

RESEARCH ARTICLE

The Influenced Learning Organization Characteristic Factors Affecting the Performance of Savings Cooperatives in Kalasin Provincial Area, Thailand

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Abstract

The objective was to study the influenced learning organization characteristic factors affecting the performance of savings cooperatives in Kalasin provincial area. The population was 20,824 members. Quota sampling technique was applied to determine the sample size with the 50 members of 9 cooperatives. It turned out of 450 individuals. The primary data were collected from the questionnaire, and analyzed by descriptive statistics and multiple linear regression. The findings found that all five components of Senge's learning organization (LO) theory affected the cooperatives operations by reducing operational costs. Furthermore, it confirmed that LO theory could be applied as a principle in operational practices and strategy formulation for the long-term efficient cooperatives operation.

Keywords: Learning Organization, Performances, Savings Cooperatives

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บทความวิจัย

ปัจจัยองค์กรแห่งการเรียนรู้ที่ส่งผลต่อผลการดำเนินงานของ สหกรณ์ออมทรัพย์ในเขตพื้นที่จังหวัดกาฬสินธุ์ ประเทศไทย

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บทคัดย่อ

การวิจัยครั้งนี้มีวัตถุประสงค์เพื่อศึกษาปัจจัยองค์กรแห่งการเรียนรู้ที่ส่งผลต่อการดำเนินงานของสหกรณ์ออมทรัพย์ในเขตพื้นที่จังหวัดกาฬสินธุ์ เก็บข้อมูลจากประชากรที่เป็นสมาชิกสหกรณ์ 20,824 คน จาก 9 แห่ง กำหนดกลุ่มตัวอย่างแบบโควตาจาก 9 สหกรณ์ ๆ ละ 50 คน ได้ขนาดกลุ่มตัวอย่าง 450 คน เก็บข้อมูลปฐมภูมิโดยใช้แบบสอบถาม วิเคราะห์ข้อมูลด้วยสถิติพรรณนา ได้แก่ ค่าเฉลี่ยและส่วนเบี่ยงเบนมาตรฐาน และสถิติอ้างอิง ได้แก่ การวิเคราะห์สมการถดถอยพหุคูณ ผลการวิจัยพบว่า ปัจจัยองค์ประกอบของทฤษฎีองค์กรแห่งการเรียนรู้ของเซงเก้ทั้ง 5 องค์ประกอบส่งผลต่อการดำเนินงานของสหกรณ์ออมทรัพย์โดยการลดค่าใช้จ่ายในการดำเนินงานขององค์กรนอกจากนี้ผลการวิจัยสามารถยืนยันได้ว่าทฤษฎีองค์กรแห่งการเรียนรู้ของเซงเก้สามารถนำมาใช้เป็นหลักการในการปฏิบัติงานและการกำหนดกลยุทธ์เพื่อการดำเนินงานที่มีประสิทธิภาพของสหกรณ์ออมทรัพย์ในระยะยาว

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Introduction

The learning organization concept originated in the writings of Chris Argyris (1957) who presented the concept of organizational behavior and people working in an organization by introducing the Learning Organization concept which described the learning of those who had their function as a learning organization. The Art and Practice of the Learning Organization discusses five disciplines that will lead to a theoretical learning organization.

A learning organization can create, acquire, and transmit knowledge, as well as change its behavior to reflect new knowledge and insights (David & Garvin 2023). A learning organization, in general, is a culture that encourages its people to increase their knowledge, chances, and abilities by utilizing a corporate framework. This helps them to innovate while also allowing the company to develop continuously.

Senge (2006) noted that the organization may reinvent itself when the market demands it by fostering team learning. These businesses' increased competitiveness is made possible by their reactive growth mindset. There are various perspectives as to what learning organizations truly are. While a study noted that learning organizations always seek ways to capture learned concepts to function continuously (Alipour, Khairuddin, & Karimi, 2021) another suggested that a vital component of building a learning organization is team learning (Norliya & Azizah, 2022). Additionally, Norashikin and Noormala (2022) also suggested that organizational learning helps to improve an organization's competitive advantage and responsiveness to change, subsequently sparking interest in developing organizations that promote and foster learning.

