ORGANIZATIONAL LEARNING REQUIREMENTS IN INDUSTRIAL COMPANY: A CASE STUDY IN AL-FURAT GENERAL COMPANY FOR CHEMICAL INDUSTRIES

Sarmad Hamza Jassim
Department of Business Administration, Faculty of Administration and
Economics, Mustansiriyah University, Baghdad, Iraq
dr.sarmad08@uomustansiriyah.edu.iq

Hadeel Qasim Oleiwi
Department of Business Administration, Faculty of Administration and
Economics, Mustansiriyah University, Baghdad, Iraq
hadeelqa@uomustansiriyah.edu.iq

Abstract
The research seeks to find possible solutions that help companies in the problem of organizational learning by diagnosing the application gap in Al-Furat General Company in relation to the four organizational learning requirements represented by employee empowerment, knowledge sharing, environmental monitoring, and human containment. The research adopted a case study approach, so an examination form was designed for each requirement and illustrative drawings, mathematical equations, and quantitative ratios were used in analyzing the results and discussion. The research reached a set of conclusions, the most prominent of which is the weakness of the human aspects in the work carried out by the company. A clear deficiency appeared in the application of human containment. The research put forward a set of recommendations, the most prominent of which is the need for the company to emphasize the four organizational learning requirements in a balanced manner that achieves equal application of each of them and enhances the efficiency and effectiveness of organizational learning in the company.

Keywords: Organizational learning, Empowering Employees, Sharing Knowledge, Monitoring Environment, Involving Human.

Introduction

Contemporary businesses need to adapt to the changing environment and learn from the successes and failures of their past performance in order to continue and achieve their goals. Organizational learning is an important factor in the company and reflects the effort made to create organizational knowledge and method theory so that it provides an unparalleled advantage for the company in the industry in which it operates (Chan,et al.,2024:2). Successful organizations are those that adapt to changing environments and thrive despite external factors. They seek to continuously develop their organizational processes and

provide knowledge management to solve problems efficiently (Qadri,et al.,2024:38). Organizational learning is a dynamic process of knowledge accumulation or related to knowledge and competence that is created and shared by people in the company. The level of organizational learning is manifested through the effort made to develop knowledge or the ability to influence behavior, values and beliefs as part of the learning process and all members of the organization become able to respond to it, which gives the company a better ability to exploit opportunities (Rafiki,et al.,2023:185).

Organizational learning is the process of improving procedures through better knowledge and understanding through which the company successfully obtains a stock of knowledge to develop better products, services and value for customers (Zhang,et al.,2023:3) .Therefore, organizational learning refers to the process of social interaction in which new knowledge is constantly generated, interpreted, integrated and established at multiple levels, namely the individual, the group and the organization, in order to achieve the company's goals or adapt to changes in the external environment that may occur (Tu & Wu,2021:511). The company learns if each of its organizational units acquires knowledge, which is a very useful ability, as it refers to the company's ability to transform, integrate and develop information so that information can be widely available to all individuals in organizational units and levels within the company (Chan,et al.,2024:2).

Organizational Learning Literature
Company tries to discover where it fails to meet its customers' expectations by adopting the correction process. After identifying the errors and trying to adopt or implement innovative ways to fix the errors, when the discovery and correction process becomes continuous, it leads the company towards continuous learning, improvement and innovation. Organizational learning is disseminated among employees to deal with the rapidly changing environment (Inthavong,et al.,2023:2). The organizational learning process means the process of information processing and consists of four stages divided into categories such as knowledge acquisition, dissemination, interpretation, reuse and storage in organizational memory for later use when required.

Knowledge acquisition represents the use of internal and external resources, which include previous experiences, indirect experiences, non-organizational experiences, strategic activities, experiences obtained from others or organizational memory, and the acquisition of new information (Al-Husseini,et al.,2023:22). Knowledge dissemination plays an important role in effectively expanding the learning process and increases its value in the eyes of company members who become more efficient and deal with knowledge in a broader context (Son and Phong,2023:2). Interpreting knowledge and adding meaning to it is a creative process at different levels because the different interpretations arising within the company will expand the scope of possible behavior, leading to an increase in organizational learning. (Abdollahi,et al.,2023:12) Storing and reusing knowledge and organizational memory for knowledge storage and reuse activities are represented by different concepts at the individual and organizational levels. Storing knowledge and experiences gained through learning is as important as putting them into practice to achieve continued organizational success (Chan,et

al.,2024:2) Most researchers agree to classify organizational learning into two types: exploitative and exploratory.

