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The Effects of Quality System Management on Creating the Basic Education Schools as Innovative Organizations in Nonthaburi Province

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Abstract

This research aimed to (1) examine the quality system management of basic education schools in Nonthaburi Province, (2) create the basic education schools in Nonthaburi Province as innovative organizations, and (3) identify the effects of quality system management on creating the basic education schools in Nonthaburi Province as innovative organizations. The research instrument was an opinionnaire of 95 items in two sections: (1) 50 items about the quality system management required for world class standard schools by the principles of the Office of the Basic Education Commission Thailand, and (2) 45 items on the creation of basic education schools as innovative organizations based on the concepts of Tidd, Bessant & Pavitt (2009). The 2-step sampling method yielded 364 persons comprising administrators, the heads of the learning subject groups, and teachers from the selected basic education schools in Nonthaburi Province. The obtained data were analyzed for frequency, percentage, mean, standard deviation and stepwise multiple regression. The study revealed three major findings: (1) *Quality system management* of the basic education schools in Nonthaburi Province was at a high level in a descending order as: (i) performance results, (ii) staff focus, (iii) strategic planning, (iv) student and stakeholder focus, (v) measurement analysis and knowledge management, (vi) process management and (vii) leadership. (2) The *creation* of the basic education schools in Nonthaburi Province as *innovative organizations* required eight characteristics in a descending order: (i) key individual, (ii) appropriate organizational structure, (iii) effective teamwork, (iv) the

climate that promotes creativity, (v) high participation in innovation, (vi) long term stability, (vii) network interconnection capability and learning exchange, (viii) shared vision of leadership and intention to create innovation. (3) *Quality system management* signified five variables: (i) outcomes, (ii) strategic planning, (iii) process management, (iv) measurement analysis, (v) knowledge management and leadership—*all affecting the creation* of the basic education schools in Nonthaburi Province as *innovative organizations* at 88.90%, as expressed in a regression analysis equation: $\hat{Y}_{tot} = 0.148 + 0.514X_7 + 0.104X_2 + 0.138X_6 + 0.124X_4 + 0.091X_1$. The identified effects of quality system management on creating basic education schools as innovative organizations shown in the study were expected to generate practical implications for effective management practices in other Thai schools in similar contexts.

Keywords: *Quality system management, innovative organizations, basic education schools, Nonthaburi Province*

1. Introduction

The application of digital technology for organizational development is part of the age of globalization, with rapid changes in global social trends. As known, digital disruption refers to the changing conditions caused by digital technologies that create innovations and new business models (Phakamach et al., 2022). There has been a change in every aspect, including science, society, a knowledge-based economy, and the advancement of information technology. It is therefore a challenge that people in the present era will realize it for organizational success, and develop self-reliant technologies (Ngernprasertsri, 2012; Sinlarat, 2020). It is important to encourage continuous learning throughout the organization and develop the organization to go through various situations that may arise. People need to be qualified, ready to develop the organization and have a good management and operational system to achieve the specified goals on a quality organization and quality output (Onsampant, 2020). In particular, educational institutions or schools are vital social institutions responsible for building and developing human capital. Therefore, educational management serves as the foundation of the country's development. Educational institutions need to have a good structure, process, and strategy. This requires strategic educational organizations' principles, methods, and management (Mongkolvanich, 2012; Sinlarat, 2020). School administrators must use leadership and professionalism to manage and support the systems for excellence in quality. The Office of the Basic Education Commission (OBEC) aimed at quality basic education and implemented the World-Class Standard School project in 2010. The project adopted the system of the Malcolm Baldrige National Quality Award (MBNQA) that develops organizational management capabilities at the global standard level. The