A more recent definition highlighted organizational learning, which is related to learning organization (Robelo & Gomes, 2021) as a process or capacity within the organization that enables it to acquire, access, and revise organizational memory thus providing directions for organizational action (Lin, 2022).

Emphasizing the learning organization that results from improving personnel's or human resources's capacity to keep up with the ongoing changes in society at all levels is important for the success of the organization. Practically, the organization takes advantage of the requirement for learning at all organizational levels--- individual, team, and organizational levels.

The formation of a learning organization, which will guide the development of the organization in all its dimensions, depends on the values, philosophy, vision, and organizational culture, in addition to the development of the attitudes of the organization's employees (Wittayakorn-Puripunpinyoo, 2022).

For the concepts of Learning Organization, Senge (2006) listed five learning organization disciplines. These are Senge's ideas on decentralized leadership, or the notion that all employees can cooperate to accomplish a common objective.

It also includes strong leadership and the learning organization philosophy. These are comprised of (1) Building a Shared vision, Interactions with employees and the company should be used to develop this vision, (2) Systems Thinking, This supports the notion that, as opposed to being a group of people. Employees are unable to concentrate on personal problems in favor of the current system as a whole as a result, (3) Mental Models, employees must use mental models to picture where they wish to go next. This

motivates kids to take independent action, (4) Team learning, to increase their ability to consider the opinions of other team members, they must be humble. To do this, they must set aside time for introspection, and (5) Personal mastery is the improvement of a worker's capacity to meet personal goals by upholding an atmosphere in which workers can forge their sense of direction to boost productivity and engagement by raising employees' degree of enthusiasm for their work.

As mentioned, learning organization has been widely applied to business organizations. Du, Zhang, and Wu (2022) explored a complete theoretical framework of organizational learning-external cooperation-technological innovation in China, this study investigates the impact of organizational learning and external collaboration configuration on enterprise technological innovation. Nipasuwan, Thanabodeekij and Ussivakul (2021) studied a key competence for sustainable Employment of 50 companies 'employees across various companies listed on the Stock Exchange of Thailand. Husseina, Mohamadb, Noordina, and Ishak (2022) studied learning organization and its effect on organizational performance and organizational innovativeness in Malaysian public institutions of higher education. Similarly, Baráth (2022) researched learning organizations as a tool for better and more effective schools emphasizing on socio-economic context of learning and the need for increasing the quality of the teaching profession in Hungary.

On the other hand, Phongsichomphu, Na-Takuatoong, and Kaemkate (2022) conducted research on factors affecting learning organizations and innovative organizations focusing on 550 managers in public and private hospitals in Bangkok, Thailand. Aliev and Sigov

(2022) conducted their research on creating a learning organization as an increase in the adaptability of a company's human capital to the volatility of the external environment in the Russian Federation. Similarly, Kaipunlert (2021) studied an organizational development Intervention to enhance the learning organization of Assumption University of Thailand. In addition, the learning organization research work has been conducted on the research on challenges to the learning organization in the context of the Covid-19 pandemic uncertainty creativity in Lithuania (Vainauskiene & Vaitkiene, 2022).

At present, learning organization was also applied for Cooperatives research. The research works of learning organization of cooperatives abroad expressed as Varamini, Rezvanfar, Movahedmohammadi, and Pishbin (2020) studied the role of organizational learning and organizational innovation of Cooperatives in Tehran, Iran. In the same way as the research works of Akhtar, Arif, Rubi, and Naveed (2022), Calontone, Cavusgil, and Zhao (2022), and Chen, Wang, and Yang (2022) conducted their research works as the application of learning organization of Cooperatives performance in China. Also, the research works of learning organizations influencing the Cooperative's performance expressed as the works of (Giriego, Geroy, & Wright, 2022; Ho, 2021; Hult, Hurley, & Knight, 2022; Hurley & Hult, 2021).