Exploitative learning represents an in-depth investigation of existing knowledge to refine comprehensive strategic planning in specific tasks, implemented by specific departments to improve employees' understanding of organizational strategies. Exploitation tends to reduce variation, maintain stability, and seek efficiency (Zhang,et al.,2023:2), while exploratory learning represents the absorption and transformation of new knowledge and ideas and enhancing responsiveness to market demand and the external environment to enhance the implementation of innovation strategies. Companies do not only need exploratory learning to seize and respond to new opportunities and requirements in the market, but also need to ensure competitive advantage and current capabilities (AlSaied and Alkhoraif,2024:209).

There are many positive effects of organizational learning, including that it helps in developing an effective understanding of customers and their perspectives, learning from business partners, learning from observation, mistakes, past experiences, and trends. It generates a set of values consisting of a commitment to learning, a shared vision, and open-mindedness, and it helps in identifying the direction of emerging and disruptive technologies so that the company can quickly develop efficiency and take the lead in the market. Organizational learning also enhances employee innovation throughout the organization and also builds the capacity to develop an innovation process. Organizational learning brings together intuitive teams, who can work, even in turbulent technological environments, to increase continuous innovation. (Rafiki,et al.,2023:185). Researchers agree that the requirements of organizational learning are (empowering employees, sharing knowledge, monitoring the environment, and containing people). The following is an explanation of each of these requirements that can be summarized as follows:

Empowering Employees

It includes all organizational levels, as the manager should provide a work environment that makes individuals and groups work at their full capacity in order to achieve the organization's goals (Hakim & Supriyatno,2023:209). That is, managers can be described as information providers, decision makers, supporters of work groups, and good listeners to individuals according to the needs of employees (Alshemmari & Kuwait,2023:53). Perhaps the most important thing in empowerment is good administrative leadership that successfully understands the needs of individuals and enables them to learn and progress in implementing their job duties (Kyei- Frimpong,et al.,2024:69).

Empowerment can occur in one of two opposite directions that are: *Firstly direction* from top to bottom, which is related to matters of delegation and responsibility. The top manager creates a clear vision and sets plans for all departments of the entire organization. This trend represents a strategy that adopts starting from the top of the organizational pyramid - clarity of the organization's mission and vision - statement of the tasks and roles of individuals and work groups - delegation of powers - balance of responsibilities with the achieved results (Zhang,et al.,2021:4). *Secondly direction* upward trend from the bottom to the top, which is related to matters of growth and change. The manager should have absolute confidence in individuals and work groups and make them feel their importance to him in order to

encourage them to do the right work. The manager should also be tolerant of them in cases of error and failure. This trend represents a strategy that adopts starting from the bottom with an understanding of the needs of individuals and work groups - supporting the self-management of operating groups - building cooperative work groups - encouraging creativity and creative risk-taking - exchanging high trust between individuals in the field of accomplishing work (Mittal,et al.,2020:6972) .

Empowerment strategies vary in their emphasis on trust and control, and many high-performance organizations adopt the second strategy (upward trend) according to their need for the level of trust and the nature of control, as these organizations believe that the presence of experts at all organizational levels instead of the high routine, slow rules and strict orders produced by the traditional organizational structure helps individuals and work groups perform their tasks and achieve the organization's goals (Sadq,et al.,2022:133) .

