeneous population of organisations representing the typical and extreme cases that will enable me to include as many negative cases and rival explanations as possible that can be used in further researches in different settings.

An important consideration in selecting the cases was the size and age of the company. This research studies small- and medium-sized enterprises (SMEs) as I believe that SMEs provide unique learning and change and innovation processes when compared to large companies because they generally lack formal and well-thought organisational learning mechanisms and other structural designs that professionalised and institutionalised large companies have. Their actions and interactions with their external environment generally have a sporadic nature leading to unplanned and sometimes accidental learning. Secondly, I purposefully wanted to have mature companies in my sample because I assumed that mature companies are in the business for a sufficient period of time that made them survive numerous changes in the economic environment and their immediate competitive environment. I also assumed that in order to survive all these changes, they should have gone through a number of organisational renewals in terms of their strategies, operations, structures among many other business aspects which may have necessitated to break their path dependencies and undergo a process of 'learning to learn' as they shift from exploitation to exploration (Jones, 2006). I thought that selecting mature companies as my research cases would provide me with plenty of data about innovation and learning experiences of organisations as I assumed that they should have learned something whether intentionally or unconsciously in order to survive and succeed in constantly changing business context.

Six mature, medium-sized companies based in various industrial regions of Turkey operating in three different sectors that are representatives of primary, secondary and tertiary sectors – olive oil processing industry, automotive component parts manufacturing industry and thermal therapy tourism industry respectively – were selected as research participants. The

two companies selected from each sector were “matched pairs” one being a successful innovator in its sector sustaining its competitiveness through technological and managerial improvements and redevelopments and the other will be an average innovator in the same industry with a successful but more stable business history. Traditionally, matched pair design is generally associated with quantitative studies (Collis and Hussey, 2003) but there are some studies in the literature that applied the technique successfully to qualitative data (see Cobbenhagen, 2000; Storey and Salaman, 2006). In matched pair design a particular factor is determined that will be studied across companies. Then two twin companies are selected that differ in the value of the particular factor under consideration but are very similar in terms of all other factors. The logic behind the idea is to control the cases and limit the intrusion of many other extraneous factors that are not central to the study. In my particular case, the participant companies differed in terms of their innovative success – which is the factor under consideration – but were very similar in terms of their industry, size, ownership structure and age. The companies were determined and matched by the general secretaries of relevant industrial associations who have expert knowledge in their sectors.

Two of the companies are in the tourism industry (Dolphin and Seahorse), two are original equipment and component parts manufacturers for the automotive industry (BrakesCo and RubberCo) and two are in the olive oil processing industry (Crystal and Gold). Four of the six companies (BrakesCo, Crystal, Gold and RubberCo) are family firms owned and managed by family members, while one company (Dolphin) is family-owned but professionally managed and one (Seahorse) was previously owned by the municipality but now is an independent corporation managed professionally. The youngest company is 28 years old (Seahorse) and the oldest is circa 90 years old (Gold), while the oldest company that is exactly on the same line of business is Crystal which is 70 years old. The smallest company (Gold) in terms of numbers of employees employs 75 people and the biggest one (Seahorse) has 215 employees. This range is in line with the European Union definition of medium-sized companies which classifies companies with 50-249 employees as medium-sized companies (ABIGEM, 2006). While establishing the case selection criteria I did not intentionally look for family firms or medium-sized companies. I was originally studying mature SMEs but it turned out that the majority of SMEs in Turkey are family owned and managed and most successful mature SMEs that survived up to this date are medium-sized respective of their number of employees.

Interviews

The interviews followed what Patton (2002: 342) calls a “general interviewing approach” where I outlined a set of issues that are to be explored in each interview which will be far from a standardised set of questions. A number of interview guides were customised for each interviewee which served as an “aide mémoire” (Burgess, 1984: 108) providing some kind of a checklist to ensure that the same topics are covered in each interview.

Around five to nine people from each company were interviewed who were middle and upper managers including the managing director of the company in each case. Interviewees ranged in terms their experience with the company ranging from one year to 25 years. The interviews lasted from about 45 minutes to over 90 minutes. Notes were taken in all interviews and 33 out of 42 interviews were also tape recorded.