In Thailand, there is a certain amount of research work on learning organizations in Cooperatives. Following the works of Wittayakorn-Puripunpinyoo (2019) and Wittayakorn-Puripunpinyoo (2020) emphasized savings cooperatives in Thailand. Savings Cooperatives is one of 8 types of cooperatives in Thailand. They are financial cooperatives owned and operated by and for their

members. Its mission is to encourage member savings and provide loan funds for productive investment. Cooperatives are governed by the Cooperative Act of 1968 (www.fsct.com).

In this work, the researcher conducted this research focusing on the learning organization characteristic factors affecting the performance of learning organization of savings cooperatives in Kalasin provincial area which included 9 savings cooperatives. By giving importance to being a learning organization of savings cooperatives in Kalasin provincial area. Savings cooperatives in Kalasin provincial area have been concerned with knowledge management and organization by using learning organization principles and concepts as the main idea in formulating the organization's strategy and, as a result, affecting the results of operations. Furthermore, their learning organization concept included the establishment of a learning culture within the organization. From past to present, it is widely known that learning organization is the key success factor for savings cooperatives performance but there is no research work of Kalasin savings cooperatives which focused the research methodology on the influenced learning organization characteristic factors affecting their performance. It is the first pilot research work to create this research topic to bring this research results beneficially.

Research Objective

The research objective was to study the influenced learning organization characteristic factors affecting the performance of savings cooperatives in Kalasin provincial area, Thailand.

Literature Review

Learning Organization

Since the 1970s and 1980s, learning organizations have attracted the attention of academic circles and have become one of the popular themes of academic research (Huifang, 2022). A learning organization in business management is a business that supports its employees' learning and undergoes constant change. The challenges that modern firms are under may lead to the development of learning organizations, which allows them to maintain their competitiveness in the business environment. According to Senge (2006), *The Fifth Discipline* helped to promote the idea of the learning organization. He suggested the following five qualities in the book which are:

Systems thinking, this conceptual framework enables individuals to examine businesses as bounded things (Geng & Zhang, 2021). Learning organizations review their business using this way of thinking and have information systems that track how well the organization as a whole and its various parts are performing (Sreeja & Hemalatha, 2022).

Personal mastery, personal mastery can also be seen spiritually as, for instance, sharpened attention, unique vision, and the capacity to observe and understand reality honestly (Pedler, 2022). Individual learning is obtained through staff development,

training, and ongoing self-improvement (Kremer & Brien, 2021).

Mental models, individual mental models explain what each person can and cannot detect. Mental models may restrict people's observations as a result of selective observation (Zhang, 2021).

Shared vision, the construction of a shared vision can be hampered by traditional structures where the company vision is imposed from above. The most effective visions rely on the individual views of the personnel at all levels of the organization (Odor, 2022).

Team learning is the culmination of individual learning. The advantage of team-based or shared learning is that employees pick up new information more quickly and organizations are better able to solve problems because they have better access to information and expertise (Easter-Smith, Crossan, & Nicolini, 2022).

Organizations do not naturally transform into learning organizations; instead, various factors influence this transformation. Organizations lose their ability to learn as they expand because rigid organizational structures and individual thought patterns result (Huber, 2021).

Savings Cooperatives in Thailand

Savings cooperative is one of eight types of cooperatives resisted legally in Thailand. They were established to encourage saving and offer loans to members. In Thailand, the continually rising cost of living has placed a significant burden on low-income individuals, including farmers as well as others like government personnel. They frequently turn to the high-interest loan companies to help them with

this issue. Savings cooperatives' specific goals as a financial entity were promoting thrift and facilitating loans among members.

The Performance of the Learning Organization

The capacity of an organization to achieve its objectives and achieve optimal outcomes is known as organizational performance. In the workforce of today, organizational performance can be defined as a company's capacity to achieve goals amidst continuous change.

Traditionally, organizational performance was looked at its output, and financial results. The organizational performance bucketed into these three categories which included (1) financial performance, (2) market performance, and (3) shareholder value

3 factors impact organizational performance including (1) the manager and employee relationship, (2) up skilling and learning opportunities and (3) the external environment (www.lawinsider.com). In this research work, the researcher followed Sange (2006) measured the performance of the learning organization of savings cooperatives in Kalasin province as a reduction in operating costs which means the elimination of operating expenses or the avoidance of future capital replacement expenditures (www.lawinsider.com).

