INFLUENCE OF ORGANIZATIONAL LEARNING DIMENSIONS ON ORGANIZATIONAL LEARNING AMONG PETROCHEMICAL COMPANIES

ALI SAEED ALDARWEESH

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ABSTRACT

The purpose of this study was to understand the influence of the learning dimensions in the organizational learning of the petrochemical organizations in the GCC countries. It had utilized four dimensions: learning barriers; learning essentials; learning enablers; and learning orientations that were synthesized from previous research. It has also put them into a framework where organizations can be assessed by. Four hundred sixtyfour individuals from three management levels have participated in a self-administered survey, which represent five organizations from the petrochemical sector in the Gulf Cooperation Council (GCC) countries. The data was subjected to a number of tests such as normality test, homogeneity test, and sphericity test prior to conducting factor analysis, ANOVA and Chi-square analyses to answer the six research questions with four hypotheses. The results of the study indicated that: no strong learning barriers exist among the three distinct management levels and that no significant differences exist among the organizations. The conditions, a component of the learning essentials dimension that can help organizational learning were found to differ across the petrochemical organizations but not across the three distinct management levels. The factors, a component of the learning essentials dimension, that affect learning were found not to differ across the petrochemical organizations nor across the three distinct management levels and the same result was found for the benefits of the organizational learning. The learning enablers did not differ significantly across the three management levels, but differed across petrochemical organizations; and the learning orientations of the five participated petrochemical organizations were identified and that two variables out of the seven variables of the learning orientations, knowledge source and skill development differed across these organizations. The result of the study can be used a measurement tool to help organizations make informed decisions when investing on developing learning capabilities. Furthermore, the study brought valuable insights from three distinct management levels with relation to the identified organizational learning dimensions.

APPROVAL PAGE

I certify that I have supervised /read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in quality and scope, as a thesis for the fulfilment of the requirements for the degree of Doctor of Philosophy.

Assoc Prof Dr Wan Sabri Wan Hussin Dean, School of Management Asia e University Supervisor

Examination Committee:

Dr Guna Rethinam Director, Organization Design Etisalat Examiner Prof Dr Mohmad Yazam Sharif Deputy Vice Chancellor, Academic Affairs Asia Metropolitan University Examiner

Prof Dr Haji Ibrahim Zahari Academic Fellow, School of Management Asia e University Examiner Prof Dr Siow Heng Loke Dean, School of Graduate Studies Asia e University Chairman, Examination Committee

This thesis is submitted to Asia e University and is accepted as fulfilment of the requirements for the degree of Doctor of Philosophy.

Assoc Prof Dr Wan Sabri Wan Hussin Dean, School of Management Asia e University Prof Dr Siow Heng Loke Dean, School of Graduate Studies Asia e University

DECLARATION

I hereby declare that the thesis submitted in fulfilment of the PhD degree is my work and that all contributions from any other persons or sources are properly and duly cited. I further declare that the material has not been submitted either in whole or in part, for a degree at this or any other university. In making this declaration, I understand and acknowledge any breaches in this declaration constitute academic misconduct, which may result in my expulsion from the programme and/or exclusion from the award of the degree.

Name of Candidate:

Signature of Candidate:

Date:

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وَاللهُ أَخْرَجَكُم مِّن بُطُونِ أُمَّهَاتِكُمْ لَا تَعْلَمُونَ شَيْئًا وَجَعَلَ لَكُمُ السَّمْعَ وَالْأَبْصَارَ وَالْأَفْئِدَةَ لَعَلَّكُمْ تَشْكُرُونَ سورة النحل آية 78

Allah has brought you forth from your mothers' wombs when you knew nothing, and then gave you hearing, and sight and thinking hearts so that you may give thanks.

Quran An-Nahl 78

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CHAPTER 1: INTRODUCTION

1.1 BACKGROUND OF THE STUDY

Recognizing the power of knowledge as one of the greatest competitive advantages, many organizations started to work on creating what is commonly known as a learning organization and developing organizational learning capabilities. For example, Saudi Basic Industrial Co. (SABIC) in its 2020 strategic planning aimed at building and sustaining such capabilities (SABIC 2020 webpage).