The first interview was conducted with the managing director of the organization about the story of the company including the milestones in the company’s history as the manager sees them, the competitive environment and the changes taking place in their environment

including their evaluation of these changes and attitudes against them. These initial interviews were structured around these general questions but the interviews were mainly unstructured because what the manager chose to emphasize changed dramatically. For example, in one company the managing director chose to emphasize the problems that they face while another focused more on the family values that made them survive for over 70 years in the sector, yet another told the story of the change projects that were undertaken in the company. In reconstructing the story of the company and the change and adaptation processes, memory failure of the interviewee was recognised as an important source of potential distortion prior to the field research. To guard against memory failure, people were asked regularly for dates and these dates were randomly checked in subsequent interviews.

After these initial interviews were conducted with the managing director more interviewees were added to the interview schedule until all major points that were covered in the initial interview were thoroughly discussed with key people who took part on each change project and/or milestone. Sometimes more key projects and milestones were uncovered in these follow-up interviews that were not previously mentioned by the managing director, and thus new interviewees were included to the study in order to have more information in these newly revealed aspects of the organisational processes.

Data Analysis

In order to prepare the data for analysis 20 interviews out of 33 which were tape recorded were transcribed verbatim in Turkish – which is the language in which the interviews were conducted. After the data is prepared for analysis, Miles and Huberman (1993) suggest the phenomena or cases under investigation to be observed, classified and scanned for patterns, themes and interconnections. But how to find these patterns, themes and note interconnections is the least well described part of qualitative research methodology (Hartley, 1994). This highly subjective, interpretive (Eisenhardt, 1989) and iterative process (Strauss and Corbin, 1990) was managed by creating conceptually ordered matrices based on some developed categories regarding interviewee's perceptions of the industry dynamics and factors making their company competitive, their descriptions of the organisational culture and values, and what they considered important to following and introducing new technologies (technical people), to developing and expanding the knowledge base of the organisation through training programmes and recruitment, to characterising their relationships with colleagues, subordinates and superordinates and to acquiring and integrating new knowledge to the organization. These categories were then compared across organisations to search for underlying patterns which summarised the essence of cases and lead to some conclusions about the characteristics in structures and systems of the organizations.

FINDINGS

Analysis and comparison of learning and innovation processes of six companies led me to develop a screen of four interdependent issues to understand why designs as proposed by the extensive innovation literature may not be sufficient for innovation to occur.

Organisational Learning Systems

The constantly changing nature of the organisations' environments suggests that when sitting still an organisation faces the risk of unfitting its environment. In order to realise the changes

in its environment, identify its gaps and adapt itself through learning, organisations should have informal or formal systems providing a frame for organisational activities and practices. These systems help the organisation to “acquire, communicate and interpret organizationally relevant knowledge for use in decision-making” (Shrivastava, 1983: 17). Organisational members knowingly or unknowingly are educated by these systems and they come to learn which parts of the organisation’s environment to attend and which parts to ignore. These systems that are developed as a result of the organisation’s history and traditions focus and constrain actions and behaviours of all the members of the organisation and consequently determine the knowledge that the organisation learns.

Based on the research data it is found that organisations which are more successful in their innovation and change efforts have highly participative learning systems which enable knowledge sharing at departmental and organisational level. This type of system provides easy access to all organisational members where the organisation provides an open, supportive and information seeking culture that makes informal and formal exchange of information, knowledge and expertise possible. In these organisations knowledge flow into the organisation from all directions and sometimes knowledge that will not produce an immediate outcome in terms solving a perceived problem of the organisation is also acquired and stored for a future potential organisation-environment misfit. The organisation and the managerial traditions encourage search for new ideas that have less certain immediate outcomes which is the behaviour exhibited by innovative companies allocate resources for exploration and experimentation. These organisations are best characterised by curiosity and informality and having an informal learning process and knowledge sharing approach mean that there are no bureaucratic priorities or other structural obstacles to innovation, which is also found as another factor facilitating innovation. This informality leads to certain types of organisational learning mechanisms and can be associated with certain organisational cultural mechanisms that are discussed in following sections.