Sharing Knowledge

Which is related to the organization's members and how to accomplish internal tasks, as organizations should redistribute information and disseminate knowledge resulting from the skills and experiences of work groups in dealing with data (Zamiri & Esmaeili,2024:4).The learning organization may give workers in the first line the authority to deal with urgent and urgent customer requirements, and therefore these individuals need training to accomplish the work correctly and successfully (Meher & Mishra,2022:508). The learning organization wants to share its expectations with customers and tries to disseminate some information to them to get feedback from them about that information and then convert those expectations into knowledge that individuals and work groups need to reach the organization's goals and enable them to engage in activities that generate value and add it to the organization's work, which in turn should allocate rewards that are commensurate with the desire and ability of individuals and work groups to learn (Deng,et al.,2023:404). Collecting and disseminating information requires three main tasks: (setting a daily schedule showing the work accomplished and the production costs associated with it - collecting data weekly and sharing it with individuals and work groups in the organization - intensive training for individuals and work groups on using computers in the field of payment, settlement, cash flow and income account settlement). The managements of learning organizations should listen and hear well to their customers, employees and suppliers. Without that, they will not be able to achieve success in completing their work. Listening and understanding well is the main key to making wise decisions (McLeod,et al.,2024:5).

Monitoring Environment

Which includes collecting and unifying external information. Knowing the opportunities and threats facing the organization is vital and decisive for its success and survival in the industrial environment in which it operates. Although focusing on the internal efficiency of production is important, the rapid change in aspects of the external environment pushes organizations towards being well-informed and informed about their surroundings of competitors and customers (Rouhani & Elhami,2024:12) . Most of the current educated organizations use the Internet to obtain external information, as the global communications

network provides them with great opportunities in the field of obtaining information easily and conveniently, in addition to reading the bulletins of competing companies, reading newspapers, scientific magazines and books, and perhaps even the possibility of meeting with some specialists and consultants (Song,et al.,2022:371).

Involving Human
It means containing, absorbing, or gaining the loyalty of the people within the organization by including the organization's goals in personal goals. The learning organization should determine the goals of the individuals and work groups belonging to it, and then generate a common goal between them and designate it as a general goal for them to come together to achieve it (Gnewuch,et al.,2024:938). Thus, it makes them combine their personal goals with the organization's goals and continues to motivate them to learn efficient ways to achieve its goals (Rashid,et al.,2023:6).

Methodology and Framework
Research aims to diagnose the weaknesses suffered by the company under study, represented by Al-Furat General Company, one of the formations of the Iraqi Ministry of Industry and Minerals, by designing a checklist for organizational learning requirements in the company, which is presented to a group of expert arbitrators in the scientific specialization, and then diagnosing the gaps in the application after knowing the actual percentage of the presence of each organizational learning requirement in the company. The results are also presented using illustrative charts, the Bay model, the Pareto model, and percentages, until the attention of the company's managers is drawn to the weaknesses that should be addressed and facilitate the company's achievement of its goals and objectives. The most prominent objectives of the research can be summarized in answering the following questions:
1. What are the organizational learning requirements within the company?
2. Is there parallelism in focusing on organizational learning requirements in the company?
3. What are the obstacles to providing organizational learning requirements in the company?
4. Does the company have sufficient capabilities to manage the organizational learning process?
5. How do the company's executive managers view organizational learning?

In order to answer these questions, the research adopts the case study approach and sets the following two hypotheses that are (requirements for organizational learning are available in Al-Furat General Company) and (Al-Furat General Company balances the focus on organizational learning requirements equally).
Research adopts views of researchers in field of management regarding requirements of organizational learning, and they agree that there are four requirements: empowering employees, sharing knowledge, monitoring environment, and involving human. An industrial company was chosen to case study of availability of these requirements and existing gaps for purpose of improving the company's performance and facilitating its achievement of its goals. Organizational learning requirements that will be analyzed in Al-Furat General

Company for Chemical Industries can be explained in research framework shown in figure (1).
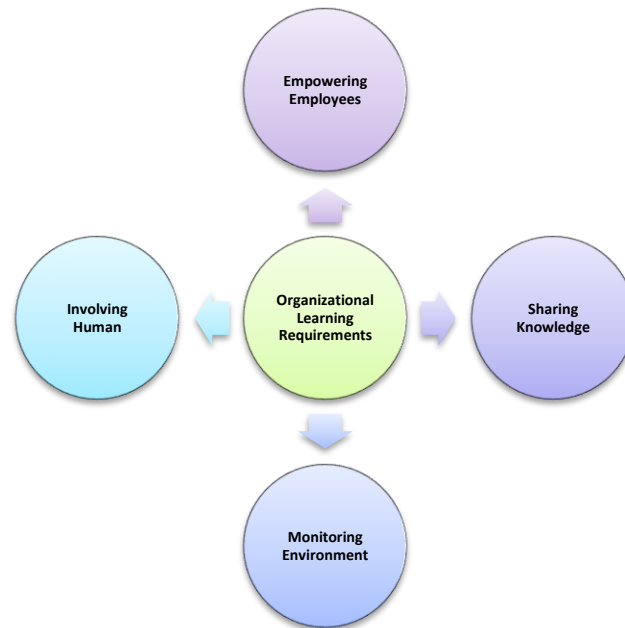