The popular cliché "Learn or be extinct", which is used by human development researchers underscores the importance of continuous learning for company survival (Sessa and London, 2006). Weldy (2009) asserts that the dynamics of global competition, technological advancement, corporate restructuring, and unstable conditions are converging on business and making it more important than ever that organizations learn and adapt to make improvements in performance.

In recent years, the level of interest in the fields of organizational learning, intellectual capital, and knowledge management has been phenomenal (Alvesson and Karreman, 2001; Andreous and Bontis, 2007; and Lopez, Peon, and Ordas, 2005). Crossan, Lane, and White (1999) posit that organizational learning can be conceived as a principal means of achieving the strategic renewal of an organization. Swart and Harcup (2013, p.2) define organizational learning as "The process whereby individual learning is shared at an organizational level and results in change within the organization which achieves organizational goals".

The concept of the organizational learning and the company's culture is strongly related to several types of performance improvement at individual, team and organizational levels (Song, Lim, Kang, and Kim. 2014). Wen (2014) describes the essence of the philosophy and practice of the learning organization as its efforts to nurture and rely on the best aspects of human nature. Seyyedi, Rahimi, and Damirchi (2011) assert that the importance placed on learning, knowledge management, and a knowledge workforce has heightens the emphasis on the advantage of operating as a learning organization and for enabling the organizations to benefit from all aspects of learning. They further emphasis that the learning organization is a valuable tool for facilitating learning and knowledge management and has been described as an important strategy for making improvements in organizational performance and maintaining competitive advantage (Seyyedi et al, 2011).

Sachan, Aroura, and Pandey (2016) assert that the concept of learning organization has received growing attention as one source of competitiveness in both financial and non-financial performance of an enterprise and that learning at different levels –individual, group and organization, influences organization's performance and effectiveness. Aksu and Ozdemir (2005) state that the learning of organizations begins at the individual level, shared at group level, and recorded into organizational memory and used when needed.

Rowe (2010) posits that the extent to which an organization learn is thought to be both structural factors- mechanisms and procedures that allow organizations to systematically collect, disseminate, and use information, and cultural factors – including shared professional values, leadership, and vision.

2

The development of organizational learning seems to be undertaking the challenges created by the increased international competition and the growing importance of innovation in the knowledge society (Saha, Chatterjee, Gregar, and Saha 2016). Perhaps alarmed by the success and dominance of some companies such as those of the Japanese and Americans, the desire to know the secrets behind such success prompted many companies to start searching. It appeared that those globally dominating companies were good at bringing innovation continuously, incrementally throughout their operations.

Saha et al. (2016) argue that Organizational learning helps strengthen the firm's competitive skills through improving the four different types of knowledge i.e. know-what, know-why, know-how, and know-who. Building a learning organization is not optional work, it should become a strategy for the organizational development and should become leaders' responsibility (Qiu, 2010). Eisenberg, Ignatjeva and Ilisko (2018, p.50) state that "only organizations that can transform themselves into more intelligent, profitable, and capable of learning will survive".

When discussing how human resources affect organizational performance, Camps and Luna-Arocas (2012) suggest that although the HR strategy does not show a direct causal connection with organizational effectiveness, they assert that it can have a considerable indirect effect on business result through the organizational learning capabilities. Goh and Ryan (2008), who conducted a longitudinal and competitor analysis study about the organizational performance of the learning companies using both market and accounting financial data for sixteen learning companies and 27 competitors over a period of 20 years.

They concluded that learning companies demonstrate strong performance in financial markets overtime, beating the traditional market indexes in both bull and bear markets and the long-term financial performance of learning companies is significantly superior to that of their closest competitors.

The methods and means by which individuals in organizations acquire knowledge, and the ways in which it can be distributed throughout the organization in order to improve its effectiveness, are coming under increasing scrutiny (Kirwan, 2016). Hussein, Mohammad, Noordin, and Ishak (2014) posit that since the capability to learn does not naturally and readily occur within organizations, it is imperative that organizations ensure that resources are allocated, efforts are made to instill learning within organizations. Hellriegel and Slocum (2011) stress that the challenge for organizations is to create and maintain a learning climate at the individual, group, and organizational levels that will sustain their competitive advantage and also retain their talent mindset.