Methodology

Conceptual Framework

The researcher developed the research concepts as follows:

Independent Variables

Characteristics of learning organization personnel according to the concept of Senge (X1-X5)
X1 = Personal Mastery
X2 = Mental Models
X3 = Shared Vision
X4 = Team Learning
X5 = Systems Thinking



Dependent Variable

The Performance of the Learning Organization (Reduction in Operating Costs)

Figure 1: The Research Conceptual Framework

The Concept of creation and development of the questionnaire and the Unit of Variable Measurement

According to the literature review, the researcher was interested in investigating whether Senge's learning organization theory could be applied to savings cooperatives and how it worked. Consequently, it was conducted on the factors of learning organization affecting the operations of savings cooperatives in Kalasin province, Thailand. The study aimed to test and confirm the

importance of Senge's five components of learning organization and their impacts on the operations of savings cooperatives.

The questionnaire developed for the study was based on Senge's learning organization theory, defined them as independent variables as follows: (1) personal mastery (X1) referred to individuals within the organization who were the foundation of organizational learning, characterized by their enthusiasm, interest, and continuous pursuit of learning. They had a desire to learn and enhance their potential, aiming for predefined goals and success, (2) mental models (X2) referred to employees' perception and understanding of their work in a holistic manner. They could link their position within the organization to the overall picture, had a clear understanding of mental models, believed that influence decision-making, and actioned to develop thinking. Their beliefs should be aligned with changing circumstances. The organization should support and encourage individuals to cultivate a learning mindset, (3) shared vision (X3) denoted the creation of a firmly held cooperative vision among employees, fostering awareness and understanding of organizational change, promoting acceptance, willingness, and commitment to common goals in working towards a shared objective. It involved creating shared vision and ensuring communication at all levels to achieve organizational goals, (4) team learning (X4) referred to collaborative learning among members, relying on the knowledge and ideas of group members to exchange opinions to develop knowledge and team capabilities. It led to shared thinking within the group, and the group should reduce influences that suppress members' thoughts while stimulating discussion and debate to achieve organizational goals, and (5)

system thinking (X5) entailed supporting learning and leading to sustainable organizational development. It involved a continuous and interconnected view, learning from experience and from others. Such interactions occur in every part that makes up the organization's system.

The dependent variable was the performance of the learning organization identified as reduction of operating costs, which referred to reducing expenses incurred in operations, including both direct and indirect costs such as reducing losses or errors in operational processes. Maximizing the use of resources in the organization efficiently, saving and extending the use of resources in the organization. The ability to improve operational efficiency in competition with external units and opportunities for success.

The measurement of both independent and dependent variables were measured the actual level of the savings cooperative's member performance in the organization applying a 5-level rating scale as follows: very high = 5, high = 4, moderate = 3, low = 2, and very low = 1 respectively.

The Determination of Population and Samples

The population determination as the 9 savings cooperatives members in Kalasin provincial area consisted of 20,824 individuals (Cooperatives Auditing Department, Ministry of Agriculture and Cooperatives, 2022). The quota sampling technique was applied for sample size determination. With the 50 members of each savings cooperative, it turned out of 450 individuals sample size.

Data Collection

The primary data were collected by the questionnaire which comprised 4 parts: (1) the general information of cooperative members, (2) factors affecting learning organization, (3) the characteristics of learning organization, and (4) the performance of learning organization of savings cooperatives.

Test of the Quality of Questionnaire as a Data Collection Tool

Reliability Test, It turned out with 0.95, which clarified that the questionnaire built was significantly reliability.

Validity Test, The Item Objective Congruence (IOC) Index is used as the basis for screening the item quality. It finally turned out of 0.90 of IOC, which statistically clarified the content validity.