quality criteria were later developed as Neighboring Countries Economic Development Cooperation Agency (NEDA)--also called OBECQA--to promote and support the development of quality education at the international level (Office of the Basic Education Commission, 2017). The project was to (1) develop students to have world citizenship, academic excellence, communication in at least two languages, advanced ideas, creative work and responsibility for the global society; (2) enhance teaching and learning management comparable to World-Class Standard Schools regarding academic quality, teacher quality, and research and development; (3) apply the principles of TQA to develop a handbook for the quality management of international standard schools by operating with 7 categories of quality management system: (i) Leadership, (ii) Strategic Planning, (iii) Student and Stakeholder Focus, (iv) Measurement, Analysis and Knowledge Management, (v) Faculty and Staff Focus, (vi) Process Management, and (vii) Performance Results. These categories are to support quality development at the international level (Office of the High School Administration, 2010).

An innovative organization refers to an organization that supports people's innovation for change. Leaders must motivate their people to work hard and have knowledge and expertise in the work done (Decharin, 2012; Phakamach et al., 2021). Tidd, Bessant & Pavitt (2009) introduced the concept of creating an innovation organization. It contained 8 components: (i) Shared Vision, Leadership and the Will to Innovate, (ii) Appropriate Organization Structure, (iii) Key Individual, (iv) High Involvement in Innovation, (v) Effective Team Working, (vi) Creative Climate, (vii) Boundary Spanning and Exchange, and (viii) Beyond the Steady State.

Nonthaburi Elementary Educational Service Area District Office 1 (2022) presented the results of education management in the academic year 2021 as follows:

(1) O-NET test results for the 6th grade and 3rd grade in 2021 and 2020 fell below the national level.

(2) Centrally defined policies appeared inconsistent with the needs of school district offices and educational institutions and were intermittent in nature.

(3) There was a shortage of personnel with specialized knowledge and abilities, such as information technology, rapidly changing information technology media, and social problems with weak moral and ethical aspects, violence against children and young people with high-risk attitudes, values and behaviors.

(4) Educational institutions lacked digital technology equipment for learning and management. Some office supplies were not sufficient. The COVID-19 pandemic resulted in a significant reduction in testing.

It was noted that most basic education institutions in Nonthaburi Province under Nonthaburi Elementary Educational Service Area District Office 1 and Office 2 and Nonthaburi Provincial Administrative Organization did not participate in the world class standard school project on quality management and innovative organizations. In this regard, the researchers expected that the principles of quality management and innovation organization under study could generate practical implications for school management at the provincial and national levels. With such expectation, the researchers considered the significance of the quality system management in terms of its effects on the creation of basic education schools in Nonthaburi Province as innovative organizations.

2. Research Objectives

The study had three research objectives:

(1) Examine the quality system management of basic education schools in Nonthaburi Province,

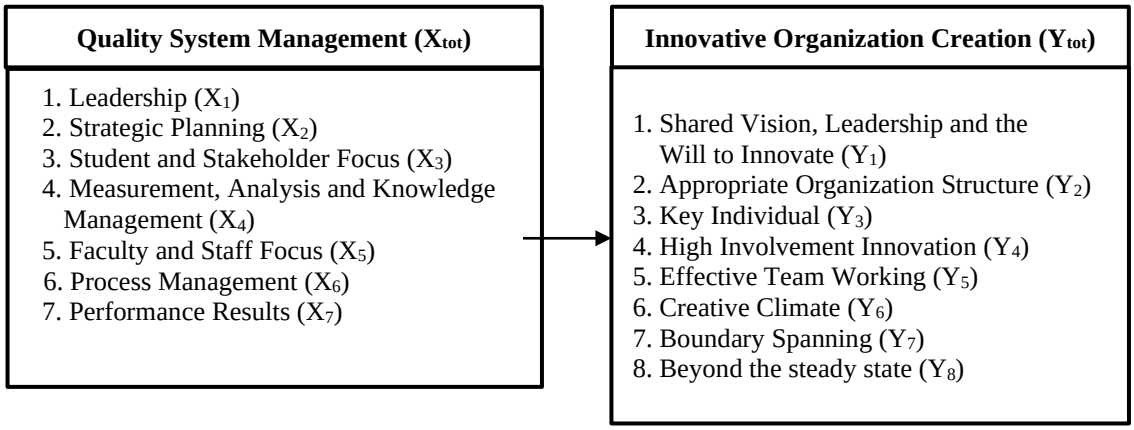
(2) Create the basic education schools in Nonthaburi Province as innovative organizations, and

(3) Identify the effects of quality system management on creating basic education schools in Nonthaburi Province as innovative organizations.