Figure (1) Procedural chart of a research

Results

Research is being applied in Al-Furat General Company affiliated to the Iraqi Ministry of Industry and Minerals as a deliberate sample for the case study. After field experience and direct meetings with the company's managers (the general manager and his assistant - department heads and their assistants - division officials and their assistants), sample size reached (63) managers who were interviewed and their opinions were surveyed regarding the paragraphs included in the checklist for organizational learning requirements, which were (employee empowerment, knowledge sharing, environmental monitoring, and human containment) (the results shown in Table 1 were reached).

Table (1) Checklists of Organizational Learning Requirements in Al Furat General Company for Chemical Industries (n=63)

Organizational Learning Requirements		
Empowering Employees		**Checkout**
1.	Company gives all its employees a high degree of independence in performing the job.	×
2.	Company's managers have the freedom to make decisions without any interference from the company's board of directors.	×
3.	Company's employees feel that they own it and are not employees.	×
4.	Company is keen to have employees participate with managers in making important decisions related to the jobs they perform.	√
5.	Managers in the company provide all the information and data that employees need to accomplish their jobs.	√
6.	Company allows its employees to complete their primary and postgraduate studies smoothly and without organizational obstacles.	√

7.	Managers in the company listen to the problems facing employees within the company.	√
8.	Company takes seriously the proposals of managers and employees that aim to develop the work.	√
9.	Managers in the company believe in the necessity of developing the skills of employees so that they can perform their jobs better.	√
10.	Managers in the company build the principle of forgiveness in cases of employees' mistakes or failure in the tasks they are assigned.	×
Percentage of actual application for empowering employees		**60%**
Sharing Knowledge		**Checkout**
11.	Managers and employees in the company understand well how their tasks are accomplished.	√
12.	Company publishes the data and information that managers and employees need in all its departments.	√
13.	Company is keen to apply the principle of (distributing information) through printed guides.	√
14.	Company has an internal communications network that allows managers and employees to exchange knowledge among themselves.	×
15.	Company grants certain administrative powers to employees in direct contact with customers to allow them to respond quickly.	×
16.	Company has training programs in the field of knowledge sharing for managers and employees.	√
17.	There are clear work rules in the company that contribute to performing the job correctly the first time.	√
18.	Managers in the company receive feedback from their employees to ensure the accuracy of their receipt and understanding of the information.	×
19.	Company sets clear organizational goals and directs managers and employees to cooperate together to achieve those goals.	√
20.	Company conducts evaluation processes the performance of all individuals in it and the results of that evaluation are announced to everyone.	√
Percentage of actual application for sharing knowledge		**70%**
Monitoring Environment		**Checkout**
21.	Company conducts analyses of external environmental variables such as the economy, technology and demographics.	√
22.	Company is interested in diagnosing the opportunities available in the markets in order to benefit from them and maximize their outcomes.	√
23.	Company considers identifying potential threats and risks in its business markets an important and necessary issue.	×
24.	Company relies on (competitor analysis technology) to collect detailed information on competitors	×
25.	Company's market intelligence system provides appropriate details about competitors, suppliers and customers	√
26.	Company has customer databases that are constantly updated	√
27.	Company exchanges electronically with its suppliers the inventory status of raw materials	√
28.	Company uses the World Wide Web (Internet) to obtain data on suppliers and customers	×
29.	Company is keen to obtain bulletins and publications issued by competitors	×
30.	Company seeks the expertise of consultants and academics in the field of analyzing its current business environment	×

