

THE STUDY OF LEARNING ORGANIZATION MODELS: A LITERATURE REVIEW

Dian Yulia Sari

Ministry of Finance Republic Indonesia

e-mail: dian.yulia@kemenkeu.go.id

*Correspondence: dianyuliasari67@gmail.com

Submitted: 02 August 2022, Revised: 22 August 2022, Accepted: 19 September 2022

Abstract. Peter Senge's learning organization model, "The Five Building Blocks," initiated five elements of learning organization, namely "personal mastery, team learning, shared vision, mental models, and systems thinking". Inspired by this model, several developed learning organization models and the elements are proposed by the scholars in the last two decades in order to preserve the needs of the change world. The aims of this study are to analyse the development of learning organization models and the elements attached to the model. A systematic process of literature review is implemented as the methodology of the study which critically resulted ten journals to be investigated. According to the research, three scholars implemented the five building blocks model from Peter Senge, while the other scholars proposed their studies with developed elements and learning organization models. The characteristics, the readiness, the perception, and the existing conditions of the organizations are several factors that affect the learning organization model. While the differences in the level of how important each element in the learning organization model is also encourages the development of learning organization model itself. Heretofore, the Five Building Blocks model is still very relevant to be used by the scholars and become the basis of learning organization model research in the future.

Keywords: learning organization; model; elements; characteristics; dimension.

INTRODUCTION

A continuous improvement has become a demand for every organization today. Various organization are trying to improve themselves so as not to be left behind the development of an increasingly advanced and globalized world. This should be a concern for an organization to change the “command” style to the “participation” style. Organization must provide opportunities for their members to always learn and develop so that they can have a positive impact on the organization. One of the strategies that must be done is to develop a learning organization.

Learning organization is a continuous and planned organization facilitate its members to be able to continuously develop and transform themselves, both collectively and individually, in an effort to achieve a better result and in accordance with the perceived needs shared between the organization and the individuals within it, ([Minister of Finance Republic Indonesia Decree](#), 2018). The concept of learning organization itself was first popularized by Peter Senge in his book, *The Fifth Discipline* (1990). According to ([Senge](#), 1990), the success of an organization is largely determined by its ability to develop its institution into a learning organization. The book also explain that learning organization are a place for people who continuously improve their capacity to create the results that are truly expected. Ideally in a learning organization each individual is able to develop various new thoughts, freely express his aspiration, and how each individual continues to learn how to learn together. To achieve this goal,

([Senge](#), 1990) suggests the use of five components of technology, namely: “systems thinking, personal mastery, mental models, shared vision, and team-learning”.

Several experts also formulate the notion of learning organization, ([Pedler et al.](#), 1991), stated that a learning organization means an organization that facilitates the learning process of all its members and continues to carry out positive transformations. This means that each individual can continue to learn, in line with organizational changes for the better. Furthermore, ([Watkins and Marsick](#), 1993) add that learning organizations will continue to learn, transform, empower communities, emphasize collaboration and group learning process, strongly encourage open discussion, and recognize that there is interdependence between organizations and individuals within them. Moreover, ([Marquardt](#), 1996) argues that a learning organization is an organization that powerfully and collectively learns and continues to transform for the better in collecting, managing, and using the knowledge for organizational success.

The importance of sharing in the context of a learning organization is not only beneficial for the continuity of the organization in the face of change and uncertainty that is happening. Learning organization is an investment. Learning that has become a culture can encourage individuals and organizations to increase knowledge, competence, and improve performance on an ongoing basis. Until the time comes, will encourage continuous improvement, support the achievement of goals, enrich innovation, and the ability to

deal with change, ([Senge](#), 1990)

While the objective of Learning organization according to ([Minister of Finance Decree Republic Indonesia](#), 2018) are, anticipating the accelerated change, disruption and uncertainty at national and global levels by creating an agile, adaptive and innovative organization; enhancing a collaborative, digital, creative, and independent learning culture for all employees; improving the competence of reliable human resources, accountable, competent, and ability to complete the tasks effectively and efficiently; improving the individual, team, and organizational performance in achieving the vision, mission, and the strategic objectives of the organization; maintaining the intellectual assets of the organization through knowledge management; and improving the culture of sharing knowledge both at the individuals, teams and organizations.