The process of knowledge-creation is not an easy, short, or inexpensive task (Nonaka & Takeuchi, 1995). According to C. Jackson Grayson of the American Productivity and Quality Center of Houston, "Japan's greatest long-term competitive advantage is not its management system, Japan Inc., or quality; it is the Japanese commitment to learning" (Senge, 1992). Kjell and Stone (2012) describe the result of a visit by a group of Americans to a number of Japanese factories in the 1970s that the reason these factories were producing products to the highest quality standard is that each person is an excellent contributor to the manufacturing process and that top management listens to the diverse opinions of their employees and implement them as well.

Kjell and Stone (2012, p.263) further highlight the importance of the internal learning climate of the organization, asserting that the "learning must be conceptualized as the use of tools within climate (e.g. Quality circles, Venn diagram, Gantt chart, cross training) all employed within organizational atmospheres conceptualized as learning climate (e.g. democratic management styles, double-loop learning, servant leadership). From this comes the learning organization concept, which is regarded as a tool for business success which Senge (2006) popularizes it with his "Fifth Discipline" where he posits that companies who want to become learning organizations they need to develop three learning abilities: ability to inspire aspiration; ability to start reflective conversation; and ability to understand complexity.

Wen (2014) asserts that the good learning organization is the one that has the ability to respond positively to four things: change; interaction; sustainable development; and complexity of the situation. Garvin (1993) Defines a learning organization as any organization that is skillful in creating knowledge, acquiring knowledge, transforming knowledge and engaging in behavior modification with the purpose of creating new knowledge and understanding. Moilanen (2001, p. 11) asserts that "the learning organization eliminates structural obstacles of learning, creates enabling structures and takes care of assessing its learning and development".

Garratt (1999) highlighted that unlike many management ideas, organizational learning is not a fad, and it is being increasingly accepted as a vital strategy for organizational survival and development. It is seen as an aspiration for a continuous process that can energize people for a long time, rather than providing a quick fix solution. Garratt (1999) further argues that organizational learning can create sustainable knowledge which can be valued as an asset on the balance sheet, and it also makes organizations more productive, profitable, and more humane places to work. Hubner (2002) argues that learning organizations have to accomplish five main activities: systematic problem solving, experimentation with new approaches, learning from their experience of past history, learning from the experience and best practice of others, and transferring knowledge quickly and effectively throughout the organization.

Carrim and Basson (2013) assert that learning takes place in order to introduce development that will bring about changes in organizational behavior and patterns of actions which result in enhanced organizational performance and competitiveness. Weldy (2009) posits that there are three common threads when defining learning organization: learning, changing, and improving. The learning aspect includes gaining of new knowledge, continuous learning, learning from mistakes, and learning by all members of the organizations.

Buckminster Fuller (1983), the inventor said "if you want to teach people a new way of thinking, don't teach them. Instead, give them a tool, the use of which will lead to new ways of thinking". The change aspect includes changes in behavior and changes in the processes used based on the knowledge gained. The improvement aspect includes improvements in individual performance and organizational performance from actions taken as a result of the learned information (Weldy, 2009). In order to survive in the highly competitive environment, organizations need to learn sooner, faster, and better than their competitors (Saadat and Saadat, 2016).

Smith, Barnes, and Harris (2014) postulate that there are significant parallels between the characteristics of learning organizations and those of ethical organizations, which include leadership, culture, communication, systems thinking, and problem-solving orientation. These parallels encourage social network stimulation, acceptance of new ideas, open discussion, the ability to disagree without rancor, a lessening of hierarchy, and employees seeing themselves as part of a larger whole. Sachan et al (2016) posit that the culture in a learning organization should be supportive, promote equality, transparency and seek continuous improvement through change.

Aksu and Ozdemir (2005) point to the importance role of the managers in setting the appropriate learning climate in their organizations by sticking to the following: coming up with planned learning opportunities; being a role model in their behavior; finding ways to integrate learning with organizational processes; and readiness to learn.

Public reflection is important as individual reflection to correct the wrongs and learn from mistakes. Evans and Kivell (2015, p. 762) posit that "embedded reflective processes are integral to individuals, groups, and organizational development. It has been shown that organizational learning creates values and fosters improved performance (Herrera, 2007, Garvin, 1993)).

Marquardt (1996) highlights that researchers and practitioners alike have to stress the need for organizations to operate as learning organizations where all members continuously learn and take action to improve performance. Several empirical studies confirmed the strong relationship between the concept of the learning organization and both the organization's financial and knowledge performance (Davis, 2005; Ellinger, Ellinger, Yang, and Howton, 2002; Herrera, 2007; McHargue, 1999; Saha et al, 2016; Sawhney, Wolcott, and Arroniz, 2006).