On the other hand of the spectrum we see learning systems that very much depend on one person. This type of system is centralised and concentrated in the hands of one person and this person (who is typically the owner-manager of the company in this particular study) filters and controls the flow of information and knowledge to the organisation. When all the knowledge and information is flowing into the organisation from one single person, then the members of the organisation are educated into this code and they start to consider her as the sole source of critical information. Her perceptions about how to run a business, her biases about the competition and the limitations of her mental model virtually become the organisation’s perceptions, the organisation’s biases and the organisation’s real limitations. These values, perceptions and beliefs not only filter information but they also focus organisation’s and individuals’ attention and hence they impede learning by constraining the learning scope of the organisation. The organisation sees its environment through its single, dominant ideology which is a factor that loosens the interaction of the organisation with its environment. In the long run these companies become unreflective because the organisation is in reality isolated from its environment as all the interaction that it has with its environment depends on one single person. The learning system is only triggered when the organisation faces an existence-threatening “problem” or “trouble” that requires consideration of organisation-environment misfits. Information seeking is pushed by the acknowledgement of a “problem” by the dominant power source.

Organisational Learning Mechanisms

The organisational learning systems that are discussed above are materialised with the help of organisational learning mechanisms which are “institutionalized structural and procedural arrangements that allow organisations to systematically collect, analyze, store, disseminate and use information relevant to the performance of the organization” (Lipshitz and Popper, 2000). Basically, they are structures extant in the organisations that actually enable the exchange of information which is required for organisational learning and decision-making which is required for generating the necessary action for organisational survival and success. Probably, the most common organisational learning mechanisms are staff meetings, management meetings and company trainings which provide a venue placing organisational members in face to face contact with each other aiding information exchange and new knowledge acquisition leading to modification of individual beliefs which influences the organisational knowledge, perceptions and belief systems indirectly.

Not surprisingly, both the reactive and proactive learners utilise several organisational learning mechanisms for knowledge sharing and decision making purposes. But the research data suggest that there is a clear distinction between standard information processing and performance monitoring mechanisms and more reflective learning mechanisms including lengthy explication of the business context and organisation’s activities and competitive position that occasionally generate imaginative responses to the current and anticipated organisation-environment misfits leading to changes in organisational operations, structures, routines through improvement of current practices and exploration of new ones. While traditional and standardised organisational learning mechanisms generally include weekly, monthly and yearly review of departments’ and companies’ performance and management planning and control, the way that the mechanism is operationalised and executed is distinctively more participative, more reflective and more untraditional in innovative companies. The actions generated from these mechanisms are more adaptive and less automated as they originate from specific needs and contexts of the organisation. Participative learning systems are more conducive to this type of organisational learning mechanism as the informality and curiosity associated with this type of system is more congruent with non-standard mechanisms with a potential of leading to generative learning opportunities. Another characteristic of the learning mechanisms as utilised by innovative companies is easy access. There are a fair number of instances where these mechanisms were formed and put in force expressly to evaluate and resolve specific issues like emerging quality problems in an ad hoc manner. From this perspective, the data suggests that proactive learners engaged with innovation and change efforts openly utilise various organisational learning mechanisms more frequently even when the information that will be discussed at one particular contact is not validated through formal channels yet.

Organisational Learning Modes

The learning generated and knowledge acquired in a given organisational learning system from a particular organisational learning mechanism differs in its respective learning outcomes. In the organisational learning literature a number of distinctions are presented by leading scholars, namely Argyris’ (1976) single and double loop learning, March’s (1991) exploitative and explorative learning and Senge’s (1990) adaptive and generative learning which discusses discrepancies based on the dimension of change, novelty of the change and the organisation’s learning orientation respectively. My observations about different learning modes in organisations are partly covered by Senge’s distinctions but are richer in terms of the origin of the learning orientation, the motivation behind it and knowledge sources utilised in order to achieve the desired learning outcome.

The adaptive learning mode has a reactive orientation with a focus on ensuring organisational survival through permanency and stability and minor redevelopments and improvements are done in order to meet the needs of the customers in terms of production, quality and efficiency. These redevelopments and improvements are found to be crisis-driven and pushed by the existence of a specific problem or an identifiable and “justifiable” set of problems. When faced with problems and issues that create a trouble for the business and production, existing organisational competences are improved through to-the-point trainings of organisational members or through recruiting new members who have the required knowledge. The cases suggest that organisations engaged mainly with adaptive learning cannot even fully reap the benefits of turn-over of its members that March (1991) and Simon (1991) talk about because the individuals recruited that are hoped to act as change agents are socialised to the organisation very fast primarily because they have long-term relationships with the organisation’s managers and owner-managers prior to starting work in the organisation. Because of the high level of complementarity between this external source of knowledge and internal organisational knowledge, the deviance required for a significant shift in the mode of thinking cannot be realised.