The learning organization itself opens opportunities for organizations to continue to grow following changes in the environment, competition, technology, and stakeholder demands. Along the way, the model of learning organization continues to develop. On that basis, this study will analyses the development of the learning organization model implemented by the scholars in the last two decades and the element attached to the model.

METHODS

The study conducted a traditional research method called literature review. According to ([Cooper](#), 2010), literature review is a research that examines and critically reviews the knowledge, the ideas,

and or findings contained in the body of academically oriented literature, and formulates theoretical and methodological contributions to a certain topic.

This study analyses the development of learning organizations models and their elements proposed by the scholars since the Five Building Blocks model from Peter Senge. The search for the articles and the journals is done through the research gate, google search, and google scholar with the keywords of learning organization, learning organization models, and learning organization elements in both Bahasa and English. The criteria for the articles and journals tracked include the period of the publishing journals in the range of the last 20 years from 2002 to 2022 with; learning organization, learning organization models, and learning organization elements as the research theme; and the types of journals are in original and full text journals.

RESULTS AND DISCUSSION

For the last three decades a numerous studies of learning organization models have come up as an essential discussion to the scholars. The change of the elements of learning organization has been proposed by the scholars as a development and improvement of the five building blocks model pioneered by Peter Senge. The following table of Learning Organization Models presents several key development of learning organization models and the differences of the elements implemented to the models.

Table 1. The Learning Organization Models

The Model	The Author	LO Elements
The five building blocks	(Peter Senge , 1990)	“Personal Mastery, Team Learning, Shared Vision, Mental Models, Systems Thinking”
The eleven characteristics of a learning company	Pedler et al (1991)	“Internal exchange, Enabling structure, Reward flexibility, Inter-company learning, Informing, Learning approach to strategy, The formative accounting and control, The participative policy making, The boundary workers as environmental scanners, Self-development opportunities for all, and Learning climate”.
Dimension of Learning Organization Questionnaire (DLOQ)	(Watkins and Marsick , 1993), (2003)	“Empowerment, Inquiry and dialogue, Team learning, Continuous learning, Strategic leadership, System connection, and Embedded system”.
Five factors of readiness	Wick and Leon (1995)	“Planning, Leadership, Innovation, Information dissemination, and Implementation”.
Learning Organization’s five indicators	(Marquardt , 1996)	“People Empowerment, Technology Management, Learning Dynamics, Organizational Transformation, Knowledge Management”.
The five strategic building blocks	Goh and Richard (1997)	“Experimentation and rewards, Clarity of organizational mission and vision, Team problem-solving, Leadership commitment and empowerment, and Effective transfer of knowledge”.
Learning Organization Process Survey	Udai Pareek (2003)	“Synergy, Information flow, Holistic frame, Shared vision, Emotional maturity, Strategic trust, Empowerment, Learning”.
The reliability and validity of the “Organizational Learning”	(Mets and Torokoff , 2007)	“Internal Environment and Learning, “Main Process” for the scale of employee, “Main Process” for the scale for managers, Shared values, and Internal Environment, Goals and Development”.
The Learning Security Model	(Garvin et al , 2008)	“Admitting new concept, psychological security, learning process, welcoming differences, learning encouraging”.
The Learning Climate	(Jamali et al , 2008)	“Systematic employee development,

Model		Employee participation, Learning reward systems, Learning climate, Constant experimentation”.
An Open Systems of Learning Organization	Liesbsch (2011)	“Relative dynamic systems, Self-organized in an adequate way and structure-determined, Relative opened systems, and Relative underdetermined systems”.
An Integrated Learning Organization Model	(Waheed et al , 2015)	“Self-development, Innovation, Leadership facilitation, Information sharing, Empowerment, Collective collaboration”.
The Five Critical Elements of learning Organization	(Shin et al , 2016)	“Empowering at all levels, gathering and integrating external information, establishing and communicating a clear sense of direction and purpose, accumulating and sharing internal knowledge, challenging the status quo and enabling creativity”.
Learning Organization Management model	D’Amato et al (2016)	“Shared responsibility, Total Transparency, Top down and bottom up approach, People and team increasingly self-managed, Intrinsic and based on involvement and job quality, Creation of learning infrastructures that facilitate learning, Build the better context to obtain the best people”.
A Collective Organizational Model	(Lau et al , 2019)	“Processes, Principles, Purposes”.
The Learning Organization Dimension	(Wetzel et al , 2019)	“Discipline, decision making, desire, equality”.
Adaptive Learning Organization Model	(JoshBersin , 2020)	“Leadership, Partnership, Innovation; Intelligence, Analytics, Velocity; Agility, Experience, Value”.