3. Research Conceptual Framework

The researchers established a conceptual framework for the research by adopting quality management according to the principles of the Office of the High School Administration (2010) in 7 categories: (i) Leadership, (ii) Strategic Planning, (iii) Student and Stakeholder Focus, (iv) Measurement, Analysis and Knowledge Management, (v) Faculty and Staff Focus, (vi) Process Management, and (vii) Performance Results. By these principles, the researchers aimed at the creation of innovative organizations according to the concept of Tidd, Bessant & Pavitt (2009) in 8 elements as follows: (i) Shared Vision, Leadership and the Will to Innovate, (ii) Appropriate Organization Structure, (iii) Key Individual, (iv) High Involvement Innovation, (v) Effective Team Working, (vi) Creative Climate, (vii) Boundary Spanning, and (viii) Beyond the Steady State. The conceptual research framework is shown in Figure 1.

Figure 1 Research Conceptual Framework



4. Research Methodology

This research was conducted with basic education schools under Nonthaburi Elementary Educational Service Area District Office 1 and Office 1 and Nonthaburi Provincial Administrative Organization (PAO) to obtain the needed data for analysis.

4.1 Population and Samples

The population of the basic educational institutions in Nonthaburi was 129 schools: (1) 32 schools under the Office of Nonthaburi Elementary Education Area District 1, (2) 63 schools under Nonthaburi Elementary Education Area Office District 2, and (3) 34 schools under Nonthaburi Provincial Administration Organization (PAO). The sample group was 54 elementary schools from the three Offices. The sample was classified by school size as extra-large and large, medium, and small—having 18 schools for each size. The two-stage random sampling method was used:

(1) The school sample was assigned according to the three sizes of the schools under each Office: extra-large and large, medium, and small. The researchers collected data from six schools of each size.

(2) The number of informants was determined by the size-criterion of the participating schools. Each school had 10 students, a medium school 8 students, and a small school 4 students as informants per school. The total number of informants was 396, as shown in Table 1.

Table 1: Samples and Informants Classified by School Size and Affiliation in Nonthaburi Province

Affiliation / School Size / Number of Informants	Nonthaburi (OPEA) Office 1		Nonthaburi (OPEA) Office 2		Nonthaburi (PAO)		Number of Contributors
	School	Person	School	Person	School	Person	
Extra-large and large size (10 person/school)	6	60	6	60	6	60	180
Medium size (8 person/school)	6	48	6	48	6	48	144
Small size (4 person/school)	6	24	6	24	6	24	72
Total	**18**	**132**	**18**	**132**	**18**	**132**	**396**

4.2 Research Instrument

The research tool was a questionnaire through content validity verification with the Index of Item Objective Congruence (IOC) technique from three experts in educational management. The individual index was between 0.67-1.00 and then the researchers obtained the accuracy of the whole analysis at the reliability value of .991, the accuracy of quality management variables equal to .982, and the accuracy of innovation organization variables equal to .983.

4.3 Research Statistics

The research statistics was in three types:

(1) The status of informants by frequency and percentage.

(2) The analysis of quality system management/creation of basic educational institutions in Nonthaburi Province as innovative organizations by mean ($\overline{X}$) and standard deviation (S.D.)

(3) The analysis of the quality system management that affects the creation of the basic education schools as innovative organizations by Stepwise Multiple Regression Analysis.

