INDERSCIENCE PUBLISHERS
Linking academia, business and industry through research

International Journal of Business Innovation and Research

ISSN online: 1751-0260 - ISSN print: 1751-0252
https://www.inderscience.com/ijbir

Organisational learning capacity impacting innovation performance of firms

Sanjay Dhir, Swati Dhir

DOI: 10.1504/IJBIR.2021.10047003

Article History:
Received:
Accepted:
Published online: 15 January 2025

Organisational learning capacity impacting innovation performance of firms

Sanjay Dhir*

Department of Management Studies,
Indian Institute of Technology Delhi,
IIT Delhi Main Rd., IIT Campus, Hauz Khas,
New Delhi, Delhi 110016, India
Email: sanjaydhir@dms.iitd.ac.in
*Corresponding author

Swati Dhir

International Management Institute New Delhi,
B 10, Qutab Institutional Area Block B Rd., Block B,
Qutab Institutional Area, New Delhi, Delhi 110016, India
Email: swati.dhir@imi.edu

Abstract: The purpose of this paper is to understand the possible valid interconnection among the variables/factors that are responsible for the innovative performance of a firm through the organisational learning capacity (OLC). This study has attempted to comprehend the complex relationship among the factors that are to be put together to encourage innovation with the help of OLC within the firm that leads to growth and development. The analysis of the factors would lead to the outcome of the firm, i.e., innovative performance. Total interpretive structural modelling (TISM) has been used to explore the 11 factors on literature reviews. In the TISM structure, some of the factors settled at the bottom of the hierarchy require more attention compared to the factors at the top. An absolute supervision of these variables can methodically achieve organisational innovative performance. The approach also gives valid reasons to analyse why and what factors work as barriers or effective endeavour to development.

Keywords: organisational learning capacity; OLC; innovative performance; absorptive capacity.

Reference to this paper should be made as follows: Dhir, S. and Dhir, S. (2025) 'Organisational learning capacity impacting innovation performance of firms', *Int. J. Business Innovation and Research*, Vol. 36, No. 1, pp.103–130.

Biographical notes: Sanjay Dhir is an Associate Professor and Area Chair, Strategic Management Area at Department of Management Studies (DMS), IIT Delhi. He received his PhD from the Indian Institute of Management (IIM) Lucknow. He has published case studies at Richard Ivey School of Business, Western Ontario jointly distributed by Ivey and Harvard Business School, *Journal of Business Research, Technological Forecasting and Social Change, and International Business Review*. His research papers were presented and published as conference proceedings at several prestigious academic conferences. His research interests include strategic management, joint ventures, innovation management, management of change, implementation strategies, and international strategy.

Swati Dhir received her FPM in OB/HRM at Indian Institute of Management Lucknow in 2014. She is an Associate Professor in OB/HRM area at International Institute of Management New Delhi. She received her BTech in Textile Technology from UPTTI Kanpur Uttar Pradesh. She has published her research work in many national and international journals (Scopus and ABDC indexed) and attended various international conferences. She has also written a textbook on *HR Analytics: Theory and Application Techniques* for post-graduate students. She is a certified DiSC trainer created by John Wiley and Sons Inc.

1 Introduction

Global market is changing drastically, and the key driven global market changes include repositioning of production and consumption patterns, new innovative performance, new strategic structure for conducting business and rapid policy changes. In an era of globalisation, firms need to subsume new strategies to manage their intelligence and production process to remain in the competition (Maune, 2014). The survival and success of a firm in an unstable and dynamic environment highly depends on competitiveness (Marín et al. 2014). In such a competitive environment, innovation becomes a major requirement to ameliorate a firm's success and sustainability. Innovativeness is the key factor for achieving long-term goals and objectives of a firm (Onag et al. 2014). It is associated with the firm's research and development (R&D) that gives rise to new innovative products and services, which improve companies' market share and lead to competitive advantages (Armbruster et al. 2008; Jiménez-Jiménez and Sanz-Valle, 2011). Hence, innovation is required to create successful executive ideas within an organisation, which is significantly related to organisational learning (Balachandra and Friar, 1997).

Innovation is an individual and combined learning process that leads to producing new ways to solve problems. The changing business environment has improved organisational capability to evolve and adapt to the change. Organisational learning accelerates the continuous requirement for adaptation and improvisation of firms. Consequently, innovation relies upon the company's capability to learn new knowledge, which is then used for development (Alegre and Chiba, 2008). Organisational learning encourages innovation effectiveness and efficiency (Calantone et al. 2002). It is an idiosyncratic variable that plays an essential role in developing new products and should adapt to the changing environment conditions such as customer's demand, advanced technological development and changing competitive market (Wheelwright and Clark, 1992). Looking from a strategic perspective, organisational learning is considered as a source that helps in attaining possible competitive advantages (Gunsel et al. 2011). At organisational level, the process of learning has some key components for increasing knowledge, which increases the production of new knowledge that contributes to innovation (Kessels, 2001).

Literature on organisational learning discusses the inadequacy and priorities (Easterby-Smith et al. 2000). This organisational learning literature mainly emphasises on strategies to create learning organisations. Organisational learning is a widely accepted concept that it is an essential element for competing in the global market; however, there is still lack of corroboration of research in the literature (Garvin, 1993). There are several studies on the complexity of the organisational learning construction (Leonard-Barton,

1992). Creation of quantitative instrument and organisational learning scale measurement might help in analysing the field; for this reason, the researchers take into account the multidimensionality of the organisational learning (Tohidi et al. 2012). Implementation of organisational learning becomes complicated because of the lack of methodical stratagem when the firm relies only on the literature of learning capability measurement. Organisational learning capability is a multidimensional construct that measures the identified and crucial organisational features and practices to promote and enable organisational learning (Jerez-Gomez et al. 2005).

Organisational learning is complemented by knowledge managemnt. Knowledge management plans, organises, controls and motivates employees, processes and operate the organisation to make sure the knowledge acquired assets are improved and effectively utilised. Organisational learning emphasises on internalising what has been learned into the system of the firm (King, 2009). The learning promotes the capacity to learn, which is the key index for an organisation's effective and potential ability to innovate. If a firm needs to be productive and innovative, the management must embody the organisational essential quality that is oriented for learning. Even, the culture of some firms allows them to decentralise decision making, error tolerance and social relations, which has affected the knowledge and innovation outcome through organisational learning (Chang and Harrington, 2003).

The objective of this research is to understand the linkage and flow among various constructs tusing TISM method. The study will help the reserachers and practitioners to undertsand how organisational learning and knowledge management leads to organisational innovation. Consolidated analysis of literature on organisational learning capability (OLC) has suggested 11 crucial factors: openness to experimentation, risk taking, dialogue, absorptive capacity knowledge, managerial commitment, clarity of mission and vision, innovation, effective transfer and integration of knowledge, organisational learning capability, interaction with external environment and teamwork participation in problem solving and decision making. The main aim of the paper is to evaluate the contribution of OLC, which creates innovative performance that is positively related to competitive advantages. The TISM shows the conceptualisation of innovative performance as a function of organisational learning (Alegre et al. 2006).

2 Literature review

Innovation has become part of a firm's performance and consistency in the rapid changing competitive market and is crucial for bringing evolution (Bueno and Ordonez, 2014; Liao et al, 2017). It consists of new successful implementation of creative ideas within the organisation, which is closely related to organisational learning (Myers and Marquis, 1969). Innovation depends on the firm's capability to learn, which creates new knowledge, transferred and applied into the firm's environment (Amabile et al. 1996; Alegrea and Chiva, 2008)). Innovation permits organisations to synchronise themselves with the changes happening in the outside environment, market and demand uncertainty (Twatu and Gammack, 2006). Production of innovation positively works for long-term company results, which is widely recognised in the market ecosystem. The close correlation of innovation and learning organisation considers the possibility of significant impact of OLC on innovation (Senge, 1990). Organisational learning emphasises the development of standardised models for the evolution of learning environment (Rebelo

and Times, 2011). From a strategic perspective, organisational learning has been a source of heterogeneity among the organisations, which is counted as a possible competitive advantage (Grant, 1996). Hence, organisational learning brings changes in the traditional way of associating with the business management (Lei et al., 1996).

Organisational learning is the process, where the organisation learns, and learning is defined as the change in the organisation's structure that develops and improves performance (Curry and March, 1963; Abdi et al, 2018). Based on this, OLC means the collection of tangible and intangible resources, knowledge and skills that firms use to gain new configurations of competitive economic advantages (Nevies et al. 1995). As a result, OLC has the ability of effective and potential innovation. Firms' ability is to learn through organisational activities by creative ideas and utilisation of knowledge to intensify the competitive advantages, accentuate the importance of learning orientations and link it with innovation (Chiba et al. 2007). For the development of the organisation, learning capability, learning organisation and prescriptive literature concentrate on the growth of the firm's normative strategic structure. Firms' strategic structure focuses on a set of activities that corroborate the learning capability such as experimentation, continuous improvement, teamwork and group decision and observation (Ulrich et al. 1993). To attain knowledge, firms must achieve a equilibrium between internal and external learning that adequately fits resource configuration and strategic objectives (Bierly and Chakraborty, 1996). Internal learning arises when members distribute the generated knowledge among the employees in the internal environment of the firm. It summarises the organisation's culture and management style (Hurly and Hult, 1998). External learning happens when knowledge is gained from outside the firm's environment and transferred throughout the organisation as a result of absorptive capacity where the knowledge is identified, assimilated and exploited (Cohen and Levinthal, 1990).

On the basis of literature review, the problem of implementing organisational learning is lack of measuring tool for organisational learning capability. However, on the basis of conceptual approach, the interpretations describe that it could lead to building organisational innovation (Goh and Richards, 1997). The extant literature has described the organisational learning processes from multiple perspectives. DeGeus's (1988) study suggests that a firm's strategic system and planning process encourage the managers and employees to examine and challenge the commonly accepted assumptions and presumptions as the learning will get difficult if the employees does not expose concealed assumptions and experiments without doing the whole background study to find out the true results; whereas, Stata(1989) interprets that learning capability is only established when the internal procedures are modified according to the changing environment such as reduction in the response time to external factors, using advanced plans and quality improvement as a learning tool.