Data Analysis

Inferential statistics was applied multiple linear regression to estimate the regression coefficients with the Ordinary Least Square (OLS) method of parameter estimation as following:

The predicted multiple linear regression could be drawn as equation (1):

$$\widehat{y}_1 = \widehat{\beta}_0 + \widehat{\beta}_1 * x_1 + \widehat{\beta}_2 * x_2 + \widehat{\beta}_3 * x_3 + \widehat{\beta}_4 * x_4 + \widehat{\beta}_5 * x_5 \dots\dots\dots(1)$$

Where:

The independent variables consist of:

- X₁ = Personal Mastery
- X₂ = Mental Models
- X₃ = Shared Vision

X_4 = Team Learning

X_5 = Systems Thinking

The dependent variable presented the Performance of the Learning Organization

Y = Reduction in Operating Costs

$\widehat{\beta}_0$ stands for the constant term, $\widehat{\beta}_1$, $\widehat{\beta}_2$, $\widehat{\beta}_3$, $\widehat{\beta}_4$, and $\widehat{\beta}_5$ stands for the estimated coefficients of X_1 , X_2 , X_3 , X_4 , and X_5 respectively.

Findings and Discussion

The characteristics of learning organization personnel both independent variables and dependent variables could be explained in Table 1 below:

Table 1

The characteristics of learning organization personnel of Savings Cooperatives in Kalasin Provincial Area, Thailand

n = 450

Characteristics of learning organization personnel	Mean	Standard Deviation	Interpretation
Personal Mastery (X_1)	4.20	0.55	The performance of the organization is at a high level.
Mental Models (X_2)	3.85	0.65	The performance of the organization is at a high level.

Table 1

The characteristics of learning organization personnel of Savings Cooperatives in Kalasin Provincial Area, Thailand (Continued)

n = 450

Characteristics of learning organization personnel	Mean	Standard Deviation	Interpretation
Shared Vision (X3)	4.25	0.63	The performance of the organization is at the highest level.
Team Learning (X4)	4.30	0.94	The performance of the organization is at the highest level.
Systems Thinking (X5)	4.26	0.83	The performance of the organization is at the highest level.
Reducing Operating Costs (Y)	4.31	0.63	The performance of the organization is at the highest level.

Source: The Researcher's calculation

According to Table 1 To describe the characteristics of learning organization personnel both independent and dependent variable, the personal Mastery (X1) of learning organization personnel had the mean and standard deviation of 4.20 and 0.55 respectively. It expressed that the personal mastery (X1) of learning organization personnel had the performance of the organization at a high level.

The mental models (X2) of learning organization personnel had the mean and standard deviation 3.85 and 0.65 respectively. It expressed that the mental models (X2) of learning organization personnel had the performance of the organization at a high level.

The shared vision (X3) of learning organization personnel had a mean and standard deviation of 4.25 and 0.63 respectively. It expressed that the shared vision (X3) of learning organization personnel had the performance of the organization at the highest level.

The team learning (X4) of learning organization personnel had a mean and standard deviation of 4.30 and 0.94 respectively. It expressed that the team learning (X4) of learning organization personnel had the performance of the organization at the highest level.

The systems thinking (X5) of learning organization personnel had a mean and standard deviation of 4.26 and 0.83 respectively. It expressed that the systems thinking (X5) of learning organization personnel had the performance of the organization at the highest level.

The reduced operating costs (Y) of learning organization personnel had a mean and standard deviation of 4.31 and 0.63 respectively. It expressed that reducing operating costs (Y) of learning organization personnel had the performance of the organization at the highest level.

The influenced learning organization characteristic factors affecting the performance of learning organization of savings cooperatives in Kalasin provincial area could be expressed in Table 2:

Table 2

The influenced learning organization characteristic factors affecting the performance of learning organization of savings cooperatives

Independent variables (X_i)	Dependent variable (Y)	T-Value	P-Value
Characteristics of learning organization personnel	Reducing operating costs (Y)		
Constant	245.62	126.71	0.0001
Personal Mastery (X1)	1.65***	96.65	0.0001
Mental Models (X2)	1.59***	87.62	0.0001
Shared Vision (X3)	2.65***	96.54	0.0001
Team Learning (X4)	1.85***	84.62	0.0001
Systems Thinking (X5)	1.95***	79.68	0.0001
F	256.09***		0.0001
R^2	0.93		
\bar{R}^2	0.91		