Ellinger et al (2002) suggest, in their exploratory research, that there is a link between the concept of the learning organization and the financial performance of a business. Building learning organization capabilities makes an organization learn faster than others and thus become more profitable. Slater and Narver (1995) posit that the company's ability to learn and focus on customers wants and needs more precisely will gain higher level of customer satisfaction, which should increase profit and sales margins.

Saha et al (2016) posit that organizational learning had a mediating role in improving organizational explicit and implicit knowledge and that it empowers firms to maintain their sustainable competitive advantage and enhance their performance. It also helps an organization bring innovation not only to the product but also to other key dimensions such as processes, customers, and solutions (Sawhney et al, 2006). Lyle (2012) suggests that the need for improved learning is being driven by changes in three areas: the social and economic climate; the work environment; and customer expectations. If an organization does not adapt itself to suit the continuously changing environment through quick and effective learning, it will not be able to survive (Zirak, 2015).

Zirak goes into saying that external environmental changes can lead to adaptation or extinction over time. Lane, Koka and Pathak (2006, p.856) when succinctly describing the "absorptive capacity posit that "Absorptive capacity is a firm's ability to utilize externally held knowledge through three sequential processes: (1) recognizing and understanding potentially valuable new knowledge outside the firm through exploratory learning, (2) assimilating valuable new knowledge through transformative learning, and (3) using the assimilated knowledge to create new knowledge and commercial outputs through exploitative learning".

Zahra and George (2002) divide the absorptive capacity into two types: potential absorptive capacity, which is the firm's ability to acquire and assimilate new knowledge; and the realized absorptive capacity, which is the firm's ability to transform and exploit the newly acquired knowledge. They further posit that the potential absorptive capacity provides the firms with the strategic flexibility and the degree of freedom to adapt and evolve in high-velocity environment, hence they describe it as dynamic capability that provide the firm with multiple sources of competitive advantage.

Kim, Akbar, Tzokas, and Al-Dajani (2014) links the systems thinking to absorptive capacity (ACAP) through the three types of learning which was adequately described in Lane et al (2006): the exploratory, the transformative, and exploitative learning. Kim et al (2014) posit that firms that identify, acquire, analyze, understand and creatively apply external knowledge are able to deliver greater value to their customers and generate greater customer satisfaction thereby increasing their performance and profitability.

Being a learning organization brings many benefits to organizations. It minimizes the negative impacts of employee turnover because of not being dependent on specific individuals and increases employee job satisfaction (Nyukorong, 2016). Job satisfaction can make employees accomplish organizational goals, take more interest in work assignments and feel privileged to be part of the organization (Davis, 1951). Another advantage of becoming a learning organization is being vigilant and skillful in detecting weak signals, thus being better prepared to meet the threats and take advantage of the opportunities taking place not only in the core business but also on the periphery (Day and Schoemaker, 2008).

Akhavan and Jafari (2006) assert that Learning is the most effective way for organizations to improve their performance both in the short- and long-term. Kim (1993) summarized the benefit of organizational learning by defining it as "increasing an organization's capacity to take effective action". Knowledge is known as vital and the most important property of the organizations, and that the knowledge management is playing undeniable role in the existence of any organization (Jafari, Akhavan, and Fathian, 2007).

Saadat and Saadat (2016) posit that the experts in management prescribe organizational learning as a medicine to all organizational problems and that managers need to pay high attention to promote learning in their organizations. Song et al. (2014) in their study of Korean for-profit firms assert that the cultural aspects of the learning organizations positively and directly affect the employee engagement, and while the cultural aspects of the learning organizations positively through the employee engagement, and that the employee engagement plays a full mediating role in explaining the relationship between the learning organizations and team performance.

The GCC petrochemical industry is crucial to the world economy. The GCC countries produce about 20% of the world's petrochemical products and employ more than 166,000 workers (GPCA, 2018). From its start in the early 1980's, its aims were to utilize the abundant hydrocarbon resources that used to burn off as flares, and to reduce dependence of national economies on oil production alone (Aitani & Hamid, 1997). The former was achieved to a certain degree while the latter yielded meagre result (Hvidt, 2013).