Since the first introduced by Senge in the early 90s, numerous theories regarding learning organization have been proposed by organizational experts. According to table 1 above, the five building blocks by ([Senge](#), 1990) is a commencement of a learning organization model. The model integrates five elements which include

“personal mastery, team learning, shared vision, mental models, and systems thinking”. It is believed that learning organization is a place where collective thoughts are spread, new thinking patterns are raised, and how learning together is being continuously developed for all individuals in the organization ([Senge](#),

1992).

Moreover, ([Pedler, et al.](#), 1991) introduced a measurement instrument to the learning organization model known as “the eleven characteristics of a learning company”. The eleven characteristics/elements are “internal exchange, enabling structure, reward flexibility, inter-company learning, informing, learning approach to strategy, the formative accounting and control, the participative policy making, the boundary workers as environmental scanners, self-development opportunities for all, and learning climate”. The instruments implemented to ensure that the company which transform into a learning organization is on the right path. In addition, Watkins and Marsick presented a new model of learning organization called “Dimension of Learning Organization Questionnaire” (DLOQ) model. The model comes up with seven important elements of learning organization, namely “Empowerment, Inquiry and dialogue, Team learning, Continuous learning, Strategic leadership, System connection, and Embedded system” ([Watkins and Marsick](#), 2003). The DLOQ is considered as the most extensive tools of questionnaire to measure the learning dimensions. It is because the questionnaire entitles the organization to consider the way to use and support the learning process at organizational, team, individual, and macro level.

The five factors of readiness, is a learning organization model from (Wick and Leon., 1995). The five factors are “planning, leadership, innovation, information dissemination, and implementation”. Each factor has several

elements to support the transformation process to be a learning organization. The elements inside the factors can be explained as follow: first, the planning; having realistic expectations of employee, participation of managers and employees in planning, alignment of plans with the vision, having measurable plans for achieving the vision, and evaluation of plans, processes, and progress. Second, the leadership; collaboration in formulating the vision, having clearly defined objectives, awareness of performance gaps, incorporating human resource management into the organization’s vision, and having clearly defined vision. Third, innovation; risk-taking, valuing novel ideas, having an open environment, creating opportunities, embracing change, and having a safe environment. Fourth, information dissemination; accessibility of information, free flow of information, awareness of expectations in the internal and external environment, sharing research findings and evaluation results, and informing employees about the organization’s plan and activities. The last, Implementation; fair distribution of resources, fair performance evaluation, attempting to develop and promote scientific knowledge, valuing human resource development and appreciating research and learning, pragmatism, and flexible work schedule.

According to ([Marquardt](#)., 1996), learning organization has five indicators as the elements, they are “people empowerment, technology management, learning dynamics, organizational transformation, knowledge management”. Furthermore, ([Marquardt](#)., 2002) affirms

that an organization can be seen as a learning organization if the new behavior has been embedded in social norms and values as a whole. Marquardt also claims that it is essential to carry out the ten strategies in building the learning subsystems. That strategies are increase employee's intervention, use scenario planning for learning, design self-grooming plans, encourage and execute systemic thinking approach, execute systemic learning skills, expand domestic and universal intercultural mindsets and learning, develop modular and reusable learning plans, increase people capability on learning how to learn, design development plan based on employee's capability, and develop organizational dialogue.

The five strategic building blocks model, a learning organization model by (Goh and Richard., 1997) suggest that strategic elements in learning organization can be grouped into the following five elements, namely "experimentation and rewards, clarity of organizational mission and vision, team problem-solving, leadership commitment and empowerment, and effective transfer of knowledge". According to (Goh and Richard, 1997), these blocks must be implemented by the organization to turn into a learning organization. The next model known as Learning Organization process survey is proposed by (Pareek., 2023). The model initially includes the eight elements, namely "Synergy, Information flow, Holistic frame, Shared vision, Emotional maturity, Strategic trust, Empowerment, Learning".