Source: The Researcher's calculation

***Statistically significant at 0.01 level

It could be drawn The predicted multiple regression as follow:

$$\widehat{Y}_1 = 245.62 + 1.65 * X_1 + 1.59 * X_2 + 2.65 * X_3 + 1.85 * X_4 + 1.95 * X_5 \dots (2)$$

From equation (2), the research result expressed that shared Vision (X3) had the biggest influence on the performance of the learning organization, the reduction in operating costs of Savings Cooperatives in Kalasin provincial area.

According to Table 1 and equation (2), the influenced learning organization characteristic factors comprised of: (1) personal mastery (X₁), (2) mental models (X₂), (3) shared vision (X₃), (4) team learning (X₄), and (5) systems thinking (X₅) had statistical significance at 99 percent on reducing operating costs (Y) expressing in equation (2). It could be expressed as:

1. The personal mastery of personnel expressed a positive effect on reducing operating costs (Y) that was, the increase in the self-knowledge of the personnel of savings cooperatives members by 1 unit will result in the reducing operating costs of savings cooperatives in Kalasin provincial area by 1.65 units. This meant that when the personal mastery of the personnel of savings cooperative members. It was determined to lead the organization to excellence and continually develop its work. Following the research result, personal mastery is one of the fifth disciplines of human capital in learning organizations. Also, it expressed the crucial positive impact of reducing operating costs in an organization. This research result was consistent with the works of Huifang (2022) who analyzed the mystery of the successful construction of learning organizations from the five disciplines of personal mastery of human capital in

private enterprises in China. In addition, it is the same direction as the work of Vainauskiene and Vaitkiene (2022), and Kaipunlert (2021) who imposed the personal mastery of human capital in learning organization as one of the influenced factors of operational outcomes organization.

2. The mental models (X_2) of personnel expressed a positive effect on reducing operating costs (Y) that was, the increase in the mental models (X_2) of the personnel of savings cooperatives members by 1 unit will result in the reducing operating costs of savings cooperatives in Kalasin provincial area by 1.59 units that occurred while human capitals were working to analyze and find their better alternatives in the next operation and exchange knowledge each other including the experience of working with their colleagues. In addition, personnel staff were always trying to find the best way to adapt their work and adjust their thinking. Also, they knew how to work with the situations and bring new ideas used to develop their better works. According to the research result, it could be stated that the mental models of human capital in an organization played a crucial role in organizational cost reduction. This research finding was consistent with the research outcomes of Varamini, Rezvanfar, Movahedmohammadi, and Pishbin (2020). Also, the research result expressed in the same direction as Akhtar, Arif, Rubi, and Naveed (2022) who found that the mental models of human capital in cooperative organizations had strongly influenced the organizational outcomes.

3. The shared vision (X_3) of personnel expressed a positive effect on reducing operating costs (Y) that was, the increase in the shared vision (X_3) of the personnel by 1 unit will result in the

reduction of operating costs by 2.65 units. Theoretically, the personnel in the organization would make their organizational environment analysis to find out the organizational strengths, weaknesses, opportunities, and threats (SWOT). Personnel had the opportunity to participate in setting the organizational vision such as brainstorming and suggesting guidance for the organizational benefits. A shared vision would generate a clear image of the organization that made personnel want to integrate to achieve goals for the future of the organization. These characteristics will affect the operating costs reduction (Y) of savings cooperatives in Kalasin provincial area. Statistically, the research findings showed that the shared vision of human capital had the biggest impact on organizational cost reduction among five learning organization factors. On the other hand, it could be concluded that shared vision was still the most important factor for human capital. This research finding corresponded to the research works of Calontone, Cavusgil, and Zhao (2022) who studied the learning orientation, innovation capability, and performance of Cooperatives in China. Likewise, the research result was consistent with the work of Chen, Wang, and Yang (2022) and Giriego, Geroy, and Wright (2022) who found that a shared vision of human capital in cooperatives had an influence on operational behavior, culture, and cost reduction.