Other contextual studies describe a set of factors which should be implemented within the firm's internal environment to create a learning organisation. These factors include bringing external people to challenge the assumption and presumption of employees, create special funds and investments and even provide the employees with suitable environment and time to experiment and create, extract and circulate learning (Shaw and Perkins, 1991).

Some firms inaugurate programs that emphasise problem solving, continuous integration of knowledge, constant experimentation and trying innovation and absorbing external information in regular practices. Even the firm's structure promotes egalitarian

culture substantiated by a reward system that encourages the employees to work efficiently and bring creative ideas that could lead to innovation (Leonard-Barton, 1992).

Conceptual studies propose that learning in the organisation occurs at individual, team and systematic levels. All these three levels are interconnected, and any organisation can develop this system to promote learning at every level. Any organisation can generate an extensive view, where organisations acquire and interpret the information from the environment; and transfer it to specific jobs, make strategic alliances with other organisations and implement systems, which retain knowledge. However, the organisation which implemented such strategies and processes concludes that for experimentation and innovation, all the alliances should work on different methods to improve learning capability (Dixon, 1993).

Other contextual papers suggest the requirement to 'unlearn' the old methods and knowledge in order to learn new; it is important to be open for different experiences and acceptance of the failures and learn from them. Orientation to continuous experimentation behaviour, which promotes organisational learning, is essential. To ensure the organisational learning, the organisational strategic structure, plans, processes and programs needs to be flexible and permeable. Moreover, the flexibility will help them to provide timely information, build creative solutions and experiment with rewards (McGill and Slocum, 1993).

To create organisational learning, the organisation should include a strategic absorptive capacity, commitment to continuous experimentation practice and the ability to learn from past mistakes, failures and success. These factors open the path of organisational renewal and development source to gain competitive advantage (Slocum et al. 1994).

Some of the literature suggests the learning organisation includes three stages: knowledge acquisition, knowledge sharing and knowledge utilisation. Based on these three principles, a comprehensive structure is created for organisational learning. This orientation focuses on source of knowledge, openness and continuous experiments. Hence, the firm acquires, shares and utilises attained knowledge in different ways, depending on the coordination of orientation and facilitating factors (Nevis et al. 1995).

Pedler, Boydell and Burgoyne (1989) suggest conditions that individual, team-group and sub-divisional branches exchange and share information on assumption and exchange the feedback on satisfaction to boost learning. The system should provide a friendly and flexible environment to question the operating assumption and seek information from the members and build collective learning. The internal culture and environment of a learning organisation encourages experimentation, learning and development from the successes as well as failures. The conceptual literature provides a compelling list of suggestions to develop learning organisations; and importantly, many similarities exist among the recommended set of t suggestion. However, the recommended sets of suggestions become problematic in practical terms. The company looks to implement the different interventions and guidelines to ensure some degree of accuracy and concordance within the organisation, and in the strategic alliance, which could lead to innovative performance.

It is true that organisational learning is a product of individual and group learning, which accomplishes the organisation's objectives and performance goals and assures management practices and internal environment that could either help or hinder the process (Duncan and Weiss, 1979). Descriptive literature of Garvin (1993) defines the learning organisation as skilled at creating, acquiring and transferring knowledge and

modifying its behaviour to reflect the knowledge. This definition claims that any organisation can actively handle the learning process to ensure that it occurs by design, not by chance. Different firm policies and management practices are responsible for learning organisations that create innovation and bring success. It can be said that firms that have OLC will succeed but firms should continuously have to be involved in the learning process to survive and adapt to changing conditions (Prahlad and Hamel, 1990).

OLC proposes the multidimensional factors that majorly focus on the learning organisation (Hult and Ferrell, 1997). An organisation attains a high degree of learning in each factor, which increases the learning capacity (Slater and Narver, 1994).

2.1 Overviewing literature to find enablers for the firm

Enablers help the firms to step out of their comfort zone and try something new that will be responsible for growth and development. These factors work together to acquire, transform and experiment the gained knowledge to the extent where they create something new. However, there is a procedure based on literature review (Bergeron and Hiller, 2002). Firms interact with external environments to acquire external knowledge and use the maintained relationship with other firms to learn and influence organisational learning by observing others (Bapuji and Crossan, 2004). The attained knowledge and information are transferred and collective inquiries and meetings are done to understand and assume to settle in the already known knowledge (Isaacs, 1993). The members of the firm participate in the decision-making process to increase the employee's involvement and organisational commitment (Cotton et al. 1988). The employees take risks to take the opportunities and experiment on the assumptions and try new ideas to bring out changes, which involve innovation as a final work process (Kouzes and Posner, 2006). Hence, the organisational learning process includes distinctive key factors that consist of acquisition, dissemination and use of knowledge, which is closely related to innovative performance of the firm (Lemon and Sahota, 2004). Conceptually, OLC is a skill that facilitates the organisational learning process: creation, dissemination and use of knowledge that generate innovation, which is needed to implement new ideas, processes or product directly related to survival, growth and development of firm in the competitive market ecosystem (Argote et al. 2003).

Based on these studies, there are total 11 factors responsible for the development of OLC: openness to experimentation, risk taking, dialogue, absorptive capacity knowledge, managerial commitment, clarity of mission and vision, innovation, effective transfer and integration of knowledge, organisational learning capability, interaction with external environment and teamwork participation in problem solving and decision making. These factors are considered as main enablers responsible for innovative performance of a firm. These enablers are then used in the TISM structure to create hierarchy.

2.2 Openness to experimentation

Experimentation is described as an activity in a creative manner and associated with the management of uncertainty, Complex and unsettled challenges are often related to innovation. Experiments are often done to involve new methods for solving complex problems that require the generation of novel and useful solutions (Ford, 2000). Additionally, experiments generate ideas and creative thoughts that involve the evaluation and implementation of new solutions (Mumford et al. 2002). Essential part of

experimentation is that it evaluates ideas that are the progressive refinement of potential ideas for innovation (Barlow, 2000). The work environment plays an important role in affecting employees desire to produce something creative and successful (Amabile et al. 2004). By providing a suitable environment and evaluation, access to resources and information, involvement of employees, engaging in tasks, facilitating idea producing experiments, a firm can build on innovation and translate that into organisational performance. Furthermore, encouraging exploration and intellectual stimulation and providing autonomy among the employees enhances creative efforts (Waldman and Bass, 1991). Thus, the new experiment is generative and facilitates double-loop learning, which needs an environment worthy of openness that produces new ideas and point of views, both internal and external, enabling the employees to constantly renew, widen and improve the knowledge the firm attains (Sinkula, 1994). To create an open environment, there is requirement for commitment towards the firm's cultural and functional diversity as well as the ability to accept all kinds of opinions and experiences to learn from them, ignoring the past learned knowledge and attitude associated with one's beliefs, values, knowledge, and experiences (Slocum, 1994). Therefore, experiment is the involvement of new ideas and suggestions, which are tried out to know how things work and how modification in the process leads to new innovative ideas. These new ideas come from within or outside the organisation, which favours experiments out of curiosity that is the essential part for generating learning capacity, which then becomes a flexible solution to the complex problems based on different methods and procedures. Hence, the experimentation factor requires a culture that assists creativity and readiness to handle risk, support ideas and learn from doing and create new enterprising ability (Naman and Elevin, 1993).

2.3 Risk taking

Risk taking is described as the patience to tolerate the equivocation, uncertainty, mistakes, and errors. The designed environment that allows the employees to absorb the risks and accept the mistakes and failures are generally associated with organisational learning. Opening business opportunities or trying something new in the production remains at a position of risk; this will then result in success or failure. Therefore, acceptance of failure and mistakes is an essential element for effective OLC (Sitkin, 1996). The success of innovation and development depends upon whether the managers can take account of negative effects of team diversity on generating new ideas, by encouraging teams to take risks (Cabrales et al. 2008). The diversity of teams in terms of both experience and education has a huge impact on creativity when there is strong susceptibility to accept risk (Andrew and Smith, 1996). Multifunctional and diverse team in a firm demonstrates the power to take risk as the employees are more motivated to utilise their ideas and thoughts (Sethi et al. 2001). Therefore, the intense interaction works as a positive effect on the fundamental innovativeness. Human resources m management practices are required to create a team by individuals that work to obtain the best results (Cappelli and Crocker-Hefter, 1996). Human resource management (HRM) directly affects the ability of the employees, which influences their knowledge, skills and motivates them to perform according to the expectations (Lepak et al. 2006). On the contrary, employees who are not motivated despite having skills are less productive. Therefore, offering incentives and reward-based projects motivates the employees to perform better and take risk to obtain something innovative that positively affects the

growth of employees as well as the organisation. Hence, taking risk in the organisation works as a key factor to promote organisational learning capability (Kim and Oh, 2002).

2.4 Dialogue

Dialogue is defined as a sustained accumulated inquiry into the procedure, assumptions and everyday certainties that is required for the development of innovation through learning orientation. It is also seen as an operation for building up a mutual understanding and questions the strategic structure to see the hidden meanings and communicating it within the organisation (Schein 1993). It is the exchange of thoughts and ideas. In this concept of dialogue, all the involved employees of an organisation act as givers and takers. It can be carried out within the organisation at different levels in which employees are usually influenced or try to influence others. In a session of dialogue, the process generally includes the purpose of expressing the planning and processes and information on certain core problems such as lack of resources, lack of R&D, and limited interaction, which impact the learning process of the organisation. It deals with the development cooperation that addresses the policies and opportunities for development and innovation by learning from each other. Communicating dialogue among the employees of the firm on strategic work integrate the involvement of better planning and implementation of the learnt knowledge. Dialogue and communication should require a leader who devotes time to perceive learning and benefit from the debates and discussion happening in the organisation over the improvement of the production. Dialogue and communication improvise the negotiating techniques. The purpose of the working group and communication is to make efforts for emerging new strategic approaches and increase the capacity to succeed in the tasks. However, the quality of the log depends largely on the personal characteristic and knowledge an employee attains. The purpose of dialogue is to make the communication easy, transferring of knowledge and more effective production procedure. The purpose is achieved by dialogue in two ways: by increasing coordination and adjustment within the firm and the other is by promoting one's own thought. Dialogue is also used as the concept where employees use it to spread awareness of the highly risky factors that could deprive the company's aim and motivations. However, the dialogue technique makes adjustment and strengthens the relationship among the members of the organisation that works in coordination and learns about new strategies to develop innovation (Black and Hunter, 2009).

