INFLUENCE OF ORGANIZATIONAL CULTURE ON THE EFFICIENTLY USAGE AND TRANSFER OF INFORMATION AND COMMUNICATION TECHNOLOGY IN THAI PUBLIC ORGANIZATIONS

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Abstract

The objectives of this research are to study organizational culture in using information and communication technology (ICT) and influence of organizational culture that effecting in using, adoption and transfer of ICT for public organizations in Thailand. The both qualitative and quantitative data were gathered from documents and 20 ministries in Thailand. The documentary analysis and content analysis were used for analyzed the document and literature review. In addition, the quantitative data analysis was represented by data that collection from questionnaires.

The results show that the culture on using ICT depend on personal characteristics and organization culture at the part of perception, adoption of ICT affect on the efficiently usage of ICT.

Index Terms : Organizational Culture, Use of ICT

1. Introduction

Culture is mentioned to the precious characters that passed through the well- characters. These characters were accepted and adopted and sent from the former generation to the later generation. [1] From the past two decades, the changing and developing of ICT was always rapidly growing expanded. Affecting from this changing is connected the world altogether and globalization is rising. [2], [3] This situations effect to the changing of social culture and also the organization operating.

Nowadays, ICT becomes the technology that the world is alert and giving more attention.[4] In Thailand, the developing of Information System was increasing developed by using many information technology to communicate, inform data, collect data, information services for management. [5] Data and information is important for organization successfulness and survival. And the rapidly progressive of ICT. [6] Can increase working efficiency in organization, many organizations are interested so the computer program becomes more important for many conveniences.[7]

However, in the good parts that ICT makes more benefits to the organization but nevertheless the affecting that comes from the using rapidly expanding technology and unbalance changing of user and manager behaviors. Plus knowledge, ability and skill in managing ICT can be problems and slow down the progressive developing. Furthermore, there are contrasting of using technology in city and urban and there are much information, general using. technology, characteristic of information, the way to spread technology that might be not full efficiency in government organization. [8] Working with less corporation from the user and involve person come from lacking knowledge about using information and communication technology and acceptance in computer's potential. And there have not teaching and spreading all over the organization, the top qualities in using information technology system has not gotten most planed benefit. [9]

The social is changing in more competition, it need to take information and communication technology to operate organization and it should concern the qualities of using technology by forming organization culture in cognitive, learning and acceptance information technology and communication. For personnel officer could use technology in efficiency. Researcher is interesting in to study affecting in organization culture on the efficiently use of information and communication technology, and from studying the influence of organization culture, it could be adjust for right comprehensive and properly practice that impacting personnel officer in the organization to be cultured acceptance information technology, it should increase organization qualities and develop the organization in the future.

2. Research Objective

1) To study organizational culture in using ICT of user in Thai public organizations.

2) To study influence of organizational cultures that effecting in using, adoption and transfer of ICT.

3. Theories and Related Research

3.1 Government Organization

Government organization or government sector · means the organizations that do duty for public service, on the other case, also include the government enterprises. [10] Bureaucracy is ideal philosophy which has many features as follows, 1) definite specific functions to the executants 2) definite specific the chain of command and specific authority and functions in positions levels 3) the management that request the all executants have got all-around training 4) full-time execution for absolute development 5) the execution have to do in the specific definite rules. [11]

3.2 Organization Culture

Organization Culture is system on value judgment, belief, comprehension and standard of all members in the organization and person's expression behaviors which have got from social's environmental influence.[12],[13] From Figure 1, the first successful information system maybe not success in other thing because of organization culture, thought, procedure factors, material factors and organization factors. [14].