4. Team learning (X_4) of personnel expressed a positive effect on reducing operating costs (Y). It could be implemented that the increase in the team learning (X_4) by 1 unit will result in the reduction of operating costs by 1.85 units. The personnel of cooperatives members received knowledge from the organization to promote teamwork or group work and personnel in the team

were learning at the same time and exchanging opinions with each other including the personnel in the team. They always had the initiative to create new things. Employees understand the organizational work process the same as everyone else. In addition, staff members had a good relationship with each other. As the team worked, the success criteria of working were set together. The information was learned in the work to discuss and summarize the best approach of the team. Team members were monitored and evaluated while working together. They had an understanding of the organizational infrastructure. Also, personnel had a clear systematic division of duties and their work responsibilities. Practically, the team-based learning of the members will result in organizational cost reduction, especially the reduction of losses or mistakes that occur in the operational processes of members working. The research results were consistent with the research outcomes of Ho (2021) and Hult, Hurley, and Knight (2022) who found that team learning was a necessity of human development and learning in the organization. Also, they found that team learning brought the improvement of human capital capacity and efficiency leading to the organizational cost reduction eventually.

5. The systematic thinking of personnel expressed a positive effect on reducing operating costs (Y). The increase in the systematic thinking of personnel by 1 unit will result in an operational cost reduction of 1.95 units. In the practical way of working, personnel had integrated the organizational vision and systematic operations which linked past performance to current and future work development. Moreover, personnel who had the initiative to create various works taking into the current reality in a stepwise manner

would lead to organizational cost reduction. According to the research findings, the systematic thinking of personnel in the organization has been and is still the essential factor for learning organizations to make operational cost reductions. These research results were in accordance with the research works of Hurley and Hult (2021) and Wittayakorn-Puripunpinyoo (2019) who found that the systematic thinking of personnel in the organization of both companies and others was the necessity for human capital. Furthermore, systematic thinking was the crucial fundamental of human learning, development and knowledge management.

In terms of the characteristics of learning organization personnel of Savings Cooperatives in Kalasin provincial area of Thailand, it could be expressed that there were 2 independent variables which were the personal mastery (X1) and the mental models (X2) expressed the performance of the organization was at a high level. For other 3 dependent variables which were the shared vision (X3), the team learning (X4), and the systems thinking (X5) expressed the performance of the organization was at a high level. Also, the reduced operating costs (Y) of learning organization personnel expressed the performance of the organization was at a high level.

From the research results, it can be concluded that Senge's learning organization theory could be applied to organizations such as savings cooperatives in Kalasin province, which were considered as one type of business organizations. The research findings confirmed that the five components of Senge's learning organization theory including: 1) personal mastery, 2) mental models, 3) shared vision, 4) team learning, and 5) systems thinking, affected the operations of savings cooperatives, particularly in reducing

operational costs. Furthermore, the reduction in operational costs enabled the cooperative to save expenses in the long term, contributing to the sustainability of its operations.

Findings from this research results not only demonstrated that Senge's learning organization theory could be applied to savings cooperatives in Thailand to transform them into fully-fledged learning organizations, but also confirmed that all five components of Senge's learning organization theory should be instilled in every member of the cooperatives. This was because cooperative members had a stake in the management of the cooperatives. Additionally, savings cooperatives should incorporate all five components of Senge's learning organization theory into their future strategic planning processes.

Conclusion

Learning organization personnel of savings cooperatives in Kalasin provincial area based on Senge's concept. Being a learning organization entails five disciplines of personnel characteristics of savings cooperatives in Kalasin provincial area. Personnel characteristics of the learning organization comprised of five aspects which were (1) systems thinking, (2) personal mastery, (3) mental models, (4) shared vision, and (5) team learning, respectively. The benefits of a Learning Organization had numerous advantages including the employees 'innovation. These results brought employees more confident and innovative in their decision-making. As a result, savings cooperatives in Kalasin provincial area will have a better workforce where new ideas were encouraged. This led to more creative ideas to increase company profitability.

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