2.5 Absorptive capacity knowledge

The prime actor in the process of organisation learning is knowledge. Knowledge is being acquired by external sources and processed and modified which is then distributed across the organisation. Members of the organisation communicate on the acquired knowledge and provide validity if agreed and then integrate into strategic management. Hence, organisation learning is the product of absorptive capacity. It increases the learning capability of a firm and develops problem solving skills. Learning capability is associated with assimilation of knowledge, whereas problem solving skills are associated with the creation of new knowledge. Absorptive capacity consists of two major elements: prior knowledge base and intensity of effort. Prior knowledge bases contain individual knowledge available within a firm. Accumulation of internal knowledge increases the capability to make sense of the scattered knowledge and produce new knowledge from it.

It is generally assessed in relation to task difficulty (Kim and Kogut, 1995), whereas intensity of effort is described as the efforts and energy needed by an organisation to solve the problems. Introduction of external knowledge is useless if the employee's efforts remain insufficient to transfer and internalise it in the organisation. Therefore, problem solving skills are accomplished through practicing trails (Harlow, 1959). Hence, substantial time and effort is needed to address the problems and solve the complexities; and therefore, such intensity among the members facilitates knowledge conversion, transformation and creation of learning capability through knowledge. When the factors, prior knowledge base and intensity of effort are high, the absorptive capacity is also high. It can identify, assimilate, transform valuable external knowledge to communicate over the problem and integrate later in the system, which enhances the chances of creating innovation ideas and products. Absorptive capacity is a proactive factor which makes the firm capable of competition with other organisations in the market economic system. It affects the learning ability and promotes an adequate environment in the competition (Tsai, 2001). Hence, absorptive capacity knowledge is highly efficient in transforming raw information into realised knowledge (Jansen et al. 2005).

2.6 Managerial commitment

Management adequacy is required to obtain relevant learning capability. Developing a managerial culture in the firm promotes the acquisition, creation and transfer of knowledge in a fundamental manner (Nonaka and Takeuchi, 1996). Management administrates the strategic view of learning, making the learning capability a central element and a valuable component that could influence the long-term impact. Management should take account of whether the employees are taking learning seriously and actively involving in the firm's activities to achieve success (Slender, 1996). Most importantly, the management is responsible for driving the knowledge in the process of change and designing organisational structure which is capable of regeneration and focuses on the new challenges (Lei et al. 1999). Adequate management abolishes the old beliefs, strategies and methods that had effective relevance in the past but are now emerging as obstacles to the creation of learning capability. Managerial commitment is commitment to innovation where the resources are allocated and activities leading to development of new products, technologies and making consistent progress with the changing market needs and competency. Therefore, the commitment facilitates the coherent restructuring of corporate assets results in increase in firms' competitiveness (Jensen, 1988). Internal development is perceived by the managers, which shows a positive impact on the organisational structure that gains learning capability (Balakrishnan, 1988). The managerial process absorbs a significant amount of energy and time, which diverts the attention from remote production methods to new efficient methods of creative innovation by learning from external resources. Efforts are needed to prepare an extensive active strategy to conduct group coordination and modification of knowledge, which accelerate the learning process (Hitt et al., 1990). In huge organisations, the managers search for ways to exert and maintain organisational control over the diverse units of the firm: strategic, financial and formal behavioural control. This control is used at different degrees and levels within the multi-divisional structure, which is used by firms for growth. Learning organisational control affects the managerial commitment to innovation and continuous learning for better firm performance (Baysinger and Hoskisson, 1989). Therefore, the external learnt knowledge is used to

create a proactive functioning structure, which emphasises the learning capability of a firm to learn, adapt and change to build a strong place in a competitive market ecosystem (Hoskisson and Hitt, 1988).

2.7 Clarity of mission and vision

An organisation and its every unit should be clear about the purpose and mission. Employees of the firm need to understand the purpose of the work and how it works in which the members of the firm are contributing to attain the result of the mission. The organisations need to promote the commitment towards the mission and goals. Some conceptual literature argues that building shared vision for future-oriented purposes creates tightness in employees, which leads them to learn (Senge, 1990). The mutual understanding of the employees sees the gap between vision and the current conditions and can work on betterment to cover the gaps. Clear mission and vision are viewed as key elements to enhance the learning capability (Pandey and Rainey, 2006). Clarifying the aim of the organisation benefits the community (Wright et al. 2012), as it raises employees' awareness of the organisational values and aims and strengthens the relationship between the member's value and ideology (Paarlberg and Lavigna, 2010). This clarification maximises the organisation's impact on learning and creativity (Vandenabeele, 2014). It gives potential to the mission-oriented employees to stimulate passion, dedication and diligence (Goodsell, 2010). To enhance the mission-committed organisation, goal-oriented dialogue communication, ACAP knowledge and motivate cultural environment are required, where managers can pull to cultivate employees (Caillier, 2015). However, the scant knowledge and insufficient attention leads to unsatisfactory results (Wright and Pandey, 2011). Organisations aim for clarity of mission and vision among the employees to strengthen relationship, encourage communication, share ideologies and clear doubts regarding the new production and methods which accelerate learning within the organisation. On the basis of this, organisational mission becomes effective when the motivation for desirable outcome is expected to be high. To make it work, rewards make sense of the accomplishment derived from the organisation's improved mission and vision to the employees who seem to be engaged and find it attractive and worthwhile in discussing and learning from the mission. Therefore, a positive relationship exists between the mission knowledge and employee's attitude (Wright et al. 2012). Hence, the link between the goal clarity and mission indicates that employees will get motivated to perform well when they have a clear understanding of the organisational goals and find them challenging (Boswell, 2006). Transparency among the employees is an essential element of clearance of goals and motives.

2.8 Innovation

Conceptually, extensive research on the sources promotes innovation (Mueller, 1962). The base requirement for innovation is the borrowing of knowledge and resources that are used to learn and inventions take place (Johnston and Gibbons, 1975). The importance of innovation performance of information originates from the internal units of the firm such as marketing and manufacturing (Mansfield, 1988). The ability to evaluate and utilise the outside knowledge to learn is usually a function of the level of prior knowledge. The prior knowledge already includes basic skills and shared knowledge, the

new learnt knowledge and technologies emerge to invent (Cohen and Levinthal, 1990). Innovation is possible to balance the pursuit of exploitation, and exploration by learning the behavioural context, which is associated with the interaction of straighten, discipline, support and trust (Gibson and Birkinshaw, 2004). The learning capability facilitates the learning and knowledge transfer proposed to be important for innovation (Teece and Pisano, 1994). The learning capability is a combination of practices, which promotes intraorganisational learning among the members, partnerships that enable to spread the learning and open culture within the organisation, which accelerate and maintain sharing of new knowledge (Mishra and Shah, 2009). The gained new knowledge is combined, and the invention ambidexterity effect is examined through the learning capability. The learnt knowledge from combining resources and capabilities attains potential to provide the firm with sustainable competitive advantages. These resources and knowledge are converted into final innovation products and services to a wide range of new assets and bonding, new technology, new management strategic structure, incentives, and trust (Amit and Schoemaker, 1993). Thus, the learning capability enables the firm to perform the procedure, which provides maximum advantages (Stalk et al. 1992). Hence, knowledge is viewed as a resource which is the base element of an organisation's ability to generate innovation through strategic thinking and central in the development of new innovation performance where the organisation culture heightens the risk-taking experiments, learning and search for opportunities and respect among the employees (Smriti et al, 2021). Innovation consists of two different dimensions: innovation efficacy and innovation efficiency. Innovation efficiency reflects the degree of success of an innovation, whereas innovation efficiency reflects the efforts made to achieve the degree of success (Barczak, 1995).

2.9 Effective transfer and integration of knowledge

This enabler is closely linked with the processes, which occur simultaneously rather than successively. Internal transfer and integration of knowledge efficiently process in the two existing ways: Absorptive capacity and lack of internal barriers that hinder the transfer of knowledge and practices within the organisation (Szulanski, 1996). Transfer is seen as the spread of acquired knowledge at individual level in every unit of a firm. Majorly, this process happens through conversations and interaction among the employees (Brown and Duguid, 1991). Hence, the fluidity of communication, dialogue, debate and discussion are the main elements of the transfer of knowledge (Nicolini and Meznar, 1995). Fluid communication refers to the existence of nibble information systems that integrate knowledge with accuracy. For the transfer and integration of knowledge, the ideal process is to have dialogue sessions, debates, teamwork, and personal meetings, where an open platform is given to the employees to share new ideas and thoughts (Nonaka, 1994). The main objective of the sessions is to develop organisational learning capability, which focuses on multidiscipline and multifunctional teamwork. In such an environment, the knowledge is transferred across the organisation which brings great opportunities for employees to learn something new from each other and then the learned knowledge is integrated into the firms of already known knowledge and in the organisational strategy structure. Finally, the new learnt knowledge gains potential to create an innovation which fits the demand of the market. The integration is used for collective corpus of knowledge embedded in the organisation culture, work process and organisation's memory to utilise it for future purposes (Huber, 1991). Hence, with the knowledge, we cover the gap of

lacking measures to achieve innovation. Constant learning is an essential component for future growth and development (Levitt and March, 1988). Therefore, the effective transfer and integration of knowledge within the organisation articulates the organisational learning capacity and leads to innovative performance (Ha & Lo, 2018).

2.10 Organisational learning capability

Organisational learning capability is a dynamic process based on knowledge, which interprets the different levels of actions, individual and in groups and at organisational level. The process includes the knowledge acquisition of individuals and transfer within the firm, exchange, and integration of the knowledge until useful knowledge is created and embedded in the organisational culture and process (Simon, 1991). The OLC process consists of three main aspects. The first aspect is knowledge acquisition and creation; dissemination integration is key strategic factor that gives rise to the idea that organisational learning is of collective nature (Shrivastava, 1983). The second is the creation of new knowledge by acquired information while theemphasis is on the constant internal change which works as a cognitive behaviour (Fio and Kyle, 1985). The third allows constant improvement of internal change that leads to betterment of firms and even allows to achieve competitive advantages based on distinguished learning capabilities (Brenneman et al. 1998). In other words, organisational learning is the ability to create, acquire, transfer, integrate and modify knowledge that affects performance. The organisational management unit supports and is involved in every process and every individual contributes collectively to gain satisfactory results. The learning and collective process is to be transferred and integrated, guaranteeing the organisations continuous learning. Adopting the change happens through a learning process, establishing a framework of heterogeneity among firms responding to the competitive environment. Hence, the firm must go further to adaptive learning and concentrate on the level of learning, which necessarily makes more innovative and flexible changes; and therefore, the learning requires open mentality towards new ideas and great deal of risk taking to experiment. The objective of this is to remain competitive and survive. Even through learning, the organisation avoids past mistakes, adapts to environment constraints, and preserves crucial knowledge (Dixon, 1993).