Organization Culture bases on member's behaviors and acts, there are 1) organization's members can realize organization culture from organization's history and take it to be standard and a way in future 2) organization culture encourage member's relation to have collectivism under philosophy and value judgment that everyone accepts 3) organization culture specifies standardize for control member to have behaviors and approach in the pleasant way 4) organization culture would have relate directly to efficiency and achievement in performing and producing [15] Therefore, organization culture has much effected to using information communication system in performance. [16]
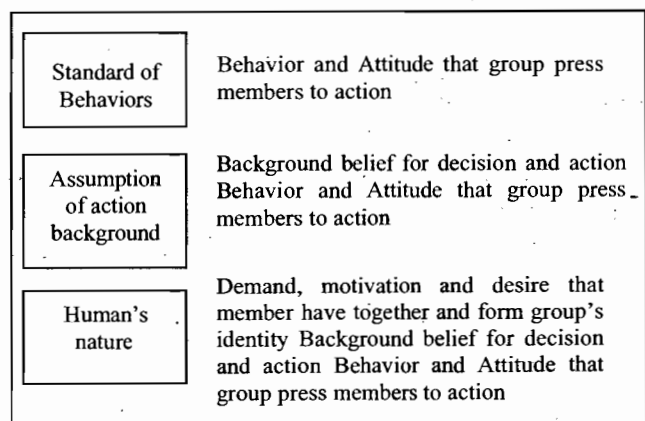
Standard of Behaviors	Behavior and Attitude that group press members to action
Assumption of action background	Background belief for decision and action Behavior and Attitude that group press members to action
Human's nature	Demand, motivation and desire that member have together and form group's identity Background belief for decision and action Behavior and Attitude that group press members to action

Fig. 1: Level of organization culture Model

Source of: Sunthorn Wongviyawan. (1997).

3.3 Information and Communication Technology (ICT)

ICT comes from integrated 2 technology [17], 1) information technology is the cooperation of hardware and software for data evaluation, filing, reaching, data retrieval, presentation, and distribute information by electronic equipment. 2) Communication is equipment and procedure in communication for reaching, exploring and speedily sending and receiving information.

ICT features in increasing efficiently work; including it is the main factors to specify for cashing in competition. [18] Although the terminated user will directly get profit from applying by package program but the thing that should consider is the damage which happen in using step and from user. These are important thing because each user has different experiences and different background, it make different characteristic operation. The concluded usefulness: [19]

1) Increased Individual Performance
2) Easier and More Direct Implementation
3) Enhanced Computer and Technological Literacy
4) Increased Competitive Advantage
5) Reduced Application Backing

ICT leads to network working that effect to relation control between chief and executants and effect to system structure and organization culture.[20]

3.4 Perception

Perception is the process that person interprets and reacts to motivation. Each person's perception is individuality because of his individual experiences and learning.[21] As individual back ground, experience, characteristic including all changing and time[22] and perception in useful of data, importance and applying usefulness.[23] ICT user have different perception level in system usefulness application and convenience to use, [9] Influential factors for perception are recipients factor, situations factor and goals factor.[22] Figure 2
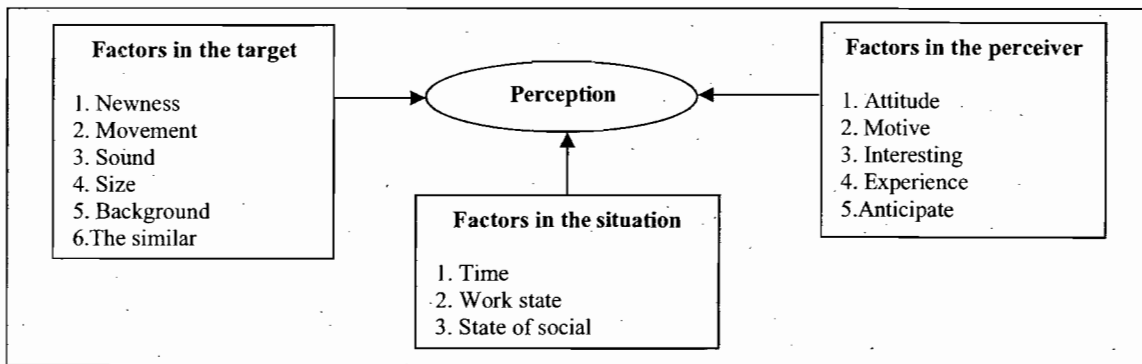

Fig. 2 : Factor that is influential build the perception

Source of : Rungsan Prasertsri, (2545).

Beside influential factors for perception, another important thing is step of person's perception,1) adopting data, 2) proposing to adopt data, 3) interpreting data, 4) maintaining data , and after pass step of perception, person will have reaction behaviors in feeling and thinking.[21] Figure 3
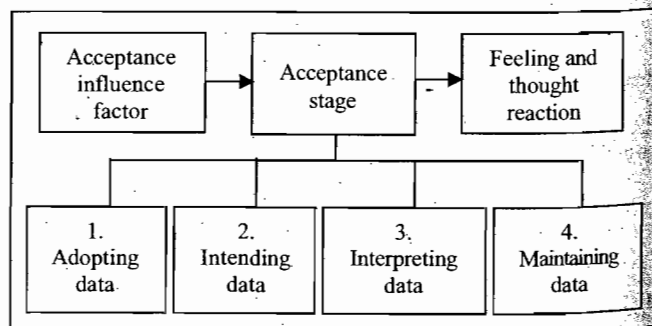

Fig. 3: The step in the perception

Source of: Rungsan Prasertsri, (2545).

3.5 Technology Acceptance

Technology acceptance is person's decided to use innovation or technology in full efficiency. [22] Researchers, information technology system scholars try to develop model that can explain, predict user's technology acceptance behavior because if we can understand or predict technology acceptance of person it will be advantageous for creativity, developing and present new technology to user[23].

Thus, there was a researcher who had invented ICT acceptance, is model TAM Model (Technology Acceptance Model). Figure 4 the model was developed from self perception theory by simple using perception, self-ability perception. [24] There is the same definition and same significance meaning of innovation character in innovation spreading theory's complexity.
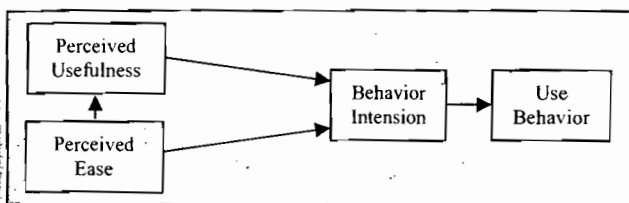

Fig. 4 : TAM Model

Source of : Davis (1989)

Pattern of acceptance decision has 5 stage [25]

1) Awareness Stage, person perceived that there has a concept but he has not deep knowledge about the particular content

2) Interest Stage is the stage that person is interesting in studying but he has not evaluated the real situation, just only increase his knowledge.

3) Evaluation Stage, person uses his intelligent for evaluate with his experiences

4) Trail Stage is the stage that person does some parts in real situation for confirming that it's as good results as he thinks.

5) Adoption Stage, it is the last procedure for person's acceptance to completely use, not use little as in Trail Stage.

From plenty theories that was studied and presented above, forming using ICT culture has to pass stage of perception, learning, applying and it will be have ICT acceptance in the organization. Each organization will has its idea of own organization's using technology culture, principle of perception,

different technology learning, it affect to different knowledge, different comprehension in factor of efficiently using ICT.

3.6 Technology Transfer

To bring the discover technology to publicize. Technology is the concept of creation or management to supply human's living things, start from simplicity, developing and evolution to knowledge progressive of their society and transmit from generation to the next or from one society to another. The knowledge will spread out and discover new procedure for responding to human requirements. This characteristic called technology transmission or Technology Know-How. [26]

3.7 Research Conceptual Framework

Conception of research can explain that influence of organization culture which effect to ICT efficiency compose with person characteristic, influence of organization culture and using ICT, these are independent variable that affect to efficiently using ICT. When person has perceived utility and perceived ease of ICT, he will concentrate in and purpose to do that he wants to use this technology by evaluating the technology that it can or cannot appropriate with his demand or solve his problem. Then he will try to use the technology, showing by after using he realizes the efficiency and satisfies, leads to acceptance the technology. That conception of this research has 5 characters Figure 5
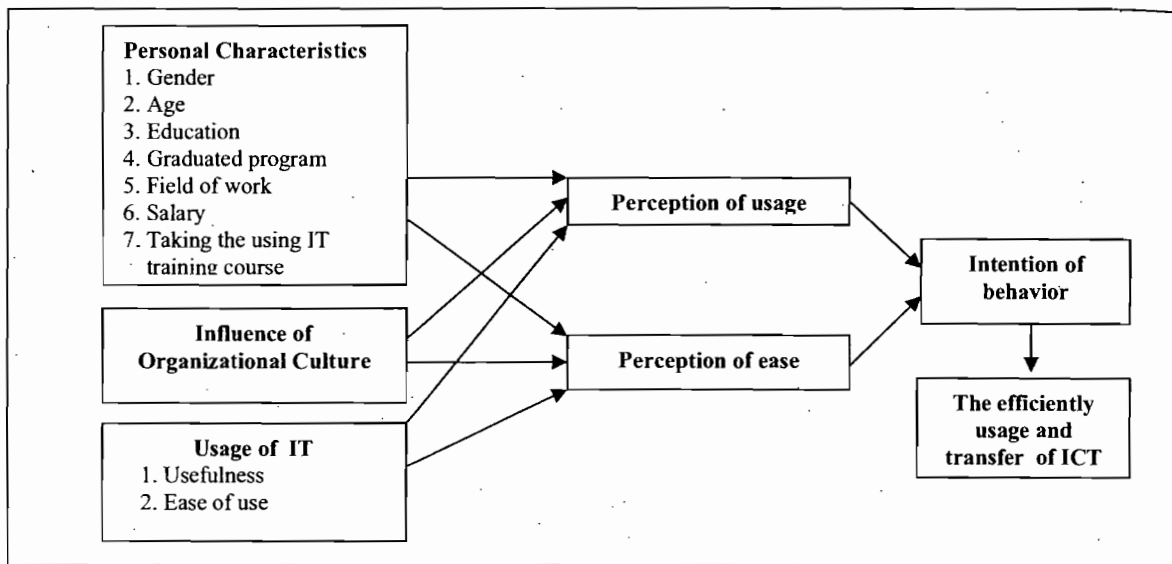
Fig. 5: Research Conceptual Framework

3.8 Research Hypotheses

1) Influence of organizational culture that affecting the usage of ICT in high level.

2) Influence of organizational culture that effecting the adoption of ICT in high level.

4. Research Methodology

The research methodologies were both qualitative and quantitative research. The populations are 20 ministries in Thailand. The sampling groups were divided into two groups as follows: 1) ICT users 2) Administrative Staff.

4.1 Categorizing Data

As the mention, we use both qualitative and quantitative research.

1. The qualitative is represented by content analysis from documents.

2. The quantitative is represented by data collected in analyzing questionnaires.

4.2 Research tool and Collecting Data

In this research, questionnaire was used as a tool for collecting the data, the sampling group 1 and 2. To built up the questionnaire, quantitative data from documents were analyzed and used.

4.3 Data Analysis

Based on qualitative and quantitative research, it can be divided into 4 steps and briefly explained as follow: Step 1: Study about culture, policies, visions, objectives, and management from related documents in 20 ministries, as well as related literature. Study about use application of ICT in organizational and ministry of ICT master plan. Step 2: Develop tools for collecting data. Step on organizational culture of ICT use from the 2 sampling groups. 3: Data collections form all sampling groups. Step 4: Analyze data in details from step 3 in order to obtain an overall figure of the affecting organizational culture on the efficiently use of ICT. And get the facts about ICT management in ministry.

5. Research Results

The qualitative methodology result which came from 20 ministries CIO interview found that CIO greatly realize to perception, understanding, transmission technology and organization's culture in using ICT. In addition, on the average CIO place importance on organization operation's culture which effect to perception, using and transmission ICT of their

personal. There is fairly high level of perception and attitude which support the using ICT. However, CIO suggests that it should adjust positive attitude to personal and create ICT culture for increasing the using ICT perception.

From this study, researcher found that affects of organization culture which impact to state of using ICT in efficiently of person in the organization comes from influence variables. There are personal characteristics, using technology culture, perception of usefulness and ease to use ICT, and technology acceptance. These affect to organization culture in efficiently using ICT, has shown in table 1.

Table 1 : Show personal characteristics

Personal characteristics		Number	%
Gender	Male	29	67.4
	Female	14	32.6
Age	Lower 26 years	1	2.3
	26-35 years	16	37.2
	36-45 years	18	41.9
	46-55 years	7	16.3
	Upper 56 years	1	2.3
Education	Lower bachelor degree	6	14.0
	Bachelor degree	20	46.5
	Master degree	17	39.5
	Doctoral degree	0	0.0
Graduated program	IT	14	32.6
	Others	29	67.4
Field of work	Lower I year	5	11.6
	1-5 year	16	37.2
	6-10 year	8	18.6
	11-15 year	3	7.0
	16-20 year	4	9.3
	Over 20 year	7	16.3
Salary	Lower 10,000 Bath	8	18.6
	10,001-20,000 Bath	22	51.2
	20,001-30,000 Bath	9	20.9
	Over 30,000 Bath	4	9.3
Taking the using IT training course	Not training	6	14.0
	Training	37	86.0

Table 2: Show the value of Chi-Square, between age and perception of ICT

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	155.704	120	.016
Likelihood Ratio	89.581	120	.983
Linear-by-Linear Association	2.793	1	.095
N of Valid Cases	43		

a 155 cells (100.0%) have expected count less than 5. The minimum expected count is .02.

From Table 2, answer hypothesis 1.2 that person characteristic-age- effect to organization culture in using ICT. In addition gender, education, graduated program, working period in the office, salary and taking ICT training course have not effected to organization culture in using ICT.

From Table 2 found that statistic significant is .016 explain that independent variable, person characteristic-age- effect to person's ICT acceptance in government office.

Table 3 : Showing relation between using ICT culture and acceptance in ICT

Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.674	.392		4.275	.000
using ICT culture	.603	.287	.312	2.102	.042

From Table 3 Testing relation, using ICT culture variable effect to acceptance in ICT has accept significant related, is .042 that means using ICT culture effect to acceptance in ICT in government office.

Table 4 : Showing Regression between perception in ICT and

acceptance in ICT

Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	.171	.310		.550	.585
perception in ICT	1.043	.139	.762	7.527	.000

From Table 4 Testing relation, perception in ICT variable effect to acceptance in ICT has accept significant related, is .042 that means perception in ICT effect to acceptance in ICT in government office.

Results from this study correspond to the theory that was studied, TAM Model, acceptance technology theory, is the 5 stage of acceptance [16] on above and comply with all mention research materials. In addition, found that effect of organization culture to the efficiently using ICT will impact to ICT's acceptance in the organization.

However, from variables that were mentioned, effect to useful acceptance and easy using ICT acceptance and after that acceptance and ease to use ICT occurs, person will have be acting behaviors, finally he actually uses ICT and accepts ICT system. Moreover, when right using technology has been done, this behavior will happen again and again and it becomes using ICT culture in the organization.

6. Conclusion

The result of this research found that the organizational culture on to efficiently use of ICT depend on the personal characteristics, age. And also the using ICT culture was effected the acceptance in ICT and the perception in ICT was effected the acceptance in ICT. They are show that many efficiently use of ICT in Thai Public Organization. From this result, researcher will apply for develop research project by create organization culture in using efficiently ICT.

7. Discussion and Suggestion

In case of gathering more data, it should know other affected variables and the research's result could be adopt to create ICT perception model for government office. And it can study more over for testing perception model by Delphi Technique and audition that model with government office where apply using ICT.

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