Inspired by theory of the five building blocks from Peter Senge, ([Mets and Torokoff.](#), 2007) develop a model known as the reliability and validity of the "Organizational Learning". The model components are "Internal Environment and Learning, "Main Process" for the scale of employee, "Main Process" for the scale for managers, Shared values, and Internal Environment, Goals and Development". The theory is implemented to identify the general characteristics of the learning organization. ([D'Amato et al.](#), 2016) proposed a learning organization model acknowledged as learning organization management model as a practical guidance for becoming a learning organization. There are seven components of the model, namely "shared responsibility, total transparency, top down and bottom up approach, people and team increasingly self-managed, intrinsic and based on involvement and job quality, creation of learning infrastructures that facilitate learning, and build the better context to obtain the best people". The management model enables all individuals in the organization to be more "human" with a change to express their emotions, passions and also the energy.

Moreover, research discussing the learning organization implementing various models of learning organization have been an important topic chosen by the scholars. According to the literature search process, there are ten journals matched the criteria of this study. The learning organization models implemented in the ten journals are presented in the table below.

Table 2. The Learning Organization Models Implemented on the Journals

Number	Researcher	Year	Learning Organization Elements
1	Yashoglu et al.,	2014	Learning Organization elements implemented in this journal are based on Peter Senge's five disciplines, then developed by Mets and Torokoff; The Learning Organization was tested to Turkish companies.
2	Liu, Huifang	2018	Learning Organization practice implemented from the perspective of the fifth discipline model theories from Peter Senge; The case study was from an enterprise in GuangZhou, China.
3	Daryani et al.,	2015	Learning Organization components implemented are based on the Marquardt systematic model; The Learning Organization analysis was implemented in a company in Iran.
4	Hishamudin et al.,	2010	The elements of Learning Organization from Goh and Richard combined with the LO elements from Watkins and Marsick model were implemented to this journal; The Learning Organization concept was reviewed from the NPOs in Singapore
5	Panagiotopoulos et al.,	2018	The journal is investigated the Learning Organization characteristics based on five principles of Peter Senge's model; The LO characteristics was tested to an education institution in the prefecture of Ilia in Greece.
6	Mehrabi et al.,	2013	The journal tested and explained the dimension of Learning Organization from Peter Senge's model; The dimension of the Learning Organization was tested and viewed from the Education Organization in Boroojerd county and the Related Department in Iran.
7	Hishamudin et al.,	2012	The paper adopted the Learning Organization framework with the

			elements from Watkins and Marsick and also Goh and Richard; The gauge progress of the Learning Organization was implemented to the non-profit human social sector of Singapore.
8	Neshat et al.,	2016	The model of Learning Organization applied to this research was from Wick and Leon Model that implemented their five factors of readiness to become a learning organization; The research was explored to the National Library and Archives of Iran (NLAI) in Iran.
9	Budhiraja et al.,	2015	The research implemented Learning Organization instruments from Udai Pareek with the eight LO dimensions based on the combination elements from five disciplines of Peter Senge and the Dimensions of the Learning Organization Questionnaire (DLOQ) from Watkins and Marsick; The model of learning organization was investigated through the research from Indian service industry.
10	Villiers, De	2007	The study validates the characteristics of Learning Organizations measured with a model developed by Pedler, et al containing eleven characteristics of Learning Organization; The survey and the report of the analysis were developed from different economic sectors in South Africa.

As stated in the table above, the ten journals have fulfilled the criteria of the database for the research. They were conducted in the last two decades, in various models of learning organization. Based on the models developed, there are numerous elements which are also implemented to various studies of the scholars. Regarding to the sample of the data, the research were conducted in several countries which are include Turkey, China, Iran, Singapore, Greece, India, and South Africa. It can be seen from the table that the research was conducted on various types of entities.

The research conducted by ([Yashoglu et al.](#), 2014) targeted companies in Turkey. Yashoglu uses the five building blocks model with the five elements embedded in it form Peter Senge which has been developed by ([Mets and Torokoff.](#), 2007) namely “Internal Environment and Learning, “Main Process” for the scale of employee, “Main Process” for the scale for managers, Shared values, and Internal Environment, Goals and Development”. The theory is implemented to identify the general characteristics of the learning organization. The study implemented the model to identify the characteristics of learning organization and to measure the scale of the learning organization in companies in Turkey. The result of the study stated that the elements based on ([Mets and Torokoff.](#), 2007) model is a proven tool to measure a level of learning organization with a high validity and reliability.