2.11 Interaction with external environment

Firm's interaction with the external environment is defined as the extension of the relationship that the firm attains in the current environment. Environment plays an essential role in organisational learning. Relationship and interconnection with the environment are important as the organisation aims to simultaneously evolve with the rapid changing market system. Therefore, the survival and success of strategic learning and innovation depends upon the ability to adapt to the changing environment. It becomes necessary for every firm to understand and examine the surrounding environment and changes that occur in the market. Organisations which are well-aware of their environment and ready to accept and adapt to the changes are most likely to survive in the long run, as the firms need to learn the patterns of changes and acquire knowledge from the strategic alliances which is beneficial for the methods and implementation of organisational strategic structure. Organisation acquires knowledge from environmental inspection and observation. It supervises the adequate environment condition that

increases the chances of opportunities and identifies the environmental threats that may deprive the environment of environmental performance. By observing the environmental condition, organisations can predict the outcomes of the different events, assumptions, discussions and learn from them or might use it for further implementation. The observation learning can detect the crisis of the firm, and through the supervision, the organisation can change their plans according to time by learning about the environment and even extract the convenient information that reduces huge risks and crises that might become destructive for the company. Therefore, learning about the environment can accelerate the knowledge and resources that are used to expand the capabilities (Kyrgidou and Spyropoulou, 2013). The recognition of environmental knowledge and past experience can lead to learning and increases the ACAP in order to transfer the knowledge further in the organisation.

2.12 Teamwork participation in problem solving and decision making

Individual units of the organisation need to help each other to accomplish organisational objectives. The organisational strategic structure and system need to escalate encouraging teamwork and group discussions that assist problem solving methods by the employees and reduce the dependence level on codified technical resources and upper management. Such teamwork should have the potential to work cross-functionally. By working in groups and teams, the transfer of knowledge becomes easier and increases the understanding of other individuals' thoughts, ideologies and how they work in different situations with different positions. However, high performance teamwork is difficult to achieve (Anderson and Salgado, 2009). Therefore, the team must attain maturity, which is utilised to increase the capable work unit over time and the team must include the hyperactive members of the organisation for continuous development and growth (Sundstrom et al. 1990). Teams sharing information across the organisation to solve complex problems, and to innovate, should recognise the diversity of team members (Edmondson and Reynolds, 2016). Yet the organisational team manages the issues actively (Ancona and Caldwell, 1992) as they have mutual strength and knowledge that support to solve the targeted problem with customised solutions that create innovative ideas.

To interpret the enablers and values on the OLC, TISM methodology is used to position these factors at a hierarchical level; and relationships among these Enablers are demonstrated to better understand the OLC working in innovative Performance.

3 Methodology

TISM methodology has been used to find the hierarchy of the OLC's enablers and relationship among them that would lead to innovation. The main purpose of the literature review is to scrutinise the enablers of OLC and establish its relationship with the innovation performance. Thus, the modelling is applied to interpret the result to know how the OLC is generated within the organisation and how its factors work together in a syncretic way to reach the result. TISM is an innovative augmentation of interpretive structural modelling that is implemented to recognise and identify a hierarchical structure among the sets of enablers of interest (Sushil, 2012). It is associated with the

interpretation of enablers by a systematic algorithm of graph theory. It helps to simplify the complex structure by supplementing a graph by using the sets of OLC enablers, which help in the conversion of a segmented framework into a systematic structure that becomes easy to understand and has some useful interpretations. It also assists recognition of leads and lags of the OLC. The TISM methodology majorly answers the questions of 'what', 'why' and 'how' on the given issue (Ruben and Varthanan, 2019).

In order to create TISM methodology, the first step is to conduct a literature review on the given topic 'organisational learning capability'. It is the primary step to recognise the major enablers from the literature review. After identifying the enablers, the factors are codified. There are total 11 factors of OLC that are identified on the basis of literature review (Sandbhor and Botre, 2014).

These factors are being codified as E1, E2, E3…E11 as follows:

E1 openness to experimentation

E2 risk taking

E3 dialogue

E4 absorptive capacity knowledge

E5 managerial commitment

E6 clarity of mission and vision

E7 innovation

E8 effective transfer and integration of knowledge

E9 organisational learning capability

E10 interaction with external environment

E11 teamwork participation in problem solving and decision making.

The second step is to make a table model of reachability matrix, in which level partition is done by placing the enablers' label voice. The relationship among the factors is examined through a binary matrix. Binary metrics represent the enablers in rows and columns. Binary matrix is carried out by self-interaction between the two enablers, which are codified either as '0' or as '1'. Code '1' is associated when an element gets affected with another element positively, on the contrary, the code '0'' is given when elements do not get affected by any other elements (Vihar and Rao, 2016).

The binary matrix and its binary codes '1' and '0' recognise the interrelationship among the factors. Based on the binary matrix, level partition is done. In level partition, the elements are out at the position of reachability set (RS) and antecedent set (AS). The RS includes all the '1' in a row and on the other side, AS includes all the '1', which are in the columns. In the level partition, cross-section between the RS and AS is being held to identify the common elements, which will come at the highest level.

In Table 2, Enabler 7 (E7) comes at the highest level in the hierarchical structure, Level 1. In the reachability set intersection with the Antecedent set, the intersection result remains the same when the reachability set is enabler 7. Hence, enabler 7 is at top of the hierarchy, that is, 'innovation'.

In the next step, enabler 7 is removed from the level partition and rest of the factors are intersected again to find the second-level hierarchy.

Table 1 Binary Matrix of intersectional relationship among the enablers

Codes	*E1*	*E2*	*E3*	*E4*	*E5*	*E6*	*E7*	*E8*	*E9*	*E10*	*E11*
E1	1	1	0	0	0	0	1	0	1	0	0
E2	1	1	0	0	0	0	1	0	1	0	0
E3	1	1	1	0	1	1	1	1	1	0	1
E4	1	1	1	1	1	1	1	1	1	0	1
E5	1	1	0	0	1	0	1	1	1	0	1
E6	1	1	1	0	1	1	1	1	1	0	1
E7	0	0	0	0	0	0	1	0	0	0	0
E8	1	1	0	0	0	0	1	1	1	0	1
E9	1	1	0	0	0	0	1	0	1	0	0
E10	1	1	1	1	1	1	1	1	1	1	1
E11	1	1	0	0	0	0	1	1	1	0	1

Table 2 Level partition examining the hierarchy among the enablers

Codes	*Reachability set*	*Antecedent set*	*Intersection*	*Level*
E1	1,2,7,9	1,2,3,4,5,6,8,9,10,11	1,2,9	
E2	1,2,7,8	1,2,3,4,5,6,8,9,10,11	1,2,8	
E3	1,2,3,5,6,7,8,9,11	3,4,6,10	3,6	
E4	1,2,3,4,5,6,7,8,9,11	4,10	4	
E5	1,2,5,7,8,9,11	3,4,5,6,10	5	
E6	1,2,3,5,6,7,8,9,11	3,4,6,10	3,6	
E7	7	1,2,3,4,5,6,7,8,9,10,11	7	1
E8	1,2,7,8,9,11	3,4,5,6,8,10,11	8,11	
E9	1,2,7,9	1,2,3,4,5,6,8,9,10,11	1,2,9	
E10	1,2,3,4,5,6,7,8,9,10	10	10	
E11	1,2,7,8,9,11	3,4,5,6,8,10,11	8,11	

Table 3 Second level partition examining the hierarchy between enablers

Codes	*Reachability set*	*Antecedent set*	*Intersection*	*Level*
E1	1,2,9	1,2,3,4,5,6,8,9,10,11	1,2,9	2
E2	1,2,8	1,2,3,4,5,6,8,9,11	1,2,8	2
E3	1,2,3,5,6,8,9,11	3,4,6,10	3,6	
E4	1,2,3,5,6,8,9,11	4,10	4	
E5	1,2,5,8,9,11	3,4,5,6,10	5	
E6	1,2,3,5,68,9,11	3,4,6,10	3,6	
E8	1,2,8,9,11	3,4,5,6,8,10,11	8,11	
E9	1,2,9	1,2,3,4,5,6,8,9,10,11	1,2,9	2
E10	1,2,3,4,5,6,8,9,10,11	10	10	
E11	1,2,8,9,11	3,4,5,6,8,10,11	8,11	

Enablers 1, 2 and 9 are at second-level hierarchy, that includes 'openness to experimentation', 'risk taking' and 'organisational learning capability'.

Table 4 Third-level partition examining the hierarchy between the enablers

Codes	*Reachability set*	*Antecedent set*	*Intersection*	*Level*
E3	3,5,6,8,11	3,4,6,10	3,6	
E4	3,4,5,6,8,11	4,10	4	
E5	5,8,11	3,4,5,6,10	5	
E6	3,5,6,8,11	3,4,6,10	3,6	
E8	8,11	3,4,5,6,8,10,11	8,11	3
E10	3,4,5,6,8,10,11	10	10	
E11	8,11	3,4,5,6,8,10,11	8,11	3

In Table 4, enablers 8 and 11 are at third-level hierarchy. The factors include 'effective transfer and integration of knowledge' and 'teamwork participation in problem solving and decision making'.

