

The organizational discipline affects knowledge management to the learning organization of educational institutions

Piyanart Boonmepipit

Abstract

The purposes of this research were to study. 1) The organizational discipline of educational institution. 2) The knowledge management to learning organization of educational institution. 3) The organizational discipline affects knowledge management to the learning organization of educational institutions. The samples were administrators and teachers from primary school 126 persons, secondary schools 126 persons, vocational school 126 persons and university 126 persons total 504 persons. The research instrument was a questionnaire. It has validity between 0.60-1.0 and reliability has .875 The statistics used for analysis were frequencies percentage, mean, standard deviation and stepwise multiple regression analysis.

The research findings were as follows:

1. The organizational discipline of educational institution were overall at a high level. When classification was finding respectively that: Discipline 1: personal mastery, Discipline 2: Mental models, Discipline 4: Team learning, Discipline 3: Shared Vision, Discipline 5: Systematic thinking.
2. The knowledge management of educational institution were overall at a high level. When classification was finding respectively that: knowledge management, knowledge exchange, knowledge learning and creating and seeking knowledge.
3. The organization discipline that affects the knowledge management to the learning organization of educational institution that: Discipline 2: mental models, Discipline 1: personal mastery, Discipline 5: systematic thinking, Discipline 3: shared vision and Discipline 4: team learning, They were affecting to the knowledge management to learning organization of educational institutions. The prediction efficiency was 52.70 percent.

Keyword: Discipline management, Knowledge management, Learning organization.

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I. Introduction

National Education Plan 2017–2036 focusing on participation and acceptance of all relevant sectors. This will result in driving the national education plan to successful practice (Office of the National Education Council, 2017, A). The participation all of sectors in building awareness, understanding, acceptance and join to the development of education in Thailand for academic progress that affects the economic and social system of countries, regions and the world. Educational monitoring and evaluation to improve the quality of education to effective teaching and learning management and school management. The executives must be bring the problems and challenges of the education system to school vision, mission and objective. The stakeholder role, strategies, goals, indicators and operational guidelines towards to learning organization of schools. The school administrators must be aware and take the national education plan to concretely and continuously action to being learning organization. Senge (Peter Senge, 1990, p.55) has said "Learning Organization was that people in the organization continually expand the scope of their abilities both of the individual, group and organization to goals of schools. They were guidelines for transfer of knowledge to each other in schools and outside. The main objectives of the transmission were opportunity to find best practice for the strength of the organization to keep up with social changes in the Thailand 4.0 era for the administrators can change management. Change management are fast schools development and keep it to adapt to changes in the external environment as well. Schools must be adapt and Life-long learning. Personnel management is an important factor for leads to knowledge management and timely change. Personnel management must be consistent with changes and various. The five new concept for school development to become a learning organization (Wanchai Suktam, 2016: 91-92) are 1) Systematic problem Solving 2) Experimental 3) Learning in the past Learning in the past 4) Learning from the Others 5) Learning by doing. There are factors that promote and support empirical results to knowledge management. It is an approach that is accepted in current.

Knowledge management in schools are the strategy that administrators, teachers, students and parents get involved to the participatory management to increase the efficiency of the school. Knowledge management is an important organization management tool. The Ministry of Education has established policies and guidelines for knowledge management in internal quality assurance standards. Schools must be action and aware of the implementation of knowledge management in accordance with internal quality assurance criteria by focusing on building a knowledge base in schools and utilized for the development of education to be a learning organization and utilized for the development of education and towards becoming a learning organization. Knowledge management to develop as schools to learning organization that uses 5 disciplines 5 steps of the knowledge management process. They can be used as a tool of knowledge management in schools. Knowledge management helps create an atmosphere conducive to the exchange of knowledge. The knowledge management cycle can be helps employee have practice systematic thinking and work with other and making it possible to think more carefully comprehensive thinking. It can be said that: The continued use of KM builds on the ability to think systematically. which is the 5th step ladder (Peter M. Senge, 1994: 125) Senge proposed five disciplines for knowledge management. The emphasizing that the most important KM sub-tools are separated by five steps. Senge stressed that the most important thing is the KM sub-tools are separated by five steps. They are 1) Personal Mastery 2) Mental Models 3) Shared Vision 4) Team Learning 5) Systems Thinking. Senge is applying 5 Disciplines to develop an organization to be a Learning organization that: Each discipline is related to each other. If an organization wants its team to have a shared vision, it's