The study by ([Liu.](#), 2018), ([Mehrabi.](#), 2013) and ([Panagiotopoulos et al.](#), 2018) implemented then model of Peter Senge

namely the five building blocks with the elements are “Personal Mastery, Team Learning, Shared Vision, Mental Models, Systems Thinking”. ([Liu.](#), 2018) conducted research on an enterprise in Guang Zhou, China using Peter Senge theory to reveal how this model can successfully build a learning organization. The enterprise was chosen for a unique talent management system. Based on the research result, the learning organization model in the enterprise is a suitable model and can be imitated as a reference. ([Mehrabi et al.](#), 2013) also conducted a research using the five building blocks from Peter Senge. This research was conducted at an education organization in Iran. The purpose of the research is to perceive the relationship between organizational structure and the dimension of learning organization. The results of the study indicate that based on the analysis carried out, the most important elements in the learning organization dimension are team learning and mental models. Furthermore, the research from ([Panagiotopoulos et al.](#), 2018) was conducted at an educational organization in Greece. The reseach is also implemented five disciplines on the theory of Peter Senge. The aim of the study is to investigate the teacher’s perception in the school about the characteristics of the learning organization in their organization. Against the research, it was found that the five elements of Peter Senge’s theory have positive correlation with the learning organization that has been running in the organization.

Several studies implemented the learning organization model that has been developed, was carried out by (Hishamudin

et al., 2010). This study combines elements of the learning organization model from (Goh and Richard., 1997) and elements of the learning organization from ([Watkins and Marsick](#), 1993). Hishamudin et al., also conducted research related to learning organization in 2012 and still implemented the similar elements as the previous research. They are organizational learning practices, team learning practice, individual learning practice, leadership commitment and empowerment, clarity of mission and vision, effective transfer of knowledge, experimentation and intrinsic motivation, and team problem-solving. The study conducted by (Hishamudin et al., 2010) and (Hishamudin et al., 2012) raised the similar type of entity, namely non-profit organization in Singapore. The aim of the research is to reveal the relationship between the elements of learning organization and organizational performance. Furthermore, the research aim is also to investigate how the learning organization implemented in non-profit organization in Singapore. The findings of the study demonstrate that team-problem solving, individual learning practice, and organizational learning practice greatly affect the organizational performance. While the elements of experimentation and intrinsic motivation, clarity of mission and vision, organizational learning practices and leadership commitment and empowerment are essential in the transformation process to become a learning organization.

A study on learning organization was conducted by ([Villiers](#), 2007) using the learning organization model from ([Pedler et al.](#), 1991). The study was conducted on

several organizations with different economic sectors in South Africa. The purpose of the study is to measure the level of implementation of the eleven characteristics which are “internal exchange, enabling structure, reward flexibility, inter-company learning, informing, learning approach to strategy, the formative accounting and control, the participative policy making, the boundary workers as environmental scanners, self-development opportunities for all, and learning climate” ([Pedler's et al.](#), 1991), to the level of characteristics of learning organization in each respondent. The result of the study indicate that the model is a uni-dimensional that has a high level of reliability and is expected to be used in the long term and scale.

The research conducted by ([Daryani et al.](#), 2015) applied a learning organization model from ([Marquardt](#), 2002) with a sample of regional company in Iran. This research was conducted with the main objective of measuring the dimension of the implementation of learning organization in the company by using elements in the Marquardt theory. “The level of validity and reliability of Marquardt model has been confirmed” ([Daryani et al.](#), 2015). The result of the research explained that the characteristics of the learning organization have been applied above the average level even though there are differences when it was viewed from different position.

The five factors of readiness model from (Wick and Leon., 1995) was applied by ([Neshat et al.](#), 2015) in their research which aims to examine the factors that influence an organization to become a learning

organization. The factors include “planning, leadership, innovation, information dissemination, and implementation”. The research was conducted on the National Library in Iran. The result of the study describes that there are striking differences in the application of learning organization readiness factors in different departments in which the strength and weaknesses of the organization also can be seen.