5. Results

Part 1: Analysis of the Quality System Management of Basic Education Schools in Nonthaburi Province

We analyzed the obtained responses to the questionnaire by using mean ($\overline{X}$)) and standard deviation (S.D.). The returned responses were 364 copies

from 49 schools-- representing 91.91% of the total. The seven aspects with their level of the quality system management of the basic education schools in Nonthaburi Province are shown in Table 2.

Table 2: Mean Values, Standard Deviation and Levels of the Quality System Management of Basic Education Schools in Nonthaburi Province (X_{tot})

(n= 364)

No.	Quality System Management (X_{tot})	$\bar{X}$	S.D.	Level
1	Leadership (X_1)	4.26	0.61	high
2	Strategic Planning (X_2)	4.34	0.53	high
3	Student and Stakeholder Focus (X_3)	4.34	0.55	high
4	Measurement, Analysis and Knowledge Management (X_4)	4.31	0.55	high
5	Faculty and Staff Focus (X_5)	4.35	0.60	high
6	Process Management (X_6)	4.30	0.59	high
7	Performance Results (X_7)	4.38	0.53	high
	Total	**4.33**	**0.50**	**high**

Table 2 shows the quality system management of the basic education schools in Nonthaburi Province as a whole is at a high level ($\bar{X}$ = 4.33, S.D. = 0.50). There was a high average in all aspects in a descending order: (1) performance results (X_7) ($\bar{X}$ = 4.38, S.D. = 0.53), (2) faculty and staff focus (X_5) ($\bar{X}$ = 4.35, S.D. = 0.60), (3) strategic planning (X_2) ($\bar{X}$ = 4.34, S.D. = 0.53), (4) student and stakeholder focus (X_3) ($\bar{X}$ = 4.34, S.D. = 0.55), (5) measurement, analysis and knowledge management (X_4) ($\bar{X}$ = 4.31, S.D. = 0.55), (6) process management (X_6) ($\bar{X}$ = 4.30, S.D. = 0.59), and (7) leadership (X_1) ($\bar{X}$ = 4.26, S.D. = 0.61).

Part 2: Analysis of the Creation of Basic Education Schools as Innovative Organizations in Nonthaburi Province

The analysis of the creation of basic education schools in Nonthaburi as innovative organizations using mean ($\bar{X}$) and standard deviation (S.D.) from the sample of 364 participants is presented in Table 3.

Table 3: Mean, Deviations for the Creation of Basic Education Schools in Nonthaburi Province as Innovative Organizations (Y_{tot})

(n= 364)

No.	Innovative Organizations Creation	$\bar{X}$	S.D.	Level
1	Shared Vision, Leadership and the Will to Innovate (Y_1)	4.28	0.62	high
2	Appropriate Organization Structure (Y_2)	4.36	0.59	high
3	Key Individual (Y_3)	4.39	0.58	high
4	High Involvement Innovation (Y_4)	4.33	0.62	high
5	Effective Team Work (Y_5)	4.34	0.60	high
6	Creative Climate (Y_6)	4.34	0.62	high
7	Boundary Spanning **(**Y_7**)**	4.31	0.64	high
8	Beyond the Steady State **(**Y_8**)**	4.32	0.64	high
	Total	**4.33**	**0.55**	**high**

Table 3 shows that the creation of the basic education schools in Nonthaburi Province as innovative organizations, as a whole, was at a high level ($\bar{X}$ = 4.33 S.D. = 0.55); the mean was found to be high on all aspects in a descending order: (i) key individual (Y_3) ($\bar{X}$ = 4.39, S.D. = 0.58), (ii) appropriate organization structure (Y_2) ($\bar{X}$ = 4.36, S.D. = 0.59), (iii) effective team working (Y_5) ($\bar{X}$ = 4.34, S.D. = 0.60), (iv) creative climate (Y_6) ($\bar{X}$ = 4.34, S.D. = 0.62), (v) high involvement innovation (Y_4) ($\bar{X}$ = 4.33, S.D. = 0.62), (vi) beyond the steady state (Y_8) ($\bar{X}$ = 4.32, S.D. = 0.64), (vii) boundary spanning (Y_7) ($\bar{X}$ = 4.31, S.D. = 0.64), and (viii) shared vision, leadership and the will to innovate (Y_1) ($\bar{X}$ = 4.28, S.D. = 0.62).

