A Digital Age Communication and Work Efficiency of Government Sectors in Ubon Ratchathani Province

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Abstract

The purposes of this research were to study the influence between communication in a digital age model and work efficiency of government sectors in Ubon Ratchathani province. The research instrument was a rating-scale questionnaire with verified validity and reliability of .935. The data were analyzed to using multiple linear regression to test hypotheses. The research results showed that the overall communication model had influence on the overall work efficiency of the government sectors in Ubon Ratchathani province with statistical significance at the critical level .01 and .05.

Key Words: Digital Age, Communication, Work Efficiency, Government Sectors

Introduction

In the globalization era, it is generally accepted that technologies have played major roles in communication. This can be evidenced in the fact that many effective channels of communication allow mankind to overcome obstacles and turn into limitless and timeless communication systems. People from different continents are able to interact with each other conveniently and   instantly. This phenomenon is communication breakthrough that changes the era. Digital media world is the world of integration, a media that can perform multi-tasks and reach more than one person sense at once. On the other hand, one person can interact with more than one media at once too. Social media have been created, then the world that used to be private turning into a centralized world (Waraporn Damjub, 2017). In the digital society that adapts more digital technologies in daily life, internet users have grown exponentially. In 2012, there were a total of 23,056,712 internet users. In 2017, the number of the internet users increased to 45,189,944 representing a growth rate of 96.0% while the total number of Thai population in 2017 was 66,188,503 people. Hence, more than two-thirds of the country's population were internet users (Office of the Broadcasting Commission National Television and Telecommunications Commission, 2018). Thailand Internet Profile research in 2018 by Electronic Transactions Development Agency (ETDA) had shown Social Networking activities accounted for 86.8% of users. The top five activities on internet were:(1) Facebook, Twitter, Instagram 93.3%, (2) email 74.2%, (3) searching for information 70.8%, (4) online video and audio broadcasting 60.7%, and (5) online shopping 51.3% (Electronic Transaction Development Agency, 2018). Business environment has been changing recently and rapidly due to globalization, information technology, economy, competitive condition, society, and culture. Many organizations had to adjust their structure, strategy, practice, and management.

Because their former pattern, process, or notion succeeded may not be as effective in current and future situations (Sompit Thongpan, 2016). These changing circumstances force human resource management team to face new challenge that cannot rely on outmoded management principles. They have to adapt practice and operation to suit organization management context (Noe, et al., 2012). Internal communication is one of the organizational architecture structures that human resource management team obligates to develop for the effectiveness (Walaiporn Sukplang, 2015). Especially in communication age, communication strategy is one of the crucial strategies. Communication is a process for awareness and learning that leads to consistent understanding of individuals throughout an organization (Patchanee Tharasena, 2007). This is corresponding to or in line with Chothip Boromathanarat (2014). For this reason, internal communication is so important and essential for activities and operations in any organization for positive efficiency and effectiveness.

Organizational behavior research on the use of social media resemble effective communication has shown that online learning media and social media utilizations would benefit internal communication effectiveness. Because current behavior, competence, skill of staffs, and media development have been changed according to development and directions of technology (Slitta Saributr, 2011). From the surveys, it has shown that social media is extremely effective in communication. The concept of organization development has been discussed about internal change of information technology that turns them into digital organizations, leading them to be a learning center network as well as a centralized information system data center. For example, researcher study digital communication channels and applications such as websites, Facebook, Line, Twitter, YouTube, weblog, email, and Skype for communication in the digital age of government sectors in Ubon Ratchathani province. The channel of communications includes posting texts and pictures, sending video clips, downloading data, uploading data, pressing like and share buttons. The researcher examined in three aspects of communication patterns within government agencies, namely: (1) the communication between supervisors to operators, (2) the communication between operators to supervisors, and (3) the communication among operators. The objective was to investigate the internal communication influencing operation effectiveness from government agencies in Ubon Ratchathani province. This research can be utilized as a guideline for any related agencies to achieve the most effective strategy in managing organization communication and to improve teaching and learning management as well.

Objective

This research is aikmed to investigate a pattern of communication in digital age that influences the operation effectiveness of the government sectors in Ubon Ratchathani province.