The study of learning organization was also conducted by ([Budhiraja et al.](#), 2015). It combines the elements attached in the learning organization model from Peter Senge and the Dimension of Learning Organization Questionnaire (DLOQ) model from Watkins and Marsick, comes up as the model developed by Udai Pareek. The merging of the elements then creates a learning organization model with eight elements attached in it, namely “synergy, information flow, holistic frame, shared vision, emotional maturity, strategic trust, empowerment, and learning”. This research was conducted on the service industry in India which aim to find a model of a learning organization and compare it to the existing models. In addition, this research also aims to determine the alteration of the determinant level of learning organization among several types of industry. The results of this study indicate that the elements of the learning organization model have existed and were previously applied both by individuals and organizationally, so that they can create a learning organization. The most prominent characteristics in these elements correspond to the elements of the five building blocks model from Peter Senge, namely personal mastery, team learning,

shared vision, mental models, and systems thinking.

CONCLUSION

In today’s world, development is inevitability. Thus, to be able to survive in an environment that continue to rapidly and competitively developed, an organization ought to discover the key to its competitive advantage through transforming into a learning organization. The Five Building Blocks model by Peter Senge is a learning organization model initiated in the early 90’s followed-by others developed model. This model, in the last two decades, is still very relevant to be used by the scholars and become the basis of learning organization model research in the future. However, the learning organization model is formerly developed following the developments of an uncertain, complex, volatile, and ambiguous world.

From the ten journals which were analyzed in this study, three scholars implemented the five building blocks model from Peter Senge, while the other scholars come up with the learning organization models and the elements that have been developed. The characteristics, the readiness, the perception, and the existing conditions of the organizations are several factors that affect the learning organization model. In addition, the differences in the level of how important each element in the learning organization model is also encourages the development of learning organization model itself.

REFERENCES

- Budhiraja, S., Malhota, M., and Kaushik, N. (2015). "Determinant of Learning Organization: A Case Study of Select Service Sector Organizations". *The International Journal of Applied Business and Economic Research*, 13(3), 1357 – 1373.
- Cooper, H. (2010). *Research synthesis and meta-analysis: A step-by-step approach*. (5th Ed). Thousand Oaks, CA: SAGE Publication, Inc.
- Daryani, S. M., and Zirak, A. (2015). "Implementing Learning Organization Components in Ardabil Regional Water Company based on Marquardt Systematic Model." *International Journal of Organizational Leadership*, 4, 238 – 253.
- D'Amato, V., Macchi, F., and Tosca, E. (2016, Desember 15-16). "Implementing Learning Organization: from Theory to Practice". Proceeding on 7th European Business Research Conference, University of Roma Tre, Italy.
- Garvin, D. A., Edmondson, A. C., and Gino, F. (2008). Is yours a learning organization? *Harvard Business Review*, 86(3), 109 – 116.
- Hishamuddin., Nam, R. Y. T., Wahab, S. A., Nordin, R., and Hakim, A. (2012). "The Implementation of Learning Organization Elements and Their Impact towards Organizational Performance amongst NPOs in Singapore". *International Journal of Business and Management*, 7(12), 2 – 35.
- Hishamuddin., Saludin, M. N., Shuib, S., Keling, M. F., Ajis, M. N., and Nam, R. Y. T. (2010). "Learning organization elements as determinants of organizational performance of non-profit organizations (NPOs) in Singapore". *International NGO Journal*, 5(5), 117 – 128.
- Jamali, D. and Sidani, Y. (2008). Learning Organization: diagnosis and measurement in a developing country context. *The Learning Organization*, 15(1), 328 – 365.
- Joshbersin. (2020). A New Model for Corporate Training: The Adaptive Learning Organization. *Enterprise Learning*. Josh Bersin Academy.
- Lau, K. W., Lee, P. Y., and Chung, Y. Y. (2019). A Collective Organizational Learning Model for Organizational Development. *Leadership and Organization Development Journal*, 40(1), 107 – 123.
- Liu, H. (2018). "A Brief Analysis of Learning Organization Practice from The Perspective of the Fifth Discipline Model Theories – A Case Study of Jatco (Guangzhou)," *American Journal of Industrial and Business Management*, 8, 2143 – 2157.
- Marquardt, M. J. (1996). *Building Learning*
-