Part 3: Analysis of Quality System Management Affecting the Creation of Basic Education Schools in Nonthaburi Province as Innovative Organizations

The researchers used 351 responses to analyze the effects of the quality system management on creating the basic education schools in Nonthaburi province as innovative organization. Before the analysis, the researchers conducted outliers called Case Wise Diagnostics and found 13 abnormal case-wise data, thus eliminating them. Using Stepwise Multiple Regression Analysis, the results are shown in Table 4.

Table 4: Multiple-Regression Analysis of the Quality System Management Affecting the Creation of Basic Education Schools in Nonthaburi Province (Y_{tot}) as Innovative Organizations

Source of Variation	Sum of Square	df	Mean Square	F	Sig.
Regression	83.331	5	16.666	561.473*	0.001
Residual	10.241	345	.030		
Total	93.571	350			
Multiple Correlation Coefficient (Multiple R)				0.944	
Coefficient of Multiple Determination (R Square)				0.891	
Adjusted Coefficient of Multiple Determination (Adjusted R Square)				0.889	
Standard Error				0.172	
Quality System Management variables that were entered:					
Variable Entries	**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
	B	Std. Error	Beta		
Constant	.148	.082		1.809	0.71
Performance Results (X_7)	0.514	.041	.531	12.675*	.001
Strategic Planning (X_2)	0.104	.036	.106	2.859*	.005
Process Management (X_6)	0.138	.031	.157	4.439*	.001
Measurement, Analysis and Knowledge Management (X_4)	0.124	.031	.132	4.029*	.001
Leadership (X_1)	0.091	.025	.100	3.645*	.001

*Significant at the level .05

Table 4 reveals the quality system management affecting the creation of the basic education schools in Nonthaburi innovative as innovative organizations. (Y_{tot}) sorted the five best forecasters: (i) performance results (X_7), (ii) strategic planning (X_2), (iii) process management (X_6), (iv) measurement, analysis and knowledge management (X_4), and (v) leadership (X_1), with a multiple correlation coefficient (multiple R) of 0.944, a coefficient of multiple determination value (R^2) of 0.891, and an adjusted coefficient of multiple determination of 0.889. Strategic planning, process management, measurement, analysis and knowledge management and leadership appeared to predict the creation of the basic education schools in Nonthaburi Province as innovative organizations at 88.90% overall (Y_{TOT}), which was written as a regression analysis equation as follows:

$$\hat{Y}_{tot} = 0.148 + 0.514X_7 + 0.104X_2 + 0.138X_6 + 0.124X_4 + 0.091X_1.$$

6. Conclusion and Discussion of the Results

As seen in the obtained results, the quality system management appeared to affect the creation of the basic education schools in Nonthaburi province as innovative organizations. The major findings based on the research objectives are reported in Section 6.1.

6.1 Conclusion

(1) The quality system management of the basic education schools in Nonthaburi province as a whole and in each aspect was at a high level and ranked in a descending order: (i) performance results, (ii) staff focus, (iii) strategic planning, (iv) student and stakeholder focus, (v) measurement analysis and knowledge management, (vi) process management and (vii) leadership,

(2) The creation of the basic education schools in Nonthaburi Province as innovation organizations as a whole and each aspect was at a high level and ranked in a descending order: (i) key individual, (ii) appropriate organizational structure, (iii) effective team work, (iv) creative climate, (v) high involvement innovation, (vi) boundary spanning, (vii) beyond the steady state, and (viii) shared vision, leadership and the will to innovate.

(3) The quality system management carried five variables: (i) outcomes, (ii) strategic planning, (iii) process management, (iv) measurement analysis, (v) knowledge management and leadership--all affecting the creation of the basic education schools in Nonthaburi Province as innovative organizations as a whole at 88.90%, written as a regression analysis equation:

$$\widehat{Y}_{tot} = 0.148 + 0.514X_7 + 0.104X_2 + 0.138X_6 + 0.124X_4 + 0.091X_1.$$

6.2 Discussion

The researchers discussed the obtained results in accordance with the research objectives:

(1) The quality system management of the basic education schools in Nonthaburi Province, both overall and individually, was at a high level. School management at the basic education level in the modern era certainly requires effective management systems and methods to benefit learners. School administrators must plan their planning strategies, implement them, align personnel to suit the job (Organizing), and decentralize authority to colleagues (Empowerment). Good executives must know the control and evaluation of their work thoroughly and fairly (Controlling). The current administrators of Nonthaburi basic education schools have been recognized for their knowledge and experience. The implementation of quality system management by basic school administrators is considered to be of international standards as

prescribed in the policy of the Office of the Basic Education Commission (OBEC) that has adopted the guidelines for the management of the quality system of educational institutions toward excellence according to the criteria of Thailand Quality Award (TQA). The criteria of quality management system at the international standards are in seven categories: (i) Leadership, (ii) Strategic Planning, (iii) Student and Stakeholder Focus, (iv) Measurement, Analysis, and Knowledge Management, (v) Faculty and Staff Focus, (vi) Process Management, and (vii) Performance Results. Each category determines the course of action--how educational institutions should act. School executives must be good leaders, use key decision-making strategies, motivate, and build strength and encouragement for teachers to perform at their full capacity. More importantly, Nonthaburi is a city of education, and both district offices and local government organizations are committed to supporting education development with their full responsibility. These points were also reported earlier by Kadphon (2015) on quality system management that affects the effectiveness of schools under the Office of Nakhon Pathom Primary which investigated Educational Service Area District Office 1 regarding the quality management of schools under the Office of Nakhon Pathom Primary Educational Service Area District Office 1 at a high level with ranks in a descending order: (i) organizational leadership, (ii) strategic planning, (iii) student and stakeholder focus, (iv) personnel focus, (v) process management, and (vi) measurement, analysis and knowledge management. Another study by Wattana (2018) proposed the basic school management model for school excellence under the provincial administration organization. Wattana (2018) also identified six elements of school management for excellence: (i) executive leadership, (ii) teacher quality, (iii) strategic planning, (iv) collaboration network, (v) student quality, management and (vi) personnel development. The findings as such from the earlier studies pointed to the significance of the quality system management as examined in the present study.

(2) This research revealed the creation of the basic education schools in Nonthaburi Province as innovative organizations by the overall picture and individual aspect at a high level. This could stem from school executives handling education management by the policy of the Office of the Basic Education Commission (OBEC) and Nonthaburi Provincial Administrative Organization--both emphasizing innovations to meet the standards of school performance, and using digital transformation with unlimited interconnected communication. Transformational leaders highly value a shared vision with people, set the direction and implement a clear innovation strategy,

determination and dedication to the identified goal--all to create innovations within the school.

It is important that the organization structure be flexible at the appropriate level for promoting innovation. Information technology has been established to develop the websites for affiliated offices and use innovative media and computer programs through online teleconferencing. School executives need to promote key personnel with knowledge of innovation and make sure that teachers possess skills in innovation and technology. Participation in planning, creating and developing innovations and new technologies must be assigned to an effective team. Teachers need good working environment that promotes creativity while having good connections and networks to facilitate knowledge sharing in the long run. Such findings were in line with Onsampant (2018) who presented the concept of creating an innovative organization for basic education institutions in Thailand by using 12 elements: (i) School background, (ii) Shared vision and innovation goals, (iii) School implementation strategy, (iv) Executive leadership and decision making, (v) Appropriate organizational structure, (vi) Key personnel and personnel management, (vii) Effective teamwork, (viii) Communication and information management, (ix) Creative atmosphere, (x) Government and community support, (xi) Learning organization, and (xii) Performance evaluation. Recently, Hirankittikorn & Kanthap (2022) also researched into the needs for innovative organization of schools under the Phasi Charoen District Office. It was found that the innovative organizational development guidelines of schools under the Office of Phasi Charoen District, Bangkok comprised six approaches: (i) The organization's management should use the principle of decentralization and encourage personnel to participate in decision-making and organizing a flexible and agile organization structure; (ii) Personnel should be creative; (iii) Executives must develop a vision of innovation that is practical and drive the organization through the management system; (i) The organization's executives are leaders with a way of developing personnel by defining the vision of the organization for the staff to accept the direction toward innovations; (v) There must be a communication channel that promotes innovation; and (vi) The executives create an atmosphere of the organization to support freedom of thought for the staff to innovate.

(3) According to the research findings, five variables of quality system management were identified: (i) performance results, (ii) strategic planning, (iii) process management, (iv) measurement, analysis and knowledge management, and (v) organizational leadership. These five variables appeared to have impacts on the creation of the basic education schools in Nonthaburi

Province as innovative organizations. Overall, 80.70% showed that quality management was of paramount importance. The participating school administrators have focused on quality system management, taking into account administrative outcomes regarding the evaluation of school performance. They used the assessment results to improve the outcomes of academic and budget management and finances. The major findings of the present research were in line with the earlier work of Meeman & Wangthanomsak (2016) on international standard schools in that the success of international standard schools included (i) curriculum, (ii) teaching and learning, (iii) quality management, and (iv) learner aspects.

It should be noted that the process variable in quality system management affects the creation of an innovation organization. In this regard, strategic planning to realize the school's vision is vitally important. To the researchers of this present study, a SWOT analysis could help a strategic plan on technological progress, new knowledge, changing regulations, and direction to specific development in coping with the educational and social situation changes, as seen in the case of the COVID-19 pandemic. Another researcher Pamuta (2016) also studied success factors in managing international standard primary schools under the Office of the Basic Education Commission. It was found that the level of success in school administration as a whole also relied on five elements as reported in the present study.

For the success of the school, it is the responsibility of the management that consists of three tasks: personnel management, organization management, and process management to achieve the quality of work as intended. Teachers' core competencies aligned with the school's mission on excellence can help the school personnel to adjust teaching and learning methods at the critical time of the COVID-19 pandemic. As seen in the work of Chandi & Indraraks (2019), technological resources supported the quality system of Wat Maklua School (Kanchanalak Wittaya) at a high level by teaching and learning Online, On Hand, Onsite, and On Demand by qualified teachers.

As for the variable of measurement, analysis, and knowledge management affecting the creation of innovative organizations, school administration has to turn digital. When Thailand faced the COVID-19 pandemic, teaching and learning arrangements had to change by going online while ensuring that teachers and students interacted sufficiently to create a positive remote teaching-learning atmosphere online and reasonable student performance assessment. Students are sufficiently assisted to reach the expected learning outcomes. Chandi & Indraraks (2019) created academic templates available to users worldwide. Phothong et al. (2013) also supported

the key elements, such as personnel/ organization, budget and facilities, process, organizational leadership, strategic planning, and knowledge management for teachers/ students/ parents.

7. Suggestions

7.1 Suggestions for the Implementation of Research Results

The innovative organizational model in basic education institutions is a structured model with various elements as applicable to school quality system management. As shown in this present study, the quality management factors that affect the creation of basic education schools as innovative organizations could be selected to suit school contexts as seen appropriate.

7.2 Suggestions for Further Research

The school quality system in support of teachers and learners should be further explored to benefit the overall educational quality under the Office of the Primary/Secondary Education Area Office. In addition, those interested in the issues of quality system management could update and expand the number the new variables that influence innovative organizations in the basic education schools in the context of Thailand as well as that of the neighboring countries.

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