Percentage of actual application for Monitoring Environment		50%
Involving Human		**Checkout**
31.	Company has an incentive system that suits all its employees.	×
32.	Managers deal fairly with their employees in the company.	×
33.	Company is keen to build organizational loyalty for each individual working in it.	√
34.	Company achieves high levels of job satisfaction.	×
35.	Company applies the principle of (management by objectives) which requires that the company's goals be consistent with the goals of its individuals.	×
36.	Work groups in the company are characterized by being stable due to mutual understanding and trust between individuals within each group.	√
37.	Company organizes competitions and sports programs for its employees.	×
38.	Company offers an annual award to the most giving employee	√
39.	Company owns cultural and recreational clubs and grants its membership free of charge to managers and employees.	×
40.	Company approves transfer requests that Provided by employees to other organizational units according to their desires and psychological comfort.	×
Percentage of actual application for Involving Human		**30%**

Discussion

The results reached can be explained by the method of tables and using the Pareto chart that shows the application and gap for each of the organizational learning requirements as in figure (2) it shows following:
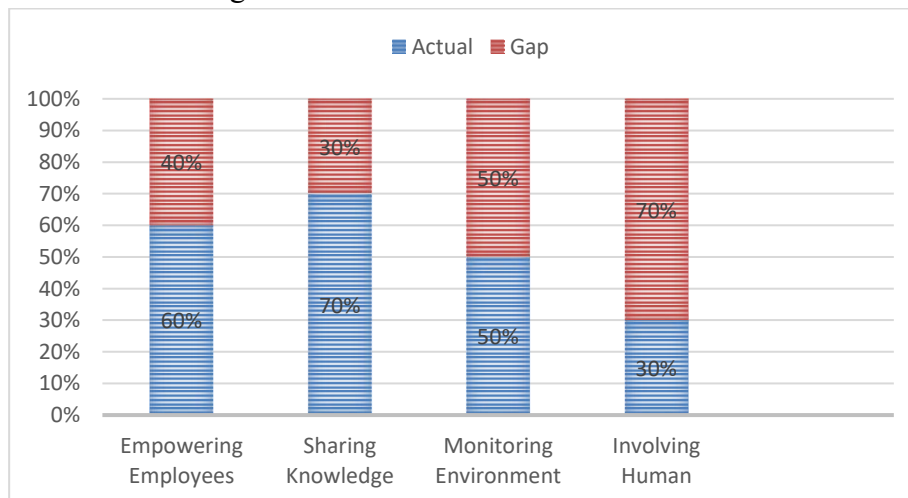

Figure (2) Actual application and gaps for organizational learning requirements from a managers' view in Al Furat General Company for Chemical Industries.

1- Application of functional empowerment in the company reached (60%) and the gap in it reached (40%). Perhaps the most prominent reasons for this gap in the company are that it does not grant freedom and independence to all managers and employees regarding their performance of the required tasks, and the company's board of directors controls all decisions taken in all organizational units in a bureaucratic and routine manner, in addition to the company members' feeling of weak belonging to the company, which creates psychological barriers between management and employees.

2- Application of knowledge sharing in the company reached (70%) and the gap in it reached (30%). Perhaps the most prominent reasons for this gap are that the company does not have internal electronic links to exchange data between managers on the one hand and employees on the other hand, and the company's senior management monopolizes critical and important information and does not want to publish it to employees, in addition to the fact that the company's managers are constantly busy with work and do not have enough time to hear opinions and suggestions from their employees.

3- Application of environmental monitoring in the company reached (50%) and the gap in it reached (50%). Perhaps the most prominent reasons for this gap are that the company is unwilling to diagnose potential threats and risks in its business markets as a government company fully supported by the state in different market conditions, and the company does not rely on the technology of analyzing competitors in the industry in which it operates, in addition to the fact that the company uses the Internet weakly to obtain information about potential suppliers and customers in the market. The company does not resort to specialized research agencies to collect information about the design, production and marketing of the products we offer.

4- Application of human containment in the company reached (30%) and the gap in its connection reached (70%). Perhaps the most prominent reasons for this gap are that the company does not have an efficient incentive system to achieve employee satisfaction, which motivates them to enhance the level of performance. Also, most managers in the company emphasize getting the work done more in containing their employees, and they are willing to allocate time to listen to the employees' suggestions, problems, and functional obstacles they suffer from. In addition, the company does not apply the principle of management by objectives and does not allow employees to bear self-responsibility and accomplish the job according to the procedures they see as appropriate. Rather, the employee must adhere to the routine rules established in advance to accomplish the work. The company relies on traditional administrative methods that are outdated and are no longer suitable for current work, as the company lacks competition programs and contests among employees to achieve the planned integrated accomplishment to achieve the company's goals.

It is noted that Al Furat General Company for Chemical Industries did not pay attention to disparity in its emphasis on requirements of organizational learning, as each of the four requirements received varying application and occupies different relative importance as shown in table (2).

Table (2) Relative importance and sequences for requirements of organizational learning in Al Furat General Company for Chemical Industries

Requirements of Organizational Learning	Actual applications	Gaps	Relative importance	Sequences
Empowering Employees	60%	40%	29%	2
Sharing Knowledge	70%	30%	33%	1
Monitoring Environment	50%	50%	24%	3
Involving Human	30%	70%	14%	4

Difference in relative importance of each of organizational learning requirements in company under study is a clear case that requires review by company's senior management. Order of importance for each requirement can be illustrated as a Pie Chart that calculates and plots the results as in figure (3).
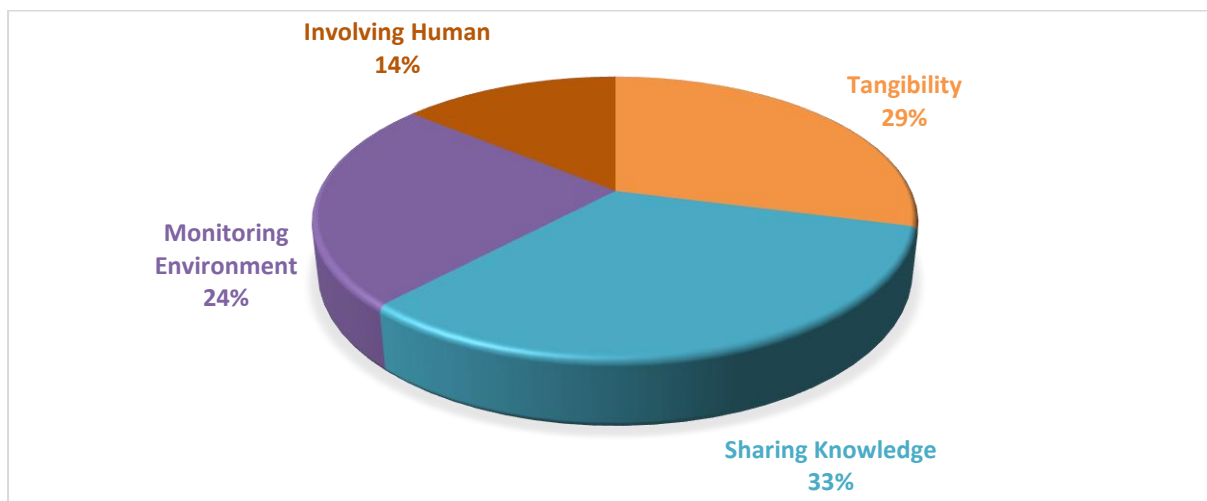

Figure (3) Relative importance for organizational learning requirements in Al Furat General Company for Chemical Industries.

Conclusions

Organizational learning represents one of the basic applications in contemporary industrial companies because it is a process that leads to employees gaining new skills, abilities and knowledge that enable them to improve the level of individual performance, which is positively reflected in improving the level of collective performance and thus improving the level of organizational performance. Organizational learning requires employee empowerment, knowledge sharing, environmental monitoring and human containment, and these four requirements represent the basis of organizational learning in industrial companies, including

Al-Furat General Company for Chemical Industries in Iraq, which is the subject of the research and case study application.

Company is interested in organizational learning and its senior management provides the facilities and support required to maximize it and considers it one of the factors of the company's success in its current industry, as through it the company can keep pace with the technical developments that occur in its business environment and industrial markets. Functional empowerment requires some necessary procedures within the company, such as training employees on modern technologies that can be used in performing work, applying flexible working hours, and adopting the management by objectives approach that ensures that the employee is a partner with the manager in setting the goal, and thus the two are jointly responsible for achieving that goal, in addition to trusting the employees' skills and abilities in individual and collective performance, which requires granting them appropriate independence and sufficient freedom in performing the job. Sharing knowledge requires that

the company have internal communication networks that provide the organizational links required to perform the work completely and skillfully.

Perhaps using internal intranet networks that link organizational units together can provide the company with links that allow knowledge sharing at two levels: the functional level, which is linked to the information and data that the employee may need regarding performing the work professionally, and secondly, the administrative level, which is linked to the information and data that the employee may need regarding the directions of authority and responsibility for issuing and implementing decisions. Al-Furat General Company for Chemical Industries faces a clear problem in monitoring the environment, as its managers and employees are indifferent to the developments and changes that occur in the industrial environment and local markets. Company believes that it is not obligated to monitor the environment and that its duty is only to manufacture, and that there are other institutions owned by Ministry of Industry and Minerals, to which the company belongs, that are responsible for the process of planning, forecasting and reporting on opportunities and threats in the industrial environment by planning and follow-up department, geological survey department and technical department.

Therefore, company should develop its own capabilities in monitoring the environment so that it can maximize organizational learning processes and achieve harmony between the core competencies and unique resources within it on the one hand, and the demands and preferences recommended by members of the external environment such as customers, partners, suppliers and even competitors. It is clear that the company under study suffers from a clear weakness in the organizational learning requirement related to human containment, and perhaps this weakness was caused by a significant decrease in the level of learning among managers and employees together.

Individual's feeling of job security within the company is very important, as it is a major motive that raises their morale and enhances their belonging to the company. The company's senior management should realize the importance of work motives and their direct impact on performance and clearly adopt the slogan of human containment and seek the help of external resources in this regard, such as human resources experts, university consulting offices, and specialized research agencies, so that the company can achieve human containment for all individuals working in it. Thus, the company ensures that its managers and employees will be motivated to learn the new skills and knowledge required for work performance, and also motivated to possess the capabilities that the company needs to excel over its competitors and provide products with high added value that make the customer satisfied and receptive and want to deal with this company and no other.

Finally, requirements of organizational learning should receive equal and balanced attention from the company's senior management, and achieving these requirements are employee empowerment - knowledge sharing - environmental monitoring - human containment, it makes company ahead of its competitors and may be classified among high-performance organizations due to continuous learning that leads to the development of human resources and facilitates the company's achievement of its goals and excellence in its industry.

References

1. Abdollahi, A., Ghaderi, Z., Béal, L., and Cooper, C. (2023). The intersection between knowledge management and organizational learning in tourism and hospitality: A bibliometric analysis. *Journal of Hospitality and Tourism Management*, *55*, 11-28.

2. Al-Husseini, S. (2023). Intellectual capital dimensions and employee performance: The mediating role of organizational learning. *Cogent Business and Management*, *10*(3), 2284437.

3. AlSaied, M. K., & Alkhoraif, A. A. (2024). The role of organizational learning and innovative organizational culture for ambidextrous innovation. *The Learning Organization*, *31*(2), 205-226.

4. Alshemmari, J. M. H. J. (2023). An empirical study on employee empowerment role in increasing efficiency of employee performance. *Journal of Logistics, Informatics and Service Science*, *10*(1), 52-71.

5. Chan, D. W., Sarvari, H., Golestanizadeh, M., & Saka, A. (2024). Evaluating the impact of organizational learning on organizational performance through organizational innovation as a mediating variable: evidence from Iranian construction companies. *International Journal of Construction Management*, *24*(9), 921-934.

6. Deng, H., Duan, S. X., & Wibowo, S. (2023). Digital technology driven knowledge sharing for job performance. *Journal of Knowledge Management*, *27*(2), 404-425.

7. Elhami, A., Roshan, A., & Giles, H. (2024). Interaction between Teacher and Students in Spanish Language Classes through the Lens of Communication Accommodation Theory. *International Journal of Society, Culture & Language*, *12*(3 (Themed Issue on Culture & Communication)), 1-16.

8. Gnewuch, U., Morana, S., Hinz, O., Kellner, R., & Maedche, A. (2024). More than a bot? The impact of disclosing human involvement on customer interactions with hybrid service agents. Information Systems Research, 35(3), 936-955.

9. Hakim, A., & Supriyatno, B. (2023). The Effect of Work Ethics and Employee Empowerment on Organizational Performance in Tebet District, South Jakarta Administrative City. *International Journal of Education, Business and Economics Research (IJEBER)*, *3*(4), 207-221.

10. Inthavong, P., Rehman, K. U., Masood, K., Shaukat, Z., Hnydiuk-Stefan, A., & Ray, S. (2023). Impact of organizational learning on sustainable firm performance: Intervening effect of organizational networking and innovation. *Heliyon*, *9*(5).

11. Kyei-Frimpong, M., Kodwo Amoako, E., Akwetey-Siaw, B., Owusu Boakye, K., Nyarko Adu, I., Suleman, A. R., & Abdul Bawa, A. (2024). Employee empowerment and organizational commitment among employees of star-rated hotels in Ghana: does perceived supervisor support matter?. *Journal of Work-Applied Management*, *16*(1), 65-83.

12. McLeod, M., Vaughan, D. R., Edwards, J., & Moital, M. (2024). Knowledge sharing and innovation in open networks of tourism businesses. *International Journal of Contemporary Hospitality Management*, *36*(2), 438-456.

13. Meher, J. R., & Mishra, R. K. (2022). Examining the role of knowledge sharing on employee performance with a mediating effect of organizational learning. *VINE Journal of Information and Knowledge Management Systems*, *52*(2), 205-223.

14. Mittal, S., Lamb, A., Goyal, A., Voleti, V., Shanahan, M., Lajoie, G., ... & Bengio, Y. (2020, November). Learning to combine top-down and bottom-up signals in recurrent neural networks with attention over modules. In *International Conference on Machine Learning* (pp. 6972-6986). PMLR.

15. Qadri, U. A., Ghani, M. B. A., Bibi, S., Tahir, A. H., Farooq, M. I., & Kashif, A. R. (2024). The learning effect on organizational performance during a crisis: a serial mediation analysis with knowledge creation, storage and sharing. *European Journal of Management and Business Economics*, *33*(1), 37-53.

16. Rafiki, A., Nasution, M. D. T. P., Rossanty, Y., & Sari, P. B. (2023). Organizational learning, entrepreneurial orientation and personal values towards SMEs' growth in Indonesia. *Journal of Science and Technology Policy Management*, *14*(1), 181-212.

17. Rashid, A., Rasheed, R., & Amirah, N. A. (2023). Information technology and people involvement in organizational performance through supply chain collaboration. *Journal of Science and Technology Policy Management*.

18. Sadq, Z. M., Ahmad, B. S., & Jwmaa, S. J. (2022). The role of empowerment strategies in achieving organizational effectiveness (An analytical study of managers' views in a sample of private banks in Erbil/Iraq). *International Journal of Social Sciences & Educational Studies*, *5*(3), 110.

19. Son, T. T., & Phong, L. B. (2023). Antecedents of Competitive Advantage for Vietnamese Firms: The Roles of Transformational Leadership, Organizational Learning and Innovation. *Journal of International Business and Management*, *6*(5), 01-15.

20. Song, J., Lee, K. B., Zhou, Z., Jia, L., Cegielski, C., & Shin, S. I. (2022). Enhancing supply chain sensing capability through social media: an environmental scanning perspective. *Information Technology & People*, *35*(1), 367-391.

21. Tu, Y., & Wu, W. (2021). How does green innovation improve enterprises' competitive advantage? The role of organizational learning. *Sustainable Production and Consumption*, *26*, 504-516.

22. Zamiri, M., & Esmaeili, A. (2024). Methods and technologies for supporting knowledge sharing within learning communities: A systematic literature review. *Administrative Sciences*, *14*(1), 17.

23. Zhang, X., Chu, Z., Ren, L., & Xing, J. (2023). Open innovation and sustainable competitive advantage: The role of organizational learning. *Technological Forecasting and Social Change*, *186*, 122114.