-
- Organization: A Systems Approach to Quantum Improvement and Global Success*. New York: McGraw-Hill.
- Marquardt, M. J. (2002). *Building the learning organization: Mastering the five elements for corporate learning*. Palo Alto: Davies-Black Press.
- Mehrabi, J., Soltani, I., Alemzadeh, M., and Jadidi, M. (2013). "Explaining the Relationship between Organizational Structure and Dimensions of Learning Organizations (case study: Education Organization in Boroojerd County and the Related Departments)". *International Journal of Academic Research in Business and Social Sciences*, 3(4), 116 – 128.
- Mets, T. and Torokoff, M. (2007). Patterns of Learning Organization in Estonian Companies. *TRAMES: A Journal of The Humanities & Social Science*, 11(61/56), 139-154.
- Minister of Finance of Republic Indonesia Decree, number 1 (2018). *The Technical Guidance of The Implementation of Learning Organization in Ministry of Finance Republic Indonesia*.
- Nair, J., and Paturkar, R. N. (2016). "A Comparative study of Learning Organization models – A critical review". *International Research Journal of Management*, 7(12), 396 – 417.
- Neshat, N., Mirhosseini, Z., Zahedi, Z. (2016). "Becoming a Learning Organization: A case Study of the National Library and Archive of Iran". *Sharing Practices and Actions for Making Best Use of organizational Knowledge in Libraries*, Langsam Library, University of Cincinnati, OH, USA, 1 – 12.
- Panagiotopoulos, G., Zogopoulos, C., and Karanikola, Zoe. (2018). "The Learning Organization According To Senge: Recording And Validation Of The Park Research Tool In Primary Education Schools In The Prefecture Of Ilia". *Global Journal of Human Resource Management*, 6(5), 1 – 19.
- Pareek, U. (2003). *Training Instruments in HRD and OD*, Tata McGraw Hills, New Delhi.
- Pedler, M. Burgoyne, J., and Boydell, T. (1991). *The Learning Company. A Strategy for Sustainable Development*. McGraw-Hill. London.
- Senge, P. M. (1990). *The Fifth Discipline: The Art and Practice of the learning Organization*. New York: Doubleday, U. S. A
- Senge, P. M. (1992). Building Learning Organization. *The Journal for Quality and Participation*, 15(2), 30 – 30.
- Shin, H. W., Picken, J. C., and Dess, G. (2016). Revisiting the learning organization: How to create it. *Organizational Dynamics Journal*, OrgDyn-594, 1-11.
- Villiers, D. (2007). "The Learning Organisation; Validating A Measuring
-

Instrument". *Journal of Global Strategic Management*, 1(1), 115 – 123.

Waheed, A., and Farrukh, M. (2015). Learning Organization And Competitive Advantage–An Integrated Approach. *Journal of Asian Business Strategy*, 5(4), 73-79.

Watkins, K. E. and Marsick, V. J. (1993). *Sculpting the Learning Organization. Lesson in the Art and Science of Systematic Change*. Jossey-Bass Publisher, San Fransisco.

Watkins, K. E. and Marsick, V. J. (2003). Demonstrating the value of an organization's learning culture: The dimensions of the learning organization questionnaire. *Advances in Developing Human Resources*, 5(2), 132 – 151.

Wetzel., R. and Tint., B. (2019). Using Applied Improvisation for Organizational Learning in the Red Cross Red Cressect Climate Centre. In: Antonacopoulou E., Taylor S. (Eds) *Sensuous Learning for Practical Judgement in Professional Practice*. Palgrave Studies in Business, Arts and Humanities. Palgrave Macmillan, Cham.

Yashoglu, M. M., Sap, O., and Toplu, D. (2014). "An Investigation of The Characteristics of Learning Organization in Turkish Companies: Scale Validation." 10th International Strategic Management Conference. *Procedia – Social and Behavioral Sciences*, 150, 726 – 734.



© 2022 by the authors. Submitted for possible open access publication under the terms and conditions of the Creative Commons Attribution (CC BY SA) license (<https://creativecommons.org/licenses/by-sa/4.0/>).