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Knowledge Management and Organizational Cooperation Affecting on Public Sector Management Quality: The Case Study of the 4th Administrative Area of Probation Office

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Abstract

The aim of this study was threefold: firstly, to examine the level of perception regarding knowledge management, organizational cooperation, and quality of public sector management; secondly, to identify the components of knowledge management and organizational cooperation that impact the quality of public management; and thirdly, to propose suggestions on knowledge management, organizational cooperation, and public management quality. This study involved a quantitative approach, and its sample consisted of 217 civil servants. Data was collected through 5-point Likert scale questionnaires, and the gathered data was analyzed using frequency, percentage, mean, standard deviation, and multiple regression analysis. The findings indicated that overall, participants had a positive perception of knowledge management, organizational cooperation, and public sector management. Furthermore, the independent variables significantly predicted public management quality with a predictive power of 84.4 percent, at a significance level of 0.05. The study concluded that employees should be familiar with performance evaluation criteria at individual, departmental, and organizational levels. It was also suggested that executives ensure resource availability to maintain organizational effectiveness.

Introduction:

The fiscal year 2005 marked the initiation of knowledge management (KM) practices within government agencies in Thailand. By the subsequent year, these agencies systematically implemented and integrated KM into their strategies. In 2007, KM was promoted further to transform all government agencies into learning organizations, using knowledge exchange as a core process (Office of the National Institute of Government Development and Productivity Institute, 2006).

The Department of Probation initiated the incorporation of KM in the fiscal year 2006, launching the Department of Probation Knowledge Management Plan. This plan aimed to devise strategies for individuals or groups to utilize knowledge, skills, and experience in their work effectively, and promote knowledge exchanges and application. By 2020, the Department had also adopted the Probation 4.0 concept, signifying a transition towards an era of high-performance, modern operations that respond to public needs.

Within this context, organizational cooperation emerged as a critical success factor. The civil servant participation is integral for knowledge exchange, contributing to efficient government work performance. Cooperation facilitates sustainable relationships and resource sharing, thereby enhancing the capacity to build relationships and acknowledge the benefits of shared resource scopes (Thepkaiwan, 2011).

Moreover, the Office of the Public Sector Development Commission adopted a comprehensive evaluation concept, which assesses government organizations across four dimensions: effectiveness per government action plan, service quality, efficiency of official operations, and organizational development. This evaluation provides insights into organizational strengths and improvement opportunities, ultimately serving the people's happiness and national benefit (Office of the Public Sector Development Commission, 2014).

This research seeks to contribute to the promotion and development of the Department of Probation's KM practices and inter - organizational cooperation. The study will examine the extent of knowledge management in each process, cooperation level in KM, quality of public administration, and influential factors predicting the quality of public administration. The study will also provide insights and suggestions for enhancing KM and organizational cooperation to improve the quality of public administration in Probation Area 4.

Research Objectives:

1) to examine the level of perception regarding knowledge management, organizational cooperation, and quality of public sector management.

2) to identify the components of knowledge management and organizational cooperation that impact the quality of public management.

3) to propose suggestions on knowledge management, organizational cooperation, and public management quality.

Literature Review:

This research study integrates four primary concepts and theories: Knowledge Management, Organizational Cooperation, Quality of Public Management, and the specific context of the Department of Probation and Probation Region 4.

Knowledge Management

Marquardt & Raynolds (1994) define KM as the organization and use of essential information, news, and knowledge. KM activities involve acquiring, storing, and maintaining knowledge in a manner accessible to all, thereby facilitating the achievement of organizational objectives. Kermally (2002) emphasizes KM's role in creating an environment within an organization conducive to knowledge creation, transfer, and sharing. Akaraborworn (2009) and Chookiat (1998) further highlight the process of collecting scattered knowledge from individuals or documents, transforming it into a system that allows universal access, and leveraging it for collective knowledge and operational efficiency. In summary, KM entails an organized system, supported by technology, that efficiently manages and shares knowledge within an organization.

Cooperation in the organization

Marquardt & Raynolds (1994) define KM as the organization and use of essential information, news, and knowledge. KM activities involve acquiring, storing, and maintaining knowledge in a manner accessible to all, thereby facilitating the achievement of organizational objectives. Kermally (2002) emphasizes KM's role in creating an environment within an organization conducive to knowledge creation, transfer, and sharing. Akaraborworn (2009) and Chookiat (1998) further highlight the process of collecting scattered knowledge from individuals or documents, transforming it into a system that allows universal access, and leveraging it for collective knowledge and operational efficiency. In summary, KM entails an organized system, supported by technology, that efficiently manages and shares knowledge within an organization.

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Quality of Public Sector Management

The Office of the Public Sector Development Commission (2014) strategized to develop the Thai bureaucratic system from 2003 – 2007, aiming to enhance processes, working methods, and government agency standards. A collaborative study project with the National Institute of Productivity Enhancement was launched to improve government agencies' performance quality. The project developed quality criteria for public sector management, designed to assess organizational strengths and improvement opportunities effectively. These criteria are based on an organizational audit guideline, comprising seven categories that outline how an organization of excellence should operate.

Context of the Department of Probation and Probation Region 4

Thailand first introduced its probation system for juvenile offenders in 1952, subsequently expanding to adult offenders. The Central Probation Office, a division-level agency under the Ministry of Justice, was established following the Criminal Code Probation Procedure Act B.E. 2522 (1979). The system has been continually extended, resulting in the Central Probation Office's authority and responsibilities broadening. Consequently, the Central

Probation Office was promoted to the "Probation Department" on March 15, 1992 (Department of Probation, 2018). Currently, the Department of Probation operates according to the Probation Act B.E. 2559 (2016). Administrative divisions include ten districts, with the Probation 4th district comprising twelve Probation Offices (Probation Department, 2022).

Research Methods:

Population and sample

This study targets practitioners in the Probation Office Area 4. The population comprises 366 civil servants, government employees, and temporary staff across 12 provincial probation offices (Department of Probation, 2022). A stratified random sampling technique was adopted, yielding a sample of 217 respondents selected randomly, following Yamane's (1967) principle.

Research Instruments

The study utilizes questionnaires featuring a five-level estimation scale. This scale gauges the level of knowledge management, organizational cooperation, and public sector management quality. Higher scores indicate a higher level, with '5' being the highest and '1' the lowest. A total of 39 items were included in the questionnaire, with an obtained reliability coefficient (Cronbach's Alpha) of .98. The research also employed the correlation coefficient method for variable consistency analysis and multiple regression methods to examine the independent variables' predictive capability.

Data Collection

The researchers distributed questionnaires related to knowledge management, cooperation, and quality of public sector management to personnel in the Probation Office District 4. A total of 217 questionnaires were disseminated using stratified random sampling. The sample was divided among provincial probation offices as follows: Khon Kaen (39), Udon Thani (23), Sakon Nakhon (21), Mahasarakham (20), Kalasin (19), Roi Et (18), Nakhon Phanom (16), Loei (15), Mukdahan (14), Nong Khai and Bueng Kan (11), and Nong Bua Lamphu (10).

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Results and Discussion:

Table 1

Levels of Agreement on Knowledge Management within the Organization

Dimension	Comments on knowledge management	$\bar{X}$	S.D.	Variation
1	Knowledge Identification	4.19	0.61	Agreed
2	Knowledge Creation and Acquisition	4.00	0.68	Agreed
3	Knowledge Organization	3.85	0.74	Agreed
4	Knowledge Codification and Refinement	3.82	0.76	Agreed
5	Knowledge Access	4.04	0.73	Agreed
6	Knowledge Sharing	3.72	0.81	Agreed
7	Learning	4.08	0.71	Agreed
	Total	**3.96**	**0.60**	**Agreed**

Table 1 presents an overview of opinions on knowledge management in the organization. The average score was 3.96, indicating a high level of agreement. Considering individual dimensions, the order from the highest to the lowest agreement was as follows: Knowledge Identification (4.19), Learning (4.08), Knowledge Access (4.04), Knowledge Creation and Acquisition (4.00),Knowledge Organization (3.85), Knowledge Codification and Refinement (3.82), and Knowledge Sharing (3.72).

Table 2

Levels of Agree on Cooperation within the Organization

Dimension	Comments of cooperation	$\bar{X}$	S.D.	Variation
8	Goal	3.93	0.74	Agreed
9	Leader/executive,	4.13	0.77	Agreed
10	Communication/Coordination	4.01	0.71	Agreed
11	Resource sharing	4.02	0.76	Agreed
	Total	**4.02**	**0.65**	**Agreed**

Table 2 reveals a high level of agreement on cooperation within the organization, with an average score of 4.02. Examining individual dimensions, the level of agreement, from highest to lowest, was as follows: Leader/ Executive (4.13), Resource Sharing (4.02), Communication/Coordination (4.01), and Goal (3.93)

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Table 3

Levels of Agreement on Public Sector Management

Dimension	Comments on Public Sector Management	$\overline{X}$	S.D.	Variation
12	Leadership	4.21	0.65	Agreed
13	Strategic planning	4.10	0.74	Agreed
14	The client and stakeholder	4.03	0.75	Agreed
15	Measuring, analytics knowledge management	4.03	0.74	Agreed
16	Personnel	3.98	0.74	Agreed
17	Operation	3.88	0.72	Agreed
18	The output	4.00	0.71	Agreed
	Total	**4.03**	**0.65**	**Agreed**

Table 3 shows a high level of agreement on the quality of public sector management, with an average score of 4.03. Regarding individual dimensions, the level of agreement, in descending order, was as follows: Leadership (4.21), Strategic Planning (4.10), Client and Stakeholder Engagement (4.03), Measurement, Analytics, and Knowledge Management (4.03), Output (4.00), Personnel (3.98), and Operations (3.88).

Table 4

Analysis of Variance in Predictive Variables Affecting Public Sector Management Quality

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	59.661	1	59.661	419.264	.000[b]
	Residual	30.594	215	.142		
	Total	90.255	216			
2	Regression	74.747	1	74.747	1036.323	.000[b]
	Residual	15.507	215	.072		
	Total	90.255	216			
3	Regression	76.391	2	38.195	589.570	.000[b]
	Residual	13.864	214	.065		
	Total	90.255	216			

a. Predictors: (Constant), Knowledge Management

b. Predictors: (Constant), cooperation in the organization

c. Predictors: (Constant), Knowledge Management, Cooperation in the organization

d. Dependent Variable: Public Sector Management Quality

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Table 4 indicates the test results of three regression equations. The results suggest that:

In Equation 1, Knowledge Management significantly predicts the Quality of Public

Sector Management at the 0.5 level.

In Equation 2, Cooperation within the Organization significantly predicts the Quality of

Public Sector Management at the 0.5 level.

In Equation 3, Knowledge Management and Cooperation within the Organization

jointly predict the Quality of Public Sector Management, which is statistically significant at the 0.5 level.

Table 5

Analysis of Multiple Correlation Coefficients

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.813	.661	.659	.37722
2	.910	.828	.827	.26857
3	.920	.846	.845	.25453

Table 5 illustrates the influence of a group of independent variables across three equations. Equation 1 suggests that the Knowledge Management variables can predict 65.9% of Public Sector Management. Equation 2 demonstrates that the Collaboration variables can account for 82.7% of the variation in Public Sector Management. Finally, Equation 3 shows that a combination of Knowledge Management and Organizational Cooperation variables can predict 84.5% of Public Sector Management.

Table 6

Analysis of Regression Coefficients for Each Principal Variable Affecting Public Sector Management

Predictive variables **Quality of Public Sector Management**	**Unstandardized Coefficient**	**Standardized Coefficient**	**T**	**Sig.**
	B	**Beta**		
Knowledge Management				
Knowledge Identification	0.019	0.019	0.505	0.614
Knowledge Creation and Acquisition	0.023	0.024	0.568	0.570
Knowledge Organization	0.040	0.046	0.913	0.362
Knowledge Codification and Refinement	0.059	0.070	1.443	0.150
Knowledge Access	0.023	0.026	0.531	0.596
Knowledge Sharing	-0.002	-0.003	-0.059	0.953
Learning	0.051	0.056	1.193	0.234
Cooperation in the organization				
Goal	0.293	0.306	5.584	0.000
Leader/ Executive	0.131	0.157	3.354	0.001
Communication/ Coordination	0.136	0.150	2.891	0.004
Resource sharing	0.200	0.237	5.526	0.000

*N=217 ; *p< 0.05 R2 = .852 Adjusted R Square = 0.844 Durbin-Watson = 2.026*

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Table 6 displays the results from the Multiple Linear Regression Analysis. The most influential predictor is found to be Goal-setting, with a regression coefficient of 0.306. This is followed by Resource Sharing (regression coefficient: 0.237), Leader/ Executive's influence (regression coefficient: 0.157), and Communication/ Coordination (regression coefficient: 0.150). This analysis confirms that the cooperation variables in the organization have a greater predictive impact than the group of Knowledge Management variables.

Conclusion:

This study examined opinion levels on knowledge management and found that both overall and individual aspects of these opinions in the Probation Office, District 4, were high. Similarly, the level of opinions about cooperation within the organization and public sector management were also high. The analysis of knowledge management and cooperation within organizations revealed their impact on the quality of public sector management. Among the elements of cooperation, goals, resource sharing, leadership, and communication and coordination could significantly predict the quality of public sector management in the Probation Office, District 4.

Knowledge management, which transforms individual knowledge into organizational knowledge, enhances decision-making effectiveness and innovation. This is in line with research by Sangkaphan (2019), Chansawang (2016), Kanha (2015), and Aumpornwetch, et al. (2017).

Likewise, organizational cooperation is a critical factor influencing the quality of public sector management, supporting the research of Jumpang et al.(2012). The success of an organization is predicated on the cooperation of its employees in various activities to achieve the organization's goals.

The research findings align with those of Nootdechanan (2015), who found that factors like system readiness, shared values and organizational culture, personnel engagement, and clarity of organizational structure influence organizational development success.

Theoretical recommendations:

This research indicated that cooperation within the organization, comprising goals, leadership/ executives, communication/ coordination, and resource sharing, serves as a moderating variable interacting with independent variables. These cooperative variables affect the relationship between knowledge management and public sector management quality. Thus, any research considering this situation should account for the influence of the moderating variable, which could otherwise lead to deviations from the actual results (Kanjanawasee & Soipetkasem, 2014).

Practical recommendations:

1. Establish knowledge management as one of the department's policies and strategic plans, encouraging all offices to conduct formal and consistent monitoring and evaluation. Additionally, systematic and standardized training at the departmental level can help promote knowledge management.

2. The Department of Probation should facilitate knowledge exchange between personnel from different offices to enhance knowledge and promote continuous activities.

3. Regarding the dimension of knowledge management, leveraging technology in work processes can streamline management, speed up work, and alleviate workload issues, leading to greater satisfaction and cooperation among personnel.

Suggestion for Future research:

1. Future research could employ in-depth interviews or qualitative data collection to supplement research with executive samples, knowledge management implementers, and general employees within the organization.

2. Future researchers may consider various concepts and literature reviews on organizational effectiveness as guidelines for assessing organizational effectiveness within different conceptual frameworks.

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