Research Methodology

Population and sample group

The population of this study consisted of 10,250 personnel staffs from government sectors in Ubon Ratchathani province. The researcher used Yamane formula for the sample size, The confidence level was set at 95% with tolerance less than 5% or at the level of statistical significance of 0.05. The samples of the study were 384 people representing personnel staffs from the government sectors in Ubon Ratchathani.

Research Instrument

The research instrument was a questionnaire consisting four parts:

Part 1: general information of participants, multiple choices with one answer, the closed-ended question.

Part 2: information on communication devices and exposure to digital media, multiple choices with one answer and multiple choices with multiple answers, the closed-ended question.

Part 3: communication patterns in the government sectors in Ubon Ratchathani province, scored by summation rating method using Likert's five-level- rating scale with interval data classified.

Part 4: communication effectiveness, containing five sub-questions. On each aspect scored by summation rating method using Likert's five-level- rating scale with interval data classified.

Data Collection Methods

Researcher collected and analyzed the data as followed details:

1.The researcher collected the data using an online questionnaire via Google Form application to survey personnel staffs from government sectors in Ubon Ratchathani province.

2.On data verification, researcher had verified data for accuracy and reliable.

3.On data coding, researcher had been coding verified questionnaires to turn data into information hence, the information recorded in computer for analysis.

4.On the data analysis, researcher analyzed information with statistical package program.

Data Analysis

Data analysis was done by a statistical package program using statistical data and justifying the hypnosis to evaluate the influence in communication between digital age communication pattern of government sectors and operation effectiveness of personnel staffs in the government sectors in Ubon Ratchathani province using multiple linear regression statistical method.

Research Result

Table 1: Result of Multiple Linear regression analysis between communication pattern and operation effectiveness in work quality aspect including accuracy, completeness, and reliability by Enter method.

Variables	B	Std. Error	Beta	t	p
Constant value	1.732	.186		9.300**	.000
The communication from supervisors to operators through digital media/application	.101	.053	.098	1.920**	.056
The communication from operators to supervisors through digital media/application	.366	.047	.446	7.806**	.000
The communication between operators to operators through digital media/application	.111	.045	.129	2.449*	.015
R^2 =.758, F =70.697, Sig. = .000					

* Statistical significance level 0.05

** Statistical significance level 0.01

Table 1 shows that the communication pattern (the communication from supervisors to operators via digital media/application and the communication from operators to supervisors via digital media/application) influenced operation effectiveness (accuracy, completeness, reliability) at statistical significance level 0.01 and .05 respectively. R^2= 0.758 showed that two independent variables in communication pattern influenced dependent variable (operation effectiveness consisted of accuracy, completeness, and reliability) by 75.8%. The other 24.2% was influenced by a variable outside this model.

Multiple Linear regression analysis by Enter method showed that communication from supervisors to operators via digital media/application factor and communication from operators to supervisors through digital media/application factor can explain progression of operation effectiveness consisting of accuracy, completeness, and reliability at statistical significance level 0.01 and 0.05 respectively as shown in equation 1 model.

work quality aspect: accuracy,completeness,reliability	= 1.732 + .366 (communication from supervisors to operators via digital media/application) +.111 (communication from operators to supervisors via digital media/application)……..	(1)

Table 2: Result of Multiple Linear regression analysis between communication pattern and operation effectiveness showing the aspect of operational achievement according to workload comparing to target by Enter method.

Variables	B	Std. Error	Beta	t	p
Constant value	2.511	.172		14.585**	.000
The communication from supervisors to operators through digital media/application	.108	.049	.124	2.204*	.028
The communication between operators to supervisors through digital media/application	.161	.043	.233	3.707**	.000
The communication between operators to operators through digital media/application	.142	.042	.197	3.388**	.001
R^2 = .622, F = 36.042, Sig. = .000					

* Statistical significance level 0.05

** Statistical significance level 0.01

Table 2 shows that communication pattern (communication from supervisors to operators via digital media/application, communication from operators to supervisors via digital media/application, communication between operators to operators via digital media/application) influenced operation effectiveness in operational achievement according to workload comparing to target at statistical significance level 0.01 and .05 respectively. R^2 = 0.622, 3 independent variