

# Development Of Information Technology Competencies Of Investigators In Work From Home Operations

Jakkapong Maenmek<sup>1</sup>, Sudawan Somjai<sup>2</sup>, Norawat Charoen-rajapark<sup>3</sup>

<sup>1</sup>*Doctor of Philosophy Program in Development Administration, Suansunandha Rajabhat University*  
E-mail: [Hallygalon@gmail.com](mailto:Hallygalon@gmail.com)

<sup>2</sup>*Doctor of Philosophy Program in Development Administration, Suansunandha Rajabhat University*  
E-mail: [sudawan.so@ssru.ac.th](mailto:sudawan.so@ssru.ac.th)

<sup>3</sup>*Doctor of Philosophy Program in Development Administration, Suansunandha Rajabhat University*  
E-mail: [norawat.ch@ssru.ac.th](mailto:norawat.ch@ssru.ac.th)

## Abstract

The National Police Chiefs' Council has adopted a work-from-home policy as a code of conduct for police officers. The inquiry is the first stage of justice that plays a huge role in the administration of justice. Quick convenience is found to be a very responsible position, the chances of a mistake in operation are very large. This research aims to: 1) To study the priority of factors influencing the development of information technology performance of investigators in the implementation of work from home 2) To study knowledge management, training, technology skills, acceptance of information technology affecting the development of information technology performance of investigators 3) To propose guidelines for improving the information technology competencies of investigators in the work from home operation. This research uses a combination of research methods, quantitative and qualitative research. Quantitative research used geospatial sampling from police officers who served as investigators under Section 100, 44 of the National Police Act 2004. There are at least 360 sample sizes, using a threshold of 20 times that of observational variables with 18 variables. The tools used are queries, data analysis, descriptive statistics, and structural equation models. The qualitative research section used semi-structured interviews with a sample of 18 people, including supervisors, investigative supervisors, the Investigators Association and the Commission for the Promotion of Investigations. The results showed that 1) development of information technology performance of investigators had the highest priority, and knowledge management training technology skills and technology adoption were very important 2) factors influencing the development of information technology performance of investigators, respectively, include acceptance of information technology, technology skills, training and knowledge management 3) development of information technology performance of investigators guidelines for performing work-from-home models. To develop the knowledge and understanding of the investigators in the use of information technology that is beneficial to the operation, promotes, supports the work equipment for the investigators to avoid damage to the operation, defined as indicators to improve performance in accordance with standards. The findings are useful for the Royal Thai Police to determine how to effectively and effectively manage the work of investigators in their home operations.

**Keywords:** Performance Development / Information Technology / Interrogator / Work-from-Home Operations

## Introduction

The investigators of the Royal Thai Police Under the Law are police officers ranking as police officers who hold positions of criminal investigation, who are responsible for gathering evidence in order to prove who is guilty. Investigators are therefore important to the judicial system to perform their duties with integrity, sacrifice, dedication and unfathomable obstacles during the course of the investigation. This includes investigating victims, witnesses, accused persons in the case, submitting documents, coordinating with various agencies, as well as collecting evidence related to the case as required by law. As a result, the National Police Chiefs' Council recognizes the importance of investigators, determining the remuneration of investigators' positions at each level, as well as the remuneration of investigators' interrogations in various cases (Human Resources Management System Development Division, Department of Forces, 2016).

An investigating officer under Section 2 (6) of the Code of Criminal Procedure is "an officer whose power and duty are to conduct an investigation". Section 2 (11) of the Criminal Procedure defines the investigation as "the collection of evidence and the conduct of the provisions of this Code. The investigators have made it possible for the accused to know the facts, to prove the offence, and to bring the perpetrators to trial. An investigation under Section 131 of the Code of Criminal Procedure provides that "the investigating officer shall gather all kinds of evidence as far as possible in order to know the facts and circumstances relating to the alleged offence in order to know the perpetrator and prove the guilt or innocence of the accused."

The inquiry, gathering evidence of the investigator, must be done only within the framework of the law. For the purpose of protecting the rights and freedoms of citizens within the state. The exercise of the authority to perform the duties of the investigator in accordance with the legal framework of the

investigating officer is an important condition for bringing the case to court, but if there is a case in which the investigator neglects, unlawfully or intentionally, or bullies any person in the investigation, collects incomplete or factual evidence, it can cause problems in the trial or in the prosecution class. Although the investigation gathered all that inaccurate evidence caused by negligence contrary to the professional standards of the investigators, it has led to disciplinary action under the National Police Act 2004. But when the accused is affected by the conduct of the above investigating officers caused by that negligence, the accused suffers more than necessary which in some cases or in certain cases is not required to be prosecuted. But when investigators gathered some evidence with negligence that led to the prosecution, such as forgetting to search for a criminal record, they were not allowed to do so. Neglecting to examine the witnesses presented by the accused, or relying solely on the accused's testimony without gathering evidence, to ascertain the accuracy of such statements thoroughly prior to his arrest, etc., this will result in the accused being unjustified by the process. The duty of investigation is the collection of evidence and other actions in accordance with the provisions of the law which the investigating officer has committed in relation to the offence. Alleging in order to know the facts, or prove the guilt or innocence of the accused, and to bring the offender to trial (Regulation SEC. On criteria and methods of assessment for the promotion of investigators, 2012).

Currently, there has been a new coronavirus pandemic. 2019-nCoV, which the World Health Organization Official Name Announcement for Respiratory Diseases (CDC, Ministry of Public Health, 2020). As a result, the government has ordered the closure of facilities, causing many organizations in Thailand to adapt by issuing a "Work from Home" policy to reduce the risk to employees, The National Police Chiefs' Council has also adopted a work-from-home policy as a

guideline for police officers. Investigators are therefore the first line of justice to play a large role in ensuring that justice is expeditious and fair, and law enforcement will achieve its objectives. On the contrary, if the investigators fail to perform their duties effectively, they will have a detrimental effect on society as a whole. In carrying out the duties of investigators, they are always criticized because the procedures of duty must affect a person's right to freedom, such as searching, arresting, detaining, etc. Given the current social conditions, crime is likely to rise in terms of volume and violence, affecting the work of investigators. And considering the position of the investigator, it is found to be a very responsible position, the chances of a mistake in the performance are great. Therefore, the behavior of the investigating officer in the negative aspects that appear in the press is always in the public interest, whether it is the use of aggression against the accused or against the public, intimidation, abuse of force, demanding money or compensation to assist in the case or taking bribes, etc. While slacking off performance, impairment in duties, backlog of rhetoric, delayed interrogation or mild rhetoric. This caused the accused to be released from prosecution, which was the cause of the disappointment of the public in the performance of the duties of the investigating officer. This has also led to a reinforcement of bad attitudes towards the police image, and one of the reasons why police officers do not wish to serve as investigators because the system of work and command command according to the ranks and disciplines contravenes the nature of the interrogation work that led to the officer's process. Every primate justice in Thailand cannot perform the task of collecting evidence based on fact and law. It must comply with the unlawful orders of the superiors, which makes the investigating officer vulnerable to criminal and disciplinary actions (Virutt Siriswasdipt, 2018).

From such a problem condition. We are interested in studying the "Development of

information technology competencies of investigators in work from home operations" in order to promote, support and empower investigators to perform tasks on time and more efficiently.

### **Purpose of research**

1. To study the priority of factors influencing the development of information technology performance of investigators in the implementation of work from home.
2. To study knowledge management, training, technology skills, acceptance of information technology affecting the development of information technology performance of investigators.
3. To propose guidelines for improving the information technology competencies of investigators in the work from home operation.

### **Research Methodology**

This research is a combination of quantitative research and qualitative research.

**Quantitative Research** An example is a police officer who holds the position of investigator under Section 44 of the National Police Act 2004 located in Bangkok. Sampling using stratified random sampling of 360 people.

The IOC found that the whole IOC was .97 and the whole confidence value was .973, analyzed the data using descriptive statistics and analyzed the structural equation model.

**Qualitative research** the key contributors are: 1) Commander level, positions ranging from Major to General of Police, numbering 6 people 2) Investigative supervisor level: special expert investigator, expert investigator, qualified investigator, 6 people and 3) The Association of Investigators, the Commission of Inquiry, 6 people, all 18 people. Tools are semi-structured interviews, The IOC value of the question is between 0.80-1.00, analyzing the data by analyzing the content.

### **Conclusions**

Research on Development of information technology competencies of investigators at work from home operations summarizes the findings, according to the research objectives as follows:

Research objective 1: To study the priority of factors influencing the development of information technology competencies of investigators at work from home operations

**Table 1** Priority of Factors

Latent variable totals (TOT)	Amount	Mean	St. Dev.	Priority	order
Knowledge Management	360	4.10	0.59	high	4
Training	360	3.96	0.64	high	5
Technology Skills	360	4.17	0.49	high	3
Acceptance of Information Technology	360	4.17	0.52	high	2
Development of information technology performance of investigators	360	4.24	0.44	highest	1

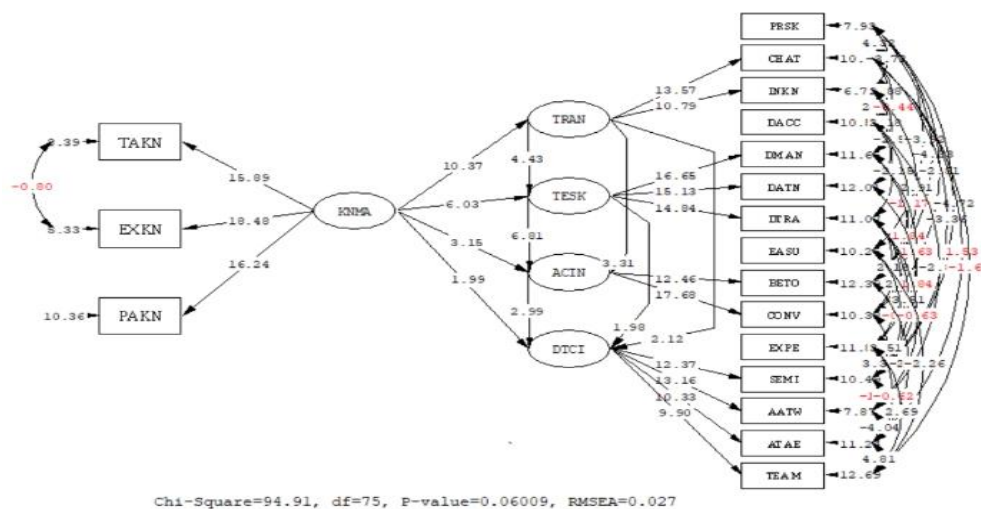
Comparative analysis and sequence of all passive variables

From Table 1, it can be sorted as follows: Development of information technology performance of investigators has an average of 4.24 for the 1st, followed by the 2nd, the Acceptance of Information Technology and Technology Skills has the same average of 4.17, the 3rd is Knowledge Management with an average of 4.10, and the 4th is Training with an average of 3.96.

Research objective 2: To study Knowledge Management Training, Technology Skills, Acceptance of Information Technology

affecting the development of information technology performance of investigators.

Correlations and influences from the analysis of the data were shown together to determine the harmonization of the model with empirical data after the final model adjustment was effected in Figure 1.



**Figure 1** Model with empirical data

Results of hypothesis test according to Table 2

**Table 2** Analysis of aggregate relationships, direct relationships, and indirect relationships of alternative models

Dependent variables	Relations hips	Independent variables				
		KNMA	TRAN	TESK	ACIN	DTCI
TRAN	DE	0.74**	N/A	N/A	N/A	N/A
	IE	N/A	N/A	N/A	N/A	N/A
	TE	0.74**	N/A	N/A	N/A	N/A
TESK	DE	0.49**	0.44**	N/A	N/A	N/A
	IE	0.33**	N/A	N/A	N/A	N/A
	TE	0.82**	0.44**	N/A	N/A	N/A
ACIN	DE	0.33**	0.34**	0.90**	N/A	N/A
	IE	0.62**	0.40**	N/A	N/A	N/A
	TE	0.95**	0.74**	0.90**	N/A	N/A
DTCI	DE	0.20*	0.28*	0.59*	0.76**	N/A
	IE	0.77**	0.54**	0.39**	N/A	N/A
	TE	0.97**	0.82**	0.98**	0.76**	N/A

Chi-Square= 94.91, df=78, p-value = 0.060, GFI=0.97, AGFI=0.93, RMR=0.011, RMSEA=0.027, CFI=1.00, CN=385.42

Note

\* Means statistically significant at 0.05. ( $[t] > 1.96$ )

\*\* Means statistical significance at 0.01 ( $[t] > 2.56$ )

From Table 2, the correlation path can be described as knowledge management (KNMA) as directly correlated with Training (TRAN) as much as 0.74. This was followed by the results of technology skills (TESK) Acceptance of Information Technology (ACIN) and Development of information technology performance of investigators (DTCI) equal to 0.49, 0.33 and 0.20 respectively. And indirectly affecting the Development of information technology performance of investigators (DTCI), acceptance of Information Technology (ACIN) and Technology Skills (TESK) was 0.77, 0.62 and 0.33, respectively.

Training (TRAN) has the most direct correlation with Technology Skills (TESK) as 0.44, second only to acceptance of information technology (ACIN) and development of information technology performance of investigators (DTCI) of 0.34 and 0.28 respectively, and indirectly affects the Development of Information Technology

performance of investigators (DTCI) and Acceptance of Information Technology (ACIN) of 0.54 and 0.40, respectively.

Technology Skills (TESK) have a direct correlation with the Acceptance of Information Technology (ACIN) as much as 0.90, followed by the Development of information technology performance of investigators (DTCI) of 0.59 and indirectly affects the Development of information technology performance of investigators (DTCI) of 0.39.

It was found that the Acceptance of Information Technology (ACIN) was directly correlated with the Development of Information Technology Performance of Investigators (DTCI) of 0.76.

The overall visual analysis showed that harmonization index values were more consistent with empirical data, meeting benchmarks that showed model consistency and empirical data with very good standards.

**Table 3** Hypothetical test results

Research hypothesis	Path coefficient	t statistics	Result
<b>Hypothesis 1:</b> Knowledge Management Training Technology Skills and Acceptance of Information Technology affect the Development of information technology performance of investigators			
1.1 Knowledge Management directly affects Development of information technology performance of investigators (KNMA --> DTCI)	0.74**	10.37	Support
1.2 Training directly affects Development of information technology performance of investigators (TRAN --> DTCI)	0.28*	2.12	Support
1.3 Technology Skills directly affect Development of information technology performance of investigators (TESK --> DTCI)	0.59*	1.98	Support
1.4 Acceptance of Information Technology directly affects Development of information technology performance of investigators (ACIN --> DTCI)	0.76**	2.99	Support
<b>Hypothesis 2:</b> Knowledge Management Training and Technology Skills affect Acceptance of Information Technology			
2.1 Knowledge Management directly affects Acceptance of Information Technology (KNMA --> ACIN)	0.33**	3.15	Support
2.2 Training directly affects Acceptance of Information Technology (TRAN --> ACIN)	0.34**	3.33	Support
2.3 Technology Skills directly affect Acceptance of Information Technology (TESK --> ACIN)	0.90**	6.81	Support
<b>Hypothesis 3:</b> Knowledge Management and Training affect Technology Skills			
3.1 Knowledge Management directly affects Technology Skills (KNMA --> TESK)	0.49**	6.03	Support
3.2 Training directly affects Technology Skills (TRAN --> TESK)	0.44**	4.43	Support
<b>Hypothesis 4:</b> Knowledge Management affects Training Technology Skills			
4.1 Knowledge Management directly affects Technology Skills (KNMA --> TRAN)	0.74**	10.37	Support

Note \*\* Means, p value  $\leq 0.01$

\* Means, p value  $\leq 0.05$

From Table 3, the results of the hypothesis test can be summarized as follows:

**Hypothesis 1:** Knowledge Management Training Technology Skills and Acceptance of Information Technology affect the development of information technology performance of investigators. Knowledge Management was found to directly affect the

development of information technology performance of investigators with a path coefficient of 0.74, t statistics of 10.37, which supports a statistically significant hypothesis of 0.01. This can be interpreted as correlating variables in the same direction, that is, as the development of information technology performance of investigators increases.

Training directly affects the development of information technology performance of investigators with a path coefficient of 0.28, t statistics of 2.12, which supports a statistically significant hypothesis of 0.05. This can be interpreted as correlating in the same direction, that is, as the range increases, this has resulted in a greater reduction in information technology performance of investigators.

Technology Skills directly affect the Development of information technology performance of investigators. The path coefficient is 0.59, the t statistics are 1.98, which supports the statistically significant hypothesis at the level of 0.05. This can be interpreted as correlating the variables studied in the same direction, that is, as technology skills increase, this has resulted in a greater reduction in information technology performance of investigators.

Acceptance of Information Technology directly affects the Development of information technology performance of investigators with a route coefficient of 0.76, t statistics of 2.99, which supports a statistically significant hypothesis of 0.01. This can be interpreted as the variables studied correlated in the same direction, that is, as acceptance of Information Technology increases, as a result, the Development of information technology performance of investigators is also greater.

**Hypothesis 2:** Knowledge Management Training and Technology Skills affect the acceptance of Information Technology. Based on hypothesis tests, Knowledge Management directly affects the acceptance of Information Technology. The path coefficient is 0.33, the t statistics are 3.15. This supports the statistically significant hypothesis at the level of 0.01, which can be interpreted as correlating the variables studied in the same direction, that is, as the increase in information technology increases, resulting in greater acceptance of information technology.

Training directly affects acceptance of Information Technology with a route

coefficient of 0.34, t statistics of 3.33. This supports a statistically significant hypothesis at the level of 0.01, which can be interpreted as the variables studied correlated in the same direction, that is, when tracking. More and more acceptance of information technology are also being added.

Technology Skills directly affect acceptance of Information Technology with a route coefficient of 0.90, t statistics of 6.81. This supports a statistically significant hypothesis at level 0.01, which can be interpreted as the variables studied correlated in the same direction, that is, as Technology Skills increased, resulting in greater acceptance of Information Technology.

**Hypothesis 3:** Knowledge Management and Training Affects Technology Skills According to the results of the hypothesis test, knowledge management has a direct impact on Technology Skills with a path coefficient of 0.49, t statistics equal to 6.03. This supports the hypothesis statistically significance at the level of 0.01, which can be interpreted as the variables studied correlating in the same direction, that is, as knowledge management increases, it also results in more technology skills.

Training directly affects technology skills, with a path coefficient of 0.44, t statistics of 4.43, which supports the statistically significant hypothesis of 0.01. This can be interpreted as the variables studied correlated in the same direction, that is, as training increases, resulting in more Technology Skills too.

**Hypothesis 4:** knowledge management hypothesis affects Tracking based on the hypothesis test results, finding that Knowledge Management directly affects Training with a route coefficient of 0.74, a t statistics value of 10.37. This supports the statistically significant hypothesis at the level of 0.01, which can be interpreted as correlating the variables studied in the same direction. More and more resulting in more training too.

The key informants agreed that the Development of information technology performance of investigators in the practice of working from home was a good idea. as follows:

1. Develop the investigator's knowledge and understanding of the use of information technology that is beneficial to the operation.
2. Promote, support work equipment for investigators to prevent damage to operations.
3. The organization is defined as a measure to improve its performance to meet the standards.

### Discussion

Knowledge Management has a positive influence on the development of information technology performance of investigator in the implementation of work-from-home models. Explain what is derived from tuition, research or experience, as well as practical abilities and skills, or understanding or information derived from experience. It corresponds to Kittitash, Keaychaon and Theerawat Chanthuk (2017) that research and experience, including practical abilities and comprehension or information skills derived from the experience gained through hearing, listening, thinking, or practicing subjects in each field of wisdom, are classified as cultural capital of paramount human importance. This has grown from knowledge, experience combined with deep apprehension sharpness to transform existing resources and knowledge to increase value in accordance with and appropriate to various community and local contexts. In line with Krahan Nanan (2016), Knowledge Management starts from the goal of the work, namely, achieving the achievement of the tasks as defined by Knowledge Management as a tool for achieving the goals of the job, developing people, developing the organization into an organization of learning and goals, graphed, the achievement of knowledge transfer in Knowledge Management, not in the documentation or

recording of knowledge, but in the interaction between colleagues.

Training has a positive influence on the development of information technology performance of investigators in the implementation of work-from-home models. It can be explained that in the process of systematically changing people, people need to evolve to keep up with the changes of global society. Good training must be able to enable individuals to change their behavior for the better for the benefit of the person, whether it is the development of knowledge and abilities, thinking, analysis of decisions in order to create internal attributes that are good for the work performed by training, usually for a short period of time, so that the participants can apply the knowledge gained in the performance immediately. In line with Surapat Thaweesak (2019), the effectiveness of training depends on the organization's adherence to the idea that Training is the way to achieve the goals of the organization. In organizing training programs systematically, there is a budget to support the development of personnel and the atmosphere in the organization that is characterized by encouraging training to be accepted and to value the benefits of training.

Technology Skills have a positive influence on the development of information technology performance of investigators in the practice of working from home. Explain that investigators have learned, practiced, and practiced the use of technology for communications to gain expertise or the ability to use technological devices, whether mobile phones, tablets or computers, to communicate with other people in order to interact with each other. In line with Narongwit Santhong (2014) discusses that information, media and technology skills are skills and knowledge that students need to practice and learn in order to be able to respond to the technological changes in globalization that are needed. In line with Nitas Sirichotirat (2017), the ability to use the Internet and barriers to exposure to learning technology are associated with the



behavior of learning technology. It corresponds to a form of technological engagement that takes into account facilitation or inhibits conditioned rather than the old form of technological acceptance. Therefore, universities should train and develop ideas to achieve greater use of educational technology.

Acceptance of Information Technology has a positive influence on the development of information technology performance of investigators in the performance of work-from-home models. Explain that the investigators are open to accepting the use of information technology, recognizing the importance of communication technology that is essential for daily life and to work in the situation of the covid-19 pandemic. Corresponds to Pigeons Prayuthsin and Arun Judhiphon (2020) stated that the adoption factor spreads innovations in the areas of conformity, self-efficacy and social norms. It influences the perception of ease of use and the perception of the usefulness of books, electronics, while the advantage factor influences only the perception of ease of use. In addition, the perception of the benefits and ease of use has greatly affected the satisfaction with the use of e-books, and the satisfaction to use them has a significant positive influence on future use of e-books.

## Suggestion

### Academic feedback

This research confirms the findings that are consistent with the concepts, theories, and related research contributions that researchers review, with the knowledge gained can be used as a basis to promote, support, and empower investigators to perform their tasks on time and more efficiently.

### Recommendations in the next research

1. Study the satisfaction of the guidelines. Development of information technology performance of investigators in the implementation of work-from-home models.

2. Study on the enhancement of the performance of investigators in criminal investigations.

## Reference

1. Armstrong, M. (2006). **A Handbook of Human Resource Management Practice**. 10th Edition, Kogan Page Publishing, London.
2. Blanchard and James W. Thacker. (2007). **Effective Training: Systems, Strategies and Practices** (3rd edition). Blackwell Publishing, inc.
3. Bradley Beauvais and Suzanne J. Wood. (2011). **Adoption and Implementation of Competency Based Education—The Army-Baylor Approach**. The Journal of health administration education, January 2011.
4. CDC, Ministry of Public Health. (2020). **Guidelines for the prevention of coronavirus disease 2019 (COVID-19) or COVID-19 for the general public and vulnerable groups**. Accessed 10 June 2020 from <http://www.thaiibd.org/n/histories/view/2797>.
5. Eric G. Meyer and Gary H. Wynn. (2018). **The Importance of US Military Cultural Competence**. Military and Veteran Mental Health, Springer Science + Business Media.
6. Grace, J. B. (2008). Structural Equation Modeling for Observational Studies. **Journal of Wildlife Management**, 72 (1), 14-22.
7. Human Resources Management System Development Division, Department of Forces. (2016). **PTTEP Regulation on The Evaluation of The Performance of**

- The Armed Forces.** Bangkok: Department of Troops.
8. Karol G. Ross and Carol A. Thomson. (2012). **Development of a Competency Model for Civil-Military Teaming.** Arlington: U.S. Army Research Institute for the Behavioral and Social Sciences.
  9. Kittitash Keaychaon and Theerawat Chanthuk. (2017). **Teamwork towards Increasing Work Effectiveness: Team Working for Increasing Work Effectiveness.** Bangkok: Dusit Thani College Journal, Vol. 11, No. 1, January-April 2017.
  10. Krahan Nanan. (2016). **Performance Management.** Bangkok: SE-ED Book Center.
  11. Major Tanekkia M. And Taylor-Clark. (2015). **Emotional Intelligence Competencies and The Army Leadership Requirements model.** Fort Leavenworth, Kansas: University of South Alabama.
  12. Narongwit Santhong. (2014). **Let's get to know Competency.** 3rd edition. Bangkok: H. R. Center, Co., Ltd.
  13. Nitas Sirichotirat. (2017). **Principles of Human Resource Management In the 21 centuries.** Bangkok: Chula Mahidol College Publishing.
  14. Prayuthsin and Arun Judhiphon. (2020). **Development of training courses to develop information and communication technology skills of secondary school teachers. Affiliated with the Secondary Education Area Office, District 11.** Bangkok: Journal of the Graduate School of Pichonthasarn 15(1): January – April 2020.
  15. Surapat Thaweesak. (2019). **Man, and Freedom: A Philosophical Perspective, Kant.** Mill Rolls. 1st edition. Bangkok: Siam Pritat Publishing House.
  16. Virutt Siriswasdiput. (2018). **Police crisis and investigative work, judicial extinguishment point.** Bangkok: Origin.
  17. Zuzana Skorková. (2016). **Competency Models in Public Sector. Procedia - Social and Behavioral Sciences.** Bratislava: University of Economics in Bratislava.