important to do so. Allowing team members to talk and exchange ideas more. Therefore, it was related to team learning, or the organization wants system thinking to find common problems. Teams also need to adjust their mental model, not clinging to their own opinions. Because all disciplines are related to each other. The organization can therefore begin to develop any discipline first. And it is not necessary to focus on all five disciplines at once. If we focus on just one or two disciplines first, then gradually move to other disciplines. The rest can create and increase competitive advantage for the organization as well. The relationship between the five disciplines It will be seeing the complexities and opportunities that exist both inside and outside It take to learning organization continuously and create to learning organization and have ability to compete. The managers and team leaders must be wary of misunderstandings about impede learning and the nature of the system as mentioned above.

II. Research Objective

1. To study organizational discipline of the educational institutions.
2. To study knowledge management to become a learning organization of the educational institutions.
3. To study The organizational discipline affects knowledge management to the learning organization of educational institutions.

Scope of Research

Population Scope: This research used educational institutions in central of Thailand, namely Ratchaburi, Phetchaburi, Kanjanaburi, consisting of primary schools, secondary schools, vocational college, and university.

Sample Group: Use the educational institutions in central of Thailand, namely 3 primary schools, 3 secondary schools, 3 vocational college, and 3 university. Each educational institutions use administrators and teachers 42 persons by purposive sample and determine the respondents by simple random sampling method. So, the total respondents were 504 persons. The Details as shown in chart 2.

Table 2 Sample Group

province	Population (number of educational institutions)				Sample size (number person)				Total
	Primary school	Secondary school	Vocation college	University	Primary school	Secondary school	Vocation college	University	
Ratchburi	324	26	7	3	1 (42)	1 (42)	1 (42)	1 (42)	(3)168
Petchburi	216	22	6	3	1 (42)	1 (42)	1 (42)	1 (42)	(3)168
Kanjanaburi	413	29	6	2	1 (42)	1 (42)	1 (42)	1 (42)	(3)168
Total	953	77	19	8	3	3 (126)	3 (126)	3 (126)	(3)504

1. Simple random sampling for choose group of schools was selected as a sample group by drawing method.
2. Determine the respondents in each educational institutions as follows:
 - The primary school from 3 province : There were 126 administrators and teachers in 3 primary schools by simple random sampling.
 - The secondary school from 3 province : There were 126 administrators and teachers in 3 secondary schools by simple random sampling.
 - The Vocation college from 3 province: There were 126 administrators and teachers in 3 secondary schools by simple random sampling.
 - The University from 3 province : There were 126 administrators and teachers in 3 secondary schools by simple random sampling. Total the sample were 504 persons.

Variable scope

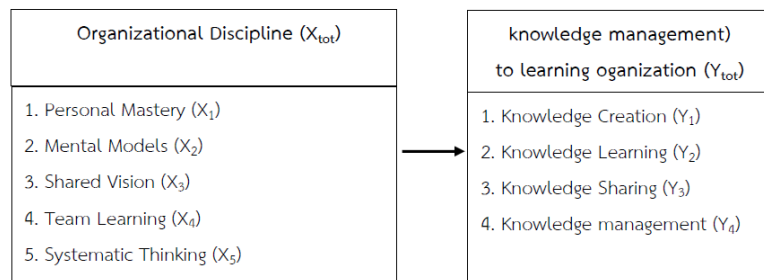
1. Determine organizational discipline variables according to Senge's concept (Senge, P.M., 1990: 45-48), consisting of 5 disciplines were 1) Personal Mastery 2) Mental Models 3) Shared Vision 4) Team Learning 5) Systematic Thinking

2. Define knowledge management variables to be a learning organization of educational institutions by researching documents based on Peter M. Senge., (1990), Peter

F. Drucker, (1986) , Ikujiro Nonaka, (1998) , Nonaka and Takeuchi, (2000) , David A. Garvin, (2019), Bonnie Rubenstein Montano, (1995), Leonard, D. Barton, (1992) and The synthesized variables are 1) Creating and seeking knowledge 2) Learning 3) Change knowledge management 4) knowledge management

2.1 When used focus group discussion techniques by expert judgment to check suitability, possibility and utilization in schools to define it as the variable in this research.

Research conceptual framework



from: Senge, P.M. (1990). *The fifth discipline: The art and practice of the learning organization*. London: Century Press.

Area and time Scope

Research site: Sample were government educational institutions in Ratchaburi, Petchaburi and Kanchanaburi province, 126 totaling. Research period October 2022 - September 2023, total 1 years.

Research method

1. Research methodology: survey research

2. Research process

Step 1 Study the documents related to the management of organizational discipline according to the concept of Peter M. Senge' Model, (2020: online) 5 item:

1) Personal Mastery 2) Mental Models 3) Shared Vision 4) Team Learning 5) Systematic Thinking

Step 2 Document Research to study knowledge management to become a learning organization as follows: Analyze documents, principles, concepts, theories, research and synthesize elements of knowledge management to become a learning organization. Defined as the variable of knowledge management to be a learning organization of educational institutions in 3 province, 4 components were 1) Knowledge Creation 2) Knowledge Learning 3) Knowledge Sharing 4) Knowledge Management.

Step 3 Focus group of 5 experts to examine and verify the knowledge management component to become a learning organization of educational institutions in 3 province of Thailand from the document research process.

III. Research tools

Research tool used in this research It was a questionnaire for collecting data, 1 issue is divided into 3 parts, consisting of:

Part 1 The questionnaire on the status of the respondents was the type of educational establishment, gender, age, educational level and work experience It is a check list type of questionnaire.

Part 2 Questionnaire about organizational discipline management. It was a 5-level rating scale questionnaire.

Part 3 Questionnaire on knowledge management as a learning organization of educational institutions. It was a 5-level rating scale questionnaire.

IV. Research tools

Creating research tools follow these steps:

Part 1 It was a questionnaire about the status of the respondents. It was a checklist type of questionnaire.

Part 2 Questionnaire about organizational discipline in educational institutions. It was a 5-level rating scale questionnaire (Likert, referred to in Aroun Jirawatkul, 2015: 107 -108)

Part 3 Questionnaire about knowledge management to learning organization of educational institutions. It was a rating scale questionnaire. It was a 5-level rating scale questionnaire (Likert, referred to in Aroun Jirawatkul, 2015: 107 - 108) as follow:

1. The questionnaire was presented from 5 expert professor to check the validity of the questionnaire by Index of Item Objective Congruence: IOC. This questionnaire had an IOC value between 0.60—1.00, which was acceptable according to the standard.

2. The questionnaire was tested (Try-Out) with non-sample group of 30 peoples for find confidence (reliability) of the questionnaire used the data to calculate Cronbach's Alpha coefficient. This questionnaire had a confidence value of the whole questionnaire equal to .839.

V. Data collection

A total of 468 questionnaires were collected, representing 96.43%.

VI. Data Analysis

3. Analyze the status of the respondent using frequency and percentage.

4. Analysis of organizational discipline of educational institutions in 3 provinces of Thailand by mean and standard deviation.

5. Analyze knowledge management to become a learning organization of the educational institutions in 3 provinces of Thailand by mean and standard

deviation.

6. Analyze the relationship between organizational discipline and knowledge management to become a learning organization of educational institutions in 3 provinces of Thailand by simple correlation analysis.
7. Analyze the organizational discipline affecting the knowledge management in order to be a learning organization of educational institutions in 3 province of Thailand by stepwise multiple regression analysis.

Research results Conclusion / summary

1. Organizational discipline of educational institutions in 3 province of Thailand in overall (X_{tot})

Table 4.1 Organizational discipline

n=468

Organizational discipline	\bar{X}	S.D.	Level value	No.
1 st discipline was self- knowledge (X_1)	4.33	0.43	high	1
2 nd discipline was conceptual plan (X_2)	4.32	0.42	high	2
3 rd discipline was share vision (X_3)	4.28	0.40	high	4
4 th discipline was team learning (X_4)	4.32	0.40	high	3
5 th discipline was systematic system (X_5)	4.26	0.39	high	5
X_{tot}	4.30	0.30	high	

The table 4.1 It was found that: The organizational discipline of educational institutions in 3 province of Thailand in overall at a high level. When considering each aspect was found the all aspects There were at a high level too and sort from most to least were as follow: The 1st discipline was self- knowledge (X_1) at a high level (\bar{X} =4.33, S.D.=0.43), The 2nd discipline was conceptual plan (X_2) at a high level (\bar{X} =4.32, S.D.=0.42), The 4th disciplinewas team learning (X_4) at a high level (\bar{X} =4.32, S.D.=0.40), The 3rd discipline was share vision (X_3) at a high level (\bar{X} =4.28, S.D.=0.40) and The 5th discipline was systematic system (X_5) at a high level (\bar{X} =4.26, S.D.=0.39) It was respectively.

2. Knowledge management to be a learning organization of educational institutions in 3 province of Thailand in overall (Y_{tot})

Table 4.2 Knowledge management to be a learning organization

n=468

Knowledge management to be a learning organization	\bar{X}	S.D.	Level value	No.
1. Creating and seeking knowledge (Y_1)	4.15	0.44	high	4
2. Learning (Y_2)	4.33	0.50	high	3
3. Knowledge exchange (Y_3)	4.44	0.55	high	2
4. Knowledge management (Y_4)	4.45	0.63	high	1
Y_{tot}	4.34	0.40	high	

The table 4.2 It was found that: Knowledge management to be a learning organization of educational institutions in 3 province of Thailand was overall at a high level(X =4. 34, S. D. =0. 40) when considering each aspect it was found the all aspects at a high level too and sort from most to least were as follow: Knowledge management (Y_4) at a high level (X =4.45, S.D.=0.63), Knowledge exchange (Y_3) at a high level (X =4.44, S.D.=0.55), Learning (Y_2) at a high level (X =4.33, S.D.=0.50) and Creating and seeking knowledge (Y_1) at a high level (X =4.15, S.D.=0.44) It was respectively.

3. Correlation Analysis between Organizational discipline (X) and Knowledge management to be a learning organization (Y) in table 4.3

Table 4.3 Correlation analysis between (X) and (Y)

Variable	Y ₁	Y ₂	Y ₃	Y ₄	Y _{tot}
X ₁	.204**	.470**	.370**	.428**	.501**
X ₂	.215**	.353**	.290**	.308**	.398**
X ₃	.249**	.453**	.455**	.405**	.534**
X ₄	.262**	.493**	.463**	.397**	.552**
X ₅	.413**	.532**	.504**	.443**	.647**
X _{tot}	.357**	.616**	.556**	.531**	.703**

The table 4.3: It was found that: The organizational discipline had a relationship with Knowledge management to be a learning organization of educational institutions in 3 province Thailand at a high level of positive statistically significant at the .01 level.

4. Stepwise multiple regression analysis of organizational discipline affecting knowledge management for learning organization of educational institutions in 3 province of Thailand. in table 4.4

Table 4.4 The organizational discipline affect knowledge management.

Organizational discipline	Unstandardized Coefficients		standardized Coefficients	t	Sig
	$\hat{\beta}$	Std. Error	Beta		
(Constant)	1.094	140		7.826***	.000
1. Organizational discipline (X _{tot})	7.523	3.144	7.241	2.393*	.017
2. 2 nd discipline: conceptual plan (X ₂)	1.580	.630	2.088	2.508*	.012
3. 1 st discipline: self- knowledge (X ₁)	1.629	.630	2.240	2.587**	.010
4. 5 th discipline: systemic system (X ₅)	1.805	.625	2.236	2.870**	.004
5. 3 rd discipline: share visions (X ₃)	1.628	.630	2.046	2.584**	.010
6. 4 th discipline: team learning (X ₄)	1.614	.632	2.046	2.556*	.011

The table 4.4: The variable of knowledge management to become a learning organization of educational institutions were overall (Y_{tot}) had been selected into the equation in order that: The organizational discipline management (X_{tot}), The 2nd discipline: conceptual plan (X₂), The 1st discipline: self- knowledge (X₁), The 5th discipline: systemic system (X₅), The 3rd discipline: share visions (X₃), The 4th discipline: team learning (X₄) enter respectively and multiplicative correlation coefficient in the prediction (Multiple R) = 726^a. The prediction coefficient (R²) was .527 it showed that 6 variables together predicted the outcome of knowledge management as a learning organization of educational institutions. It was 52.70% overall Adjusted (R²) was .522, Standard Error was .21718. It showed that all of discipline affected the knowledge management to become a learning organization of educational institutions (Y_{tot}) at statistically significant could be write the regression analysis equation as follows:

$$\hat{Y}_{tot} = 1.094 + 7.523X_{tot} + 1.580X_2 + 1.629X_1 + 1.805X_5 + 1.628X_3 + 1.614X_4$$

The equation on standard score that

$$Z \hat{Y}_{tot} = 7.241X_{tot} + 2.088X_2 + 2.240X_1 + 2.236X_5 + 2.046X_3 + 2.046X_4$$

VII. Discuss the results

1. The organizational discipline of educational institutions in 3 provinces of Thailand were overall at a high level. This may be because the administrators were giving importance to work with organizational discipline. It was making the teachers worked in the same way and follow organizational discipline according like the administrator. The teachers were started discipline from the working process and create discipline in thinking and working and live rationally. So, Makes this assessment of the organizational discipline was at a high level, which was consistent with research: Sathaporn Grethathorn (2015, p,161-210) who conducted research on "The elements of learning organization characteristics that affect the five disciplines of personnel in basic education schools" that research found the element variables with the regression coefficient affecting 5 disciplines of personnel overall, there were 4 variables, all variables were at a high level, had a positive effect and they accounted for approximately 47.0% of the overall personnel variance in the five disciplines and consistent with the research of Boonjira Phadermrod (2015, p,45-46) who conducted research on "Discipline of learning that affects being a learning organization of the office of marine resources management and the 3rd coast (Phetchaburi) department of marine and coastal resources" that research founded the results showed that overview of the learning discipline level of personnel at a high level had an average of 3.69.

2. The knowledge management to be a learning organization of educational institutions in 3 province of Thailand : this research founded the knowledge management to be a learning organization of educational institutions in 3 province of Thailand at a high level, Because the schools were practice challenging them abilities. They must been looking new good ways for existence and growth under change environment. The administrators who would lead the teachers in educational institutions to fight the change and to be able to survive stably. They had an accurate and effective strategy for increase the capacity of personnel. The administrators must been paying attention to knowledge management and manage the school to be a learning organization by five disciplines. That was consistent with the research of Payom Chinnawong and Sirichai Shinatangkun (2013, p,47) who conducted research on “Model of being a learning organization for schools specialized in disabilities for deaf children in Thailand” The research found that : 1) The elements of learning organization in schools for children with disabilities in the deaf at a very good level. 2) Model of being a learning organization for schools were self knowledge had direct and indirect influence on thought patterns and shared vision learning together as a team and systematic thinking at a high level.

3. The organizational discipline affects knowledge management to the learning organization of educational institutions. This research found that: The organizational discipline affected knowledge management to the learning organization, There were selected into the equation by respectively were organizational discipline were 2nd discipline thought plan, 1st discipline self-awareness, 5th discipline systematic thinking, 3rd discipline shared vision, 4th discipline team Learning. There was prediction 52.70 percent. It was consistent with the research of Sathaporn Kreethathorn (2015, p.161- 210). who conducted research on “The elements of learning organization characteristics that affect the five disciplines of personnel in schools”. The research found that: The composition was positive at a high level and was statistically significant at the . 01 level. The most important elements in characterizing a learning organization as a whole were: knowledge management, technology deployment, personal empowerment, dynamics of learning, organization change, Multiple regression analysis to study the five discipline factors of personnel founded that: There was a regression coefficient affecting 5 disciplines of personnel as a whole with 4 variable were at a high levels and positive, They accounted for approximately 47. 0% of the overall personnel variance in the five disciplines consistent with the research of Boonjira Phadermrod (2015, 105) who conducted research on “Department of Marine and Coastal Resources that: Discipline of learning that affects being a learning organization marine and coastal resources management office 3 Phetchaburi). The research objective were 1) To study knowledge and understanding of personnel about knowledge management Marine and Coastal Resources Management Office 3 (Phetchaburi) 2) To study the discipline of learning that affects being a learning organization Marine and Coastal Resources Management Office 3 (Phetchaburi)

3) To study the problems and obstacles in knowledge management of personnel in the office of the Marine and Coastal Resource Management 3 (Phetchaburi) . The personal mastery, Mental models, Shared vision, Team learning, Systems thinking, that over all of discipline of learning of personnel was at a high level and average was 3. 69 which order from highest to lowest was team learning has an average of 3. 85, Shared vision has an average of 3.73, Systems thinking has an average of 3.69, Mental models has an average of 3.60, Personal Mastery has an average of 3.57,

Research recommendations General feedback

The administrators should study the guidelines for applying 5 organizational disciplines to be used as tools for school administration. It can be seen that the five disciplines affect knowledge management to become a learning organization. The executives must study the guidelines for applying them to be in the framework of good governance. It can motivate personnel to follow the discipline willingly.

Suggestions for future research

Should do research on relationship of administrative behavior and the effectiveness of the use of five organizational disciplines in schools by with various statistics as a checker

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