Table 5 Fourth-level partition examining the hierarchy between factors

Codes	*Reachability set*	*Antecedent set*	*Intersection*	*Level*
E3	3,5,6	3,4,6,10	3,6	
E4	3,4,5,6	4,10	4	
E5	5	3,4,5,6,10	5	4
E6	3,5,6	3,4,6,10	3,6	
E10	3,4,5,6,10	10	10	

Table 6 Fifth-level partition examining the hierarchy between enablers

Codes	*Reachability set*	*Antecedent set*	*Intersection*	*Level*
E3	3,6	3,4,6,10	3,6	5
E4	3,4,6	4,10	4	
E6	3,6	3,4,6,10	3,6	5
E10	3,4,6,10	10	10	

Table 7 Sixth-level partition examining the hierarchy between the enablers

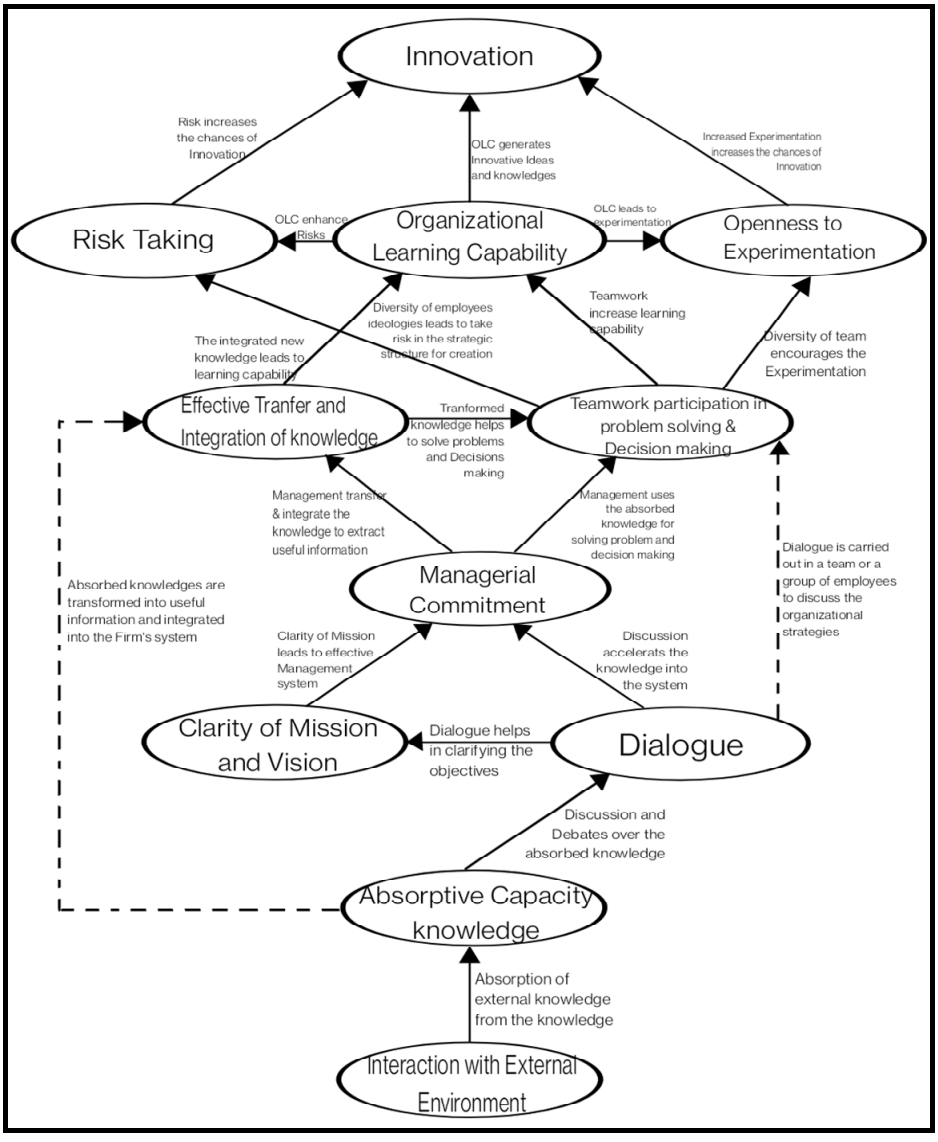
Codes	*Reachability set*	*Antecedent set*	*Intersection*	*Level*
E4	4	4,10	4	6
E10	4,10	10	10	

Table 8 Seventh-level partition examining the hierarchy between enablers

Codes	*Reachability set*	*Antecedent set*	*Intersection*	*Level*
E10	10	10	10	7

In Table 5, Enablers 5 (E5) are at fourth-level hierarchy, 'managerial commitment'; whereas in Table 6, enablers 6(E6) and enabler 3(E3) are at the fifth-level hierarchy, that is, 'clarity of mission and vision' and 'dialogue'.

Figure 1 Digraph representation of 'OLC' showing hierarchy among the enablers



In Table 7 and Table 8, enabler 4 (E4) and enabler 10 (E10) are at sixth and seventh level hierarchy, that is, 'absorptive capacity knowledge' and 'Interaction with External Environment'. These hierarchical enablers are arranged according to the levels graphically and direct links are connected as per the relationship. A digraph demonstrates the step-by-step hierarchical relationship from the knowledge base (Figure 1).

MICMAC analysis of the TISM methodology shows that the relationship is associated with 1 and 0, though the strength and bond of the relationship between the two factors remains blurred. The relationship among the two factors needs to be identified to know whether it could be weak, very weak, strong, very strong or no relationship exists. The limitation of TISM methodology is addressed by matriced impacts crosses

multiplication applique and classmate (MICMAC) analysis which elaborates the strength of the relationship among the enablers. The use of MICMAC is beneficial to identify the drive and Dependence power of the OLC enablers. However, the relationship among the factors is not always equal (Shibin et al., 2016).

Figure 2 Diagram representation of MICMAC analysis (see online version for colours)

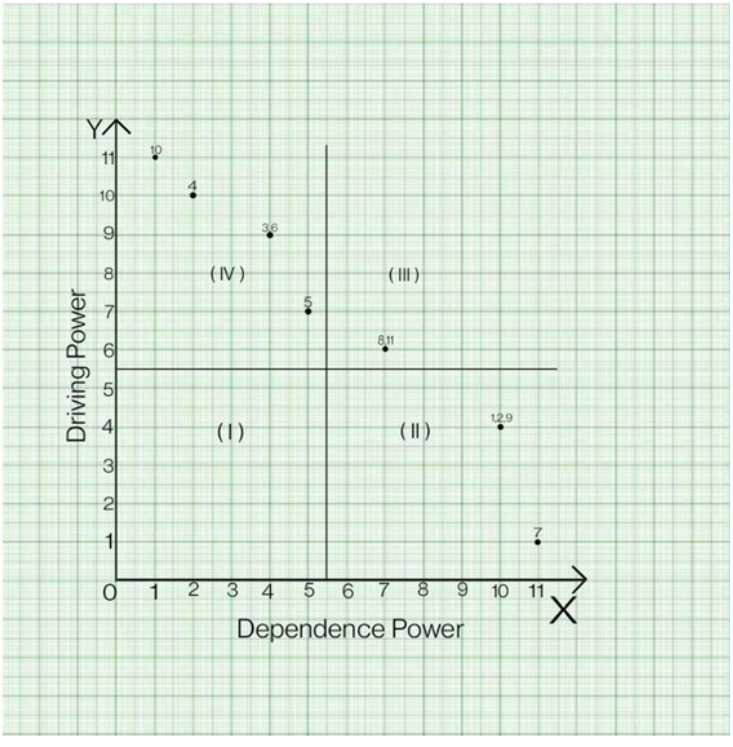


Table 9 Binary matrix calculating driving power and dependence power

Codes	*E1*	*E2*	*E3*	*E4*	*E5*	*E6*	*E7*	*E8*	*E9*	*E10*	*E11*	*Sum*
E1	1	1	0	0	0	0	1	0	1	0	0	4
E2	1	1	0	0	0	0	1	0	1	0	0	4
E3	1	1	1	0	1	1	1	1	1	0	1	9
E4	1	1	1	1	1	1	1	1	1	0	1	10
E5	1	1	0	0	1	0	1	1	1	0	1	7
E6	1	1	1	0	1	1	1	1	1	0	1	9
E7	0	0	0	0	0	0	1	0	0	0	0	1
E8	1	1	0	0	0	0	1	1	1	0	1	6
E9	1	1	0	0	0	0	1	0	1	0	0	4
E10	1	1	1	1	1	1	1	1	1	1	1	11
E11	1	1	0	0	0	0	1	1	1	0	1	6
Sum	10	10	4	2	5	4	11	7	10	1	7	

The MICMAC analysis interprets the strength of the relationship among the enablers of OLC that are responsible for creating Innovation performance. The analysis elaborates the drive and dependence power of the enablers that lead to the invention of innovation through the learning process.

Sum of the binary matrix of enablers in rows determines the driving power, whereas the sum of the binary matrix of enablers in the columns identifies the dependence power (Table 9). The diagram evaluates the strength of the relationship among the OLC enablers, which affects the innovative performance of the firm. Based on Table 9, MICMAC analysis is created on a chart (Figure 2).