On the other hand, the generative learning mode has a proactive orientation characterised by the existence of an organisationally shared vision of continuous improvement. Knowledge is seen as the source of sustainable competitive advantage and organisations’ members are aware of the fact that in the turbulent and complex environment that they are operating in there is no such thing as a “rational” or “justifiable” solution to “the problem”. They try to manage uncertainty rather than focusing on specific problems and issues. They do this by scanning a wide range of knowledge sources, acquiring and integrating as much knowledge as possible by try to imagine what kind of future may be waiting for them. They are not afraid of searching for new ideas, devising untraditional solutions with uncertain and indirect outcomes.

Cultural Mechanisms

Both the organisational learning systems and mechanisms discussed are embedded in the cultural facets of organisations. The cultural mechanisms present in the organisation which can be seen as the combination of perceptions, values, beliefs and assumptions collectively held by the organisation’s members that are translated and communicated across the organisation. These cultural mechanisms facilitate systems, mechanisms, structures and practices required to generate innovative responses and sustain this innovativeness.

Organisations with reactive orientations focusing on adaptation are found to impose imagined constraints on themselves. Their perceptions about themselves and their environment focus their attention on opportunities and threats that they believe to be important and make them ignore other opportunities and threats that may turn out to be more important and more vital for the long-term success of the organisation and sustained competitiveness. As the realities that they construct are actually shaped by their assumptions, perceptions, values and beliefs the actions that they generate when faced with the problem – although is thought to be the result of a rational analysis of the situation – is an automated, habitual response congruent with past experiences, organisational traditions and routines. The large repertoire of procedures creates a simplified representation of the problem and blocks the new information that may be required to deal with the problem because the attention of the organisation is (mis)focused to a selected part of the problem. When the problem or the issue is interpreted

within the framework of their current values and beliefs the variation of results and actions generated turn out to inhibit permanent, diffused changes in the organisation.

Perceptions of the industry dynamics and company's situation are communicated across the organisation and the business strategy; actions proposed by the subordinates and implemented by the decision-makers are heavily coloured with these perceptions. Because of differing frames of reference the same information is interpreted differently. If the narratives in the organisation about competitive environment have negative connotations summarised with words such as crisis and struggle then it is clear that the organisation will focus on ensuring stability and survival and the competitive environment will be perceived as a hard place full of obstacles to overcome. On the other hand, if the external environment is perceived with full of opportunities for growth and change and narrated as a fun place to be, then it is not surprising to hear that growth and continuous improvement are prioritised. These companies deal with the complexity and rapid change of their environment more successfully and manage the flood of information by recruiting more professionalised staff with relevant formal education and by creating time and space to bring together these knowledgeable members to investigate an issue and develop a variety of resolutions. In these systems, the culture is conducive to receive and produce new ideas and new knowledge and the top managers' open the information and communication channels to enable the free entrance and translation of ideas from subordinates.

CONCLUSIONS

The key to success and survival in constantly changing, volatile and turbulent competitive environments is to be able to learn as an organisation and adapt to this chaotic environment by constantly changing themselves. Organisations however have persistent problems in adjusting themselves and implementing necessary problem solutions before an existence-threatening crisis hits them, even though often they see what happens in their environment. Through empirical research conducted in mature, medium-sized companies in Turkey this study has examined these problems and details how organisational learning systems and mechanisms speed up learning and change. The research is limited by its exploratory nature and the fact that condensed results presented in the paper do not incorporate any illustrative examples and left out many other important findings.

It is found that organizational learning leads to superior innovative performance when knowledge is shared between organisational members and with the organisation's external environment through appropriate infrastructure and a culture of inquisitiveness, dynamism and courage. However, the impact of organisational learning on innovativeness seems to be dependent on the organisational context of a firm – organizations operating in sectors with low technological requirements like the olive oil processing industry are unlikely to reap the benefits of innovativeness as a result of organizational learning. On the contrary, organisations operating in sectors with high technological requirements like the automotive industry even when if they do not have participative learning systems may have “learned to learn” by adapting themselves to their environments successfully through transferring the required knowledge and technology because of the pace and discipline of the industry they are in. But apart from structural barriers to innovation and learning there are also interpretive barriers that call for cultural solutions. Although the cases build on previous studies in the learning and innovation fields, in its utilisation of the learning perspective to understand innovation it differs significantly. The paper contributes to the ongoing debates on the subject

of innovation by showing the role of organisational learning types and styles for improved innovativeness.

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