4 Result and discussion

This literature review talks about the OLC, which is an essential factor for innovation and progress. In the rapid changing market environment, Innovation seems to be an element, which provides a sustainable environment and advantages in the Competitive environment of a cut-throat market (Kiron and Kannan, 2018). The environment keeps changing and influencing the market strategies. The changes involve factors like customer's needs, priorities, demand, and technical advancement and so on. These factors play a significant role in the dynamic business world, leading to change in business policies, so that companies could survive in the market. To do so, the organisations need to keep track of the market conversions; keeping account of the environmental market change makes the firm more interactive with the external environment. To survive in the fast-changing competitive market, firms need to find new ways to innovate. The process starts with the interaction with the external environment. The exposure to the external environment helps the organisation acquire the collective knowledge that is later utilised to generate innovative ideas. Interaction with the environment is also important to keep pace with the other organisations and observe and learn from their success and mistakes. The learnt knowledge is then absorbed and adopted in the internal environment. The absorptive capacity knowledge is unique and different from the already known information. The organisation refines the abstract, vague knowledge and absorbs only meaningful and useful information that can be used further for transfer and integration of knowledge. The useful knowledge is processed through the dialogue and discussion sessions where the employees share their thoughts and ideas and communicate regarding the knowledge that has been shared. This session provides a clear vision to the employees regarding the objectives of adopting new knowledge. It clears the doubts of the employees regarding new methods, procedures, technologies, and new ways of utilising knowledge and resources. However, the new refined knowledge with an objective is to be internalised in the management system where an adequate managerial strategic structure processes the gained knowledge and learns from it and analyses its advantages and disadvantages. For the process of conversion of knowledge to learning capability, the management system must be efficient and enable good environment. It develops an organisational culture that promotes the creation of Innovation through the learnt knowledge in a fundamental manner. The management influences the learning capability making it a central factor to achieve a successful result. The management also aims to coordinate the organisational employees and their work. Hence, the Management department of a firm must take managerial commitment and seek new ways to make the firm more productive and creative to produce innovative performance. For such

procedure, the management effectively transfers and integrates the newly gained knowledge to utilise it in the creative ideas. The firm internalises the new knowledge where the employees collectively integrate the knowledge in a way, so it could bring out something new and innovative, that enhances the development and growth in the competitive market and accelerates the competitive advantages. The team of employees within the organisation participates in understanding the new knowledge to learn it and increase the effectiveness of the firm. Teams and groups work together to solve the problem and barriers that come in the path of innovative production and learn from its mistakes and failures. Importantly, the team cumulatively take decisions that better suit the organisations according to its requirements. The team conducts dialogue sessions where they also discuss the threats and risks and learn how to solve them. Therefore, the effective transfer and integration of knowledge and teamwork participation produces the organisational learning capability, where learning is a major factor that brings new knowledge to trying out new things. The teamwork clears the path to increase OLC, take risks and experiments. The OLC encourages the organisation to take risks as it has huge impact on the chances to create something innovative and openness to experiment provides the environment to try new ideas that could lead to innovation. Hence, risk-taking and openness to experimentation have huge probability that something innovative can be created that could widen the development and growth of the organisation in the competitive market system.

If we see from the MICMAC methodology, factors of the OLC for improving innovation in the long-run market economic system are being selected based on literature review. The relationship between these enablers elaborates the driving and dependence power using MICMAC analysis. It accommodates a representation of the relative importance and interdependence among the enablers (Dewangon et al. 2015). The results help to understand the linkage among the constructs and quadrant structure helps to understand the strength of relationship.

The strength of the relationship is determined as follows:

- *First quadrant*: The first quadrant is called autonomous quadrant. Enablers settling in this quadrant do not have much influence on the procedure. Based on MICMAC analysis, in Figure 2, no factors stand in the autonomous quadrant. Hence, in the OLC, the absence of the enablers in the first quadrant demonstrates that all the elements are significantly present in the process. Apparently, position of all the 11 enablers determines that all of them play an essential role in the creation of Innovation through OLC.

- *Second quadrant*: The second quadrant is called dependence quadrant, which has low driving and high dependence power. On the basis of this, a total of four enablers stands in this quadrant. ‘Openness to experimentation’(E1), ‘risk taking’(E2) and ‘organisational learning capability’(E9) Enablers are indicated as independent and have strong driving power (4) but weak dependence power (10) and these enablers are at second level in the TISM hierarchical structure (Figure 1). Openness to Experimentation consists of changes to produce something new by refining potential ideas and thoughts and innovating something that fits with the Competitive situation to gain advantage, whereas Risk provides the environment to move forward to survive and accept failure and learn from it. Organisational learning capability accelerates both the above factors through learning capability to create Innovation. ‘Innovation’(E7) has weak driving power (1) and strong dependence power (11),

which is placed at the top of the hierarchical structure. Innovation is important and final res' [ult of the OLC in the market Environment to achieve competitive advantages and improve development of the firm and growth further.

- Third quadrant: The third quadrant is known as linkage quadrant. The factors which come under this Quadrant have high driving power and high dependence power. There are only two enablers that fall under this category: 'Effective transfer and integration of knowledge' (E8) and 'Teamwork participation in problem solving and decision making' (E11). Both the factors work with the acquired knowledge, learn it and internalise it for organisational use and shape it according to the firm's requirement to achieve innovation; and teamwork makes it easier to solve problems and make decisions collectively. These factors have high driving power (6) and high dependence power (7). Both enablers occur at the third-level hierarchy in the TISM Structure.
- *Fourth quadrant*: This is called independent quadrant, which attains strong driving power, but weak dependence power. There are totally five enablers in this quadrant. 'Managerial commitment'(E5) has strong driving power (7) and weak dependence power (5). Managerial commitment is responsible for all the planning and structure in the organisation taking place for the creation of Innovation. It comes at the Fourth level hierarchy in the TISM Structure. Similarly, 'Dialogue' (E3) and 'Clarity of Mission and Vision' (E6) have strong driving power (9) but weak dependence power (4) and come at the fifth level of hierarchy in the TISM Structure. Both the enablers are related to the communication and sharing of new thoughts and ideas. These new thoughts and ideas are the base requirement for the Innovation.
    a 'Absorptive capacity knowledge'(E4) is independent and has strong driving power (10) and weak dependence power (2). This factor comes at the six hierarchical level and is important for absorbing the new external knowledge, which is then processed and refined to find useful information.
    b 'Interaction with external environment' (E10) is an essential factor to establish the base of the OLC hierarchical structure to enhance the firm's Innovation to achieve Competitive advantages. This Enabler has strong driving power (11) but weakest dependence power (1). This Enabler is placed at the bottom of the TISM hierarchical structure. The organisation must keep track of the changing environmental conditions of the market and observe the activities of other firms to learn from their success and failures and implement the learnt knowledge with the Organisation to achieve innovation.

5 Conclusions

The concept of organisational learning has an essential part to play in the current scenario as the organisational life now has shorter product life cycle spans, huge major global competition, increase in diversity and constant requirement to produce more with limited resources. In such a competitive environment, fast learners have their own distinct advantage as they learn and find ways to improve their work processes and will achieve success and development before their competitor do. The managers approach systematically by focusing on specific procedures and design it according to the

organisational needs, which enhance the ability to learn. However, the organisational learning capability is not something which can be achieved overnight. It involves multidimensional steps like knowledge acquisition, knowledge sharing, utilisation and creation of new thoughts. It deals with the changes and ability to adapt to changes and challenges. Learning is the foundation base of a bold and powerful organisation that brings changes within itself to improve performance in the long run. To create something new, the organisations must take risks and experiment and learn from their mistakes. The employees create bonds and commitments to learn from each other and use the accumulated knowledge for gaining advantages. It is important as it increases job satisfaction, lowers turnover rates, and increases efficiency and adaptability. The technologies keep changing and evolve with the current environment, which is necessary. For example, social media like Facebook and Twitter updates new features and policies to keep up with the users' needs. The organisation uses such media accounts to share information to update the members and keep them engaged to learn about new updates. Years ago, online debates did not exist and now debates and discussions on politics and polarising issues are held online. Also, organisations get attention by taking stand on issues and for criticising the debates and arguments.

In a nutshell, organisations need to work as open systems where it interacts with the external world in a continuous manner and utilises the absorptive capacity of the organisational members. it not only helps the members to have an open dialogue but also helps to revisit its long-term vision and mission. The dialogue also helps the employees to be convinced about the absorbed knowledge and critically evaluate by the community which helps to develop the buy in of managers and translates into managerial commitment. The commitment ensures the team participation and effective transfer of knowledge. Moreover, that further leads to organisational capability, Risk taking tendencies and employees openness to experiments. OLC and employee's openness collectively leads to innovative performance. This study has highlighted the interlinage of innovation through OLS and knowledge transfer. Hence, the organisations need to have a continuous learning process to adapt to the changing environment and evolve with the changing world, getting prepared for the future advancement and modification that will help the organisation to agitate in the rapidly changing competitive environment. Organisations who will keep pace gain success and those who fail to do so are left behind.

References

Abdi, K., Mardani, A., Senin, A.A., Tupenaite, L., Naimaviciene, J., Kanapeckiene, L. and Kutut, V. (2018) 'The effect of knowledge management, organizational culture and organizational learning on innovation in automotive industry', *Journal of Business Economics and Management*, Vol. 19, No. 1, pp.1–19.

Alegre, J. and Chiva, R. (2008) 'Assessing the impact of organizational Learning capability on product innovation performance: An empirical test', *Technovation*, Vol. 28, No. 6, pp.315–326.

Alegre, J., Lapiedra, R. and Chiva, R. (2006) 'A measurement scale for product innovation performance', *European Journal of Innovation Management*, Vol. 9, No. 4, pp.333–346.

Amabile, T., Conti, R., Coon, H., Lazenby, J. and Herron, M. (1996) 'Assessing the work environment for creativity', *Academy of Management Journal*, Vol. 39, No. 5, pp.1154–1184.

Amabile, T.M., Schatzel, E, Moneta, G. and Kramer, S. (2004) 'Assessing the work environment for creativity: perceived leader support', *The Leadership Quarterly*, Vol. 5, No. 1, pp.5–32.

Amit, R. and Schoemaker, P.J.H (1993) 'Strategic assets and organizational rent', *Strategic Management Journal*, Vol. 14, No.1, pp.33–46.

Ancona, D. G. and Caldwell, D. F. (1992) 'Demography and design: predictors of new product team performance', *Organization Science*, Vol. 3, No. 3, pp.321–341.

Andrews, J. and Smith, D. (1996) 'In search of marketing imagination: Factors affecting the creativity of Marketing programs for mature products', *Journal of Marketing Research*, Vol. 33, No. 2, pp.174–187.

Argote, L., McEvity, B. and Reagan, R. (2003) 'Managing knowledge in organization: An integrative framework and Review of emerging themes', *Management Science*, Vol. 49, No. 4, pp.571–582.

Armbruster, H, Bikfalvi, A., Kindel, S. and Lay, G. (2008) 'Organizational innovation: the challenge of measuring non–technical innovation in large scale surveys', *Technovation*, Vol. 28, No. 10, pp. 744–657.

Balachandra, R. and Friar, J.H. (1997) 'Factors for success in R&D projects and new product innovation: a contextual framework', *IEEE Transactions on Engineering Management*, Vol. 44, No. 3, pp.276–287.

Balakrishnan, S. (1988) 'The prognostics of diversifying acquisitions', *Strategic Management Journal*, Vol. 9, pp.185–196.

Barczak, G. (1995) 'New product strategy, structure, process, and performance in the telecommunications industry', *Journal of Product Innovation Management*, Vol. 12, No. 2, pp.224–234.

Baysinger, B.D. and Hoskisson, R.E. (1989) 'Diversification strategy and R&D intensity in large multiproduct firms', *Academy of Management Journal*, Vol. 32, No. 2, pp.310–332.

Bapuji, H. and Crossan, M. (2004) 'From raising questions to providing answers: Reviewing organizational learning research', Management Learning, Vol. 35, No. 4, pp.397–417.

Bergeron, P. and Hiller, C.A. (2002) 'Competitive Intelligence', Annual Review on information science technology, Vol. 36, No. 1, pp.353–390.

Bierly,P. and Chakrabarti, A. (1996) 'Generic knowledge strategies in the US pharmaceutical industry', *Strategic Management Journal*, Vol. 17, No. S2, pp.123–135.

Black, E. and Hunter, A. (2009) 'An inquiry dialogue system', *Auton Agent Multi-Agent System*, Vol. 19, No. 2, pp.173–209.

Boswell, W. (2006) 'Aligning employees with the Organization's strategic objectives: out of 'line of sight', out of mind', *International Journal of Human Resource Management*, Vol. 17, No. 9, pp.1489–1511.

Brenneman, W.B., Keys, J.B. and Fulmer, R.M. (1998) 'Learning across a living company: the shell companies' experiences', *Organizational Dynamics*, Vol. 27, No. 2, pp.61–70.

Brown, J.S., Duguid, P. (1991) 'Organizational learning and communities-of-practice: toward a unified view of working, learning and innovation', in Cohen, M. and Sproull, L.S. (Eds.): *Organizational Learning*, Vol. 2, No. 1, pp.40–57.

Bueno, E. and Ordonez, P. (2004) 'Innovation and learning in the knowledge-based economy: challenges for the firm', *International Journal of Technological Management*, Vol. 27, Nos. 6/7, pp.532–533.

Cabrales, A.L., Medina, C.C., Lavado, A.C. and Cabrera, R.V. (2008) 'Managing functional diversity risk taking and incentives for teams to achieve radical innovations', *R&D Management*, Vol. 38, No. 1, pp.35–50.

Calantone, R.J., Cavusgil, S.T. and Zhao, Y. (2002) 'Learning orientation, firm innovation capability and firm performance', *Industrial Marketing Management*, Vol. 31, No. 6, pp.515–524.

Caillier,J. (2015) 'Towards better understanding of public service motivation and mission valence in public agencies', *Public Management Review*, Vol. 17, No. 9, pp.1217–1236.

Capello, P. and Crocker-Hefter, A. (1996) 'Distinctive human resources are firm's core competencies', *Organizational Dynamics*, Vol. 24, No. 3, pp.6–22.

Chang, M. and Harrington Jr., J.E. (2003) 'Multimarket Competition, consumer search and the organizational structure of multi-unit firms', *Management Science*, Vol. 49, No. 4, pp.541–552.

Chiva,R., Alegre,J. and Lapiedra,R. (2007) 'Measuring Organizational Learning Capability among the workforce', *International Journal of Manpower*, Vol. 28, No. 3, pp.224–242.

Cohen, W.M. and Levinthal, D.A. (1990) 'Absorptive Capacity: A new perspective on learning and Innovation', *Administrative Science Quarterly*, Vol. 35, No. 1, pp.128–152.

Cotton, J.L, Vollrath, D.A., Foggat, K.H. LenginickHall, M.L. and Jennings, K.R. (1988),'Employees participation: diverse forms and different outcomes', *Academy of Management Review*, Vol. 13, No. 1, pp.8–22.

Cyert, R.M. and March, J.G. (1963) 'A behavioral theory of the firm', Vol. 2, No. 4, pp.169–187.

DeGuess, A.P. (1988) 'Planning as learning', *Harvard Business Review*, Vol. 3, No. 2, pp.70–74.

Dixon, N. (1993) *Organizational Learning*, Report to the conference board of Canada on Organizational Learning, Unpublished Report, George Washington University.

Duncan, R. and Weiss, A. (1979) 'Organizational learning implications for organization design', *Research in Organizational Behaviour*, Vol. 1, No. 1, pp.75–123.

Easterby-Smith, M., Crossan, M. and Nicolini, D. (2000) 'Organizational learning: debates past, present and future', *Journal of Management Studies*, Vol. 37, No. 6, pp.783–796.

Edmondson, A. C. and Reynolds, S. S. (2016) 'Location innovation', *Building the Future: Big Teaming for Audacious Innovation*, Berrett-Koehler Publishers.

Fiol, C.M. and Lyles, M.A. (1985) 'Organizational learning', *Academy Management Review*, Vol. 10, No. 4, pp.803–13.

Ford, C.M. (2000) 'Creative Development in creative theory', *Academy of Management Review*, Vol. 25, pp.284–289.

Garvin, D.A. (1993) 'Building a learning organization', *Harvard Business Review*, Vol. 71, No. 4, pp.78–91.

Gibson, C. B. and Birkinshow, J. (2004) 'The antecedents, consequences, and mediating role of organizational ambidexterity', *Academy of Management Journal*, Vol. 47, No. 2, pp.209–26.

Goh, S. and Richards, G. (1997) 'Benchmarking the learning capability of organizations', *European Management Journal*, Vol. 15, No. 5, pp.575–583.

Goodsell, C. (2010) 'Mission mystique and a belief system template', *Mission Mystique: Belief Systems Public Agencies*, Sage.

Grant,R.M. (1996) 'Prospering in dynamically competitive environment: oganizational capability as knowledge integration', *Organization Science*, Vol. 7, No. 4, pp.375–387.

Gunsel, A, Siachen, E. and Acar, A.Z. (2011) 'Knowledge management and learning capability to enhance organizational innovativeness', *Procedia Social and Behavioral Science*, Vol. 24, No. 1, pp.880–888.

Jiménez-Jiménez, D. and Sanz-Valle, R. (2011) 'Innovation, organizational learning, and performance', *Journal of Business Research*, Vol. 64, No. 4, pp.408–417.

Harlow, H.F. (1959) 'Learning set and error factor theory', in Koch, S. (Ed.): *Psychology: A Study of Science*, Vol. 2, No. 1, pp.492–537, McGraw-Hill, New York.

Ha, S.T. and Lo, M.C. (2018) 'An empirical examination of knowledge management and organisational performance among Malaysian manufacturing SMEs'. *International Journal of Business Innovation and Research*, Vol. 17, No. 1, pp.23–37.

Hedberg, B.L.T. (1981) 'How organizations learn and unlearn', *Handbook of Organizational Design*, Vol. 1, No. 1, pp.3–7.

Hitt, M.A., Hoskisson, R.E. and Ireland, R.D. (1990) 'Mergers and acquisitions and managerial commitment to innovation in m-form firms', *Strategic Management Journal*, Vol. 11, pp.29–47.

Hoskisson, R.E. and Hitt, M.A. (1988) 'Strategic control and relative R&D investment in large multiproduct firms', *Strategic Management Journal*, Vol. 9, pp.605–621.

Hult, G.T.M. and Ferrell, O.C. (1997) 'Global organizational learning capability in purchasing: construct and measurement', *Journal of Business Research*, Vol. 40, No. 97, pp.111–121.

Hurley, R.F. and Hult, G.T.M (1998) 'Innovation market orientation and organizational learning: an integration and empirical examination', *Journal of Marketing*, Vol. 62, No. 3, pp.42–54.

Isaac's, W. (1993) 'Dialogue, collective thinking and organizational learning', *Organizational Dynamics*, Vol. 22, No. 2, pp.24–39.

Jansen, J., Van den Bosh, F. and Volberda, H. (2005) 'Managing potential and realized absorptive capacity', *Academy of Management Journal*, Vol. 48, No.6, pp.999–1015.

Jensen, M.C. (1988) 'Takeovers: their causes and consequences', *Journal of Economic Perspective*, Vol. 2, No. 1, pp.21–48.

Jerez-Gomez, P., Céspedes-Lorente, J. and Valle-Cabrera, R. (2005) 'Organizational learning capability: a proposal of measurement', *Journal of Business Research*, Vol. 58, pp.715–725.

Johnston, R. and Gibbons, M. (1975) 'Characteristic of information usage in technological innovation', *IEEE Transactions on Engineering Management*, Vol. 1, No. 1, pp.27–34.

Kessels, J.W. (2001) 'Learning in organizations: a corporate curriculum for the knowledge Economy', *Futures*, Vol. 33, No. 6, pp.497–506.

Kim, B. and Oh, H. (2002) 'Economic compensation composition preferred by R&D personnel of different R&D types and intrinsic value', *R&D Management*, Vol. 32, No. 1, pp.42–59.

Kim, D.J. and Kogut, B. (1995) 'Technological platforms and diversification', *Organization Science*, Vol. 7, No. 3, pp.283–301.

King, W.A. (2009) 'Knowledge management and organizational learning', *Annals of Information Systems*', Vol. 4, No. 1, pp.3–13.

Kiron, K. R. and Kannan, K. (2018). Innovation capability for sustainable development of SMEs: an interpretive structural modelling methodology for analysing the interactions among factors', *International Journal of Business Innovation and Research*, Vol. 15, No. 4, pp.514–535.

Kouzes, J.M. and Posner, B.Z. (2006) *The Leadership Challenge*, Vol. 3, John Wiley & Sons.

Kyridou, L.P. and Spyropoulou, S. (2013) 'Drivers and performance outcome of innovativeness: an empirical study', *British Journal of Management*, Vol. 24, No. 1, pp.281–298.

Lemon, M. and Sahota, P.S. (1987) 'Organizational culture as a knowledge repository for increased innovative capacity', *Technovation*, Vol. 24, No. 6, pp.483–499.

Lepak, D., Liao, H., Chung, Y. and Harden, E. (2006) 'A conceptual review of human resource management systems in strategic human resource management research', *Research in Personnel and Human Resource Management*, Vol. 25, No. 1, pp.217–271.

Lei, D., Slocum,J.W. and Pitts, R.A. (1999) 'Designing organizations for competitive advantage: the power of unlearning and learning', *Organizational Dynamics*, Vol. 27, No. 3, pp.24–38.

Levitt, B. and March, J.G. (1988) 'Organizational learning', *Annual Review Sociology*, Vol. 14, No. 1, pp.319–40.

Leonard-Barton, D. (1992) 'The factory as a learning laboratory', *Sloan Management Review*, Vol. 34, No. 1, pp.23–38.

Liao, S.H., Chen, C.C., Hu, D.C., Chung, Y.C. and Yang, M.J. (2017) 'Developing a sustainable competitive advantage: absorptive capacity, knowledge transfer and organizational learning'. *The Journal of Technology Transfer*, Vol. 42, No. 6, pp.1431–1450.

Maharajan, R., Agrawal, R., Sharma, V. and Nagia, V. (2016) 'Analysis of challenges for management education in India using total interpretive structural modelling', *Quality Assurance in Education: An International Perspective*, Vol. 24, No. 1, pp.95–122.

Mansfield, E. (1988) 'The speed and cost of industrial Innovation in Japan and the United States: external Vs. internal technology', *Management Science*, Vol.34, No. 10, pp.1157–1168.

Marin,L., Rubio, A. and de Maya,S.R. (2012) 'Competitiveness as a strategic outcome of corporate social responsibility', *Corporate Social Responsibility Environment Management*, Vol. 19, No. 6, pp.364–376.

Maune, A. (2014) 'Competitive intelligence as an enabler for firm competitiveness: an overview', *Journal of governance and Regular*, Vol. 3, No. 2, pp.29–42.

McGill, M. and Slocum, J.W. (1993) 'Unlearning the organization', *Organizational Dynamic*, Vol. 22, No. 2, pp.67–79.

Mishra, A.A. and Shah, R. (2009) 'In union lies strength: collaborative competence in new product development and its performance effects', *Journal of Operations Management*, Vol. 27, No. 4, pp.324–38.

Mueller, W.F. (1962) 'The origins of the basic inventions underlying Du Pont's major product and process innovations, 1920 to 1950', in *The Rate and Direction of Inventive Activity: Economic and Social Factors*, pp.323–358, Princeton University Press.

Mumford, M.D., Scott, G.M., Gaddis, B. and Strange, J.M. (2002) 'Leading creative people: Orchestrating expertise and relationship', *The Leadership Quarterly*, Vol. 13 No. 6, pp.705–750.

Myers, S. and Marquis, D.G. (1969) *Successful Industrial Innovations*, National Science Foundation, Report No. 69-17, Washington, DC.

Naman, J.L and Slevin, D.P. (1993) 'Entrepreneurship and the concept of fit: A model and empirical text', *Strategic Management Journal*, Vol. 14, No. 2, pp.135–152.

Nevis, E., DiBella, A.J. and Gould, J.M. (1995) 'Understanding organization learning system ', *Sloan Management Review*, Vol. 36, No. 2, pp.73–85.

Nicolini, D. and Meznar, M. (1995) 'The social construction of organizational learning: conceptual and practical issues in the field', *Human Relations*, Vol. 48, No.7, pp.727–46.

Nonaka, I. (1994) 'Dynamic theory of organizational knowledge creation', *Organizational Science*, Vol. 5, No. 1, pp.14–37.

Nonaka, I. and Takeuchi, H. (1996) 'The knowledge-creating company: how Japanese companies create the dynamics of innovation', *Long Range Planning*, Vol. 4, No. 29, pp.592–627.

Onag, A.O., Tepeci, M. and Basalp, A.A. (2014) 'Organizational learning capability and its impact on firm innovativeness', *Procedia Social and Behavioral Science*, Vol. 105, pp.708–717.

Paarlberg, L. and Lavigna, B. (2010) 'Transformational Leadership and public service motivation: driving individual and organizational performance', *Public Adminstration Review*, Vol. 70, No. 5, pp.710–718.

Pandey, S. and Rainey, H. (2006) 'Public manager's perception of goals ambiguity: analysing alternative model', *International Public Management Journal*, Vol. 9, No. 2, pp.85–112.

Pedler, M., Boydell, T. and Burgoyne, J. (1989) 'Towards the learning company', *Management Education and Development*, Vol. 20, No. 1, pp.1–8.

Prahlad, C. and Hamel, G. (1990) 'The core competencies of the corporation', *Harvard Business Review*, Vol. 68, No. 3, pp.79–91.

Rebelo, T.M. and Gomes, A.D. (2011) 'Conditioning factors of an organizational learning culture', *Journal of workplace Learning*, Vol. 23, No. 3, pp.173–194.

Ruben, R.B. and Varthanan, P.A. (2019) 'Application of total interpretive structural modelling (TISM) approach for analysis of barriers in deploying circular supply chain', *Indian Journal of the Science and Technology*, Vol. 12, No. 24, pp.1–6.

Sandbhor, S. and Botre, R. (2014) 'Applying Total Interpretive Structural Modelling to study factors affecting construction labour productivity', *Australian Journal of Construction Economy and Building*, Vol. 14, No. 1, pp.20–31.

Schein, E.H. (1993) 'On dialogue, culture and organizational learning', *Organizational Dynamics*, Vol. 22, No. 2, pp.40–51.

Senge, P. (1990) *The Fifth Discipline: The Art and Practise of the Learning Organization*, New York.

Sethi, R., Smith, D.C. and Park, C.W. (2001) 'Cross-functional product development teams, creativity and the innovativeness of new consumer products', *Journal of Marketing Research*, Vol. 37, No. 1, pp.73–85.

Shaw, R.B. and Perkins, D.N.T. (1991) 'Teaching organization to learn', *Organizational Development Journal*, Vol. 9, No. 4, pp.1–12.

Shibin, K.T., Gunasekaran, A., Papadopoulos, T., Dubey, R., Singh, M. and Wanna, S.F. (2016) 'Enablers and barriers of flexible green supply chain management: a Total interpretive structural modelling approach', *Global Journal of Flexible Systems Management*, Vol. 17, No. 2, pp.171–188.

Shrivastava, P. (1983) 'A typology of organizational learning systems', *Journal Management Studies*, Vol. 20, No.1, pp.8–28.

Simon, H.A. (1991) 'Bounded rationality and organizational learning', *Organizational Science*, Vol.2, No. 1, pp.125–134.

Sinkula, J.M. (1994) 'Market information processing and organizational learning', *Journal of Marketing*, Vol. 58, No. 1, pp.35–45.

Sitkin, S. (1996) 'Learning through failure: the strategy of small losses', *Teoksessa: Organizational Learning*, pp.541–577, Toim. M. Cohen & L. Sproull.

Slater, S.F. and Narver, F.J. (1995) 'Market orientation and learning organization', *Journal of Marketing*, Vol. 59, pp.63–74.

Slocum, J.W., McGill, M. and Lei, D.T. (1994) 'The new learning strategy: Anytime, anything, anywhere', *Organizational Dynamics*, Vol. 23, No. 2, pp.33–47.

Smriti, V., Dhir, S. and Dhir, S. (2021) 'Strategic thinking in a professional environment: a review of the literature', *International Journal of Business Innovation and Research*, Vol. 25, No. 2, pp.260–284.

Spender, J.C. (1996) 'Making Knowledge the basis of a dynamic theory of the firm', *Journal of Strategic Management*, Winter Special Issue, Vol. 17, No. S2, pp.45–62.

Stalk, G., P. Evans, and Shulman, L.E. (1992) 'Competing on capabilities: the new rules of corporate strategy', *Harvard Business Review*, Vol. 70, No. 2, pp.57–69.

Stata, R.B. (1989) 'Organizational learning- the key to management innovation', *Sloan Management Review*, Vol. 30, No. 3, pp.63–73.

Sundstrom, E., De Meuse, K. P. and Futrell, D. (1990) 'Work teams: applications and effectiveness', *The American Psychologist*, Vol. 45, No. 2, pp.120–133.

Sushil (2012) 'Interpreting the interpretive structural model', *Global Journal of Flexible Systems Management*, Vol. 13, No. 2, pp.87–106.

Szulanski, G. (1996) 'Exploring internal stickiness impediments to the transfer of best practice within the firm', *Strategy Management Journal*, Winter Special Issue, Vol. 17, No. S2, pp.27–44.

Teece, D. and Pisano, G. (1994) 'The dynamic capabilities of firms: an introduction', *Industrial Corp Change*, Vol. 3, No. 3, pp.537–556.

Tohidi, H., Seyed-Aliakbar, S.M. and Mandegari, M. (2012) 'Organizational learning measurement and the effect on firm Innovation', *Journal of Enterprise Information Management*, Vol. 25, No. 3, pp.219–245.

Tsai, W. (2001) 'Knowledge transfer in interorganizational networks: effects of network position and absorptive capacity on business unit innovation and performance', *The Academy of Management Journal*, Vol. 44, No. 5, p.996.

Twati, J.M. and Gammack, J.G. (2006) 'The impact of organizational culture innovation on the adoption of IS/IT: the case of Libya', *Journal of Enterprise information Management*, Vol. 19, No. 2, pp.175–191.

Ulrich, D., Jick, T. and Vin, G.M.A. (1993) 'High-impact learning: building and diffusing learning capability', *Organizational Dynamics*, Vol. 22, No. 2, pp.52–79.

Vandenabeele, W. (2014) 'Explaining public service motivation: the role of leadership and basic needs satisfaction', *Review of Public Personnel Administration*, Vol. 34, No. 2, pp.153–173.

Vihar, N.S. and Rao, M.K. (2016) 'Molding the enablers of corporate sustainability using total interpretive structural modelling', *International Journal of Research and Methodology in Social Science*, Vol. 2, No. 1, pp.30–49.

Waldman, D.A. and Bass, B.M. (1991) 'Transformimational leadership at different phases of the innovation process', *The Journal of High Technology Management*, Vol. 2, No. 2, pp.169–180.

Wheelwright, S.C. and Clark, K.B. (1992) *Revolutionizing Product Development: Quantum Leaps in Speed, Efficiency, and Quality*, Simon and Schuster.

Wright, B., Moynihan, D. and Pandey, S. (2012) 'Pulling the levers: transformational leadership, public service motivation and mission valence', *Public Administration Review*, Vol. 72, No.5, pp.206–215.

Wright, B. and Pandey, S. (2011) 'Public organization and mission valence: when does mission matter?', *Administration and Society*, Vol. 43, No. 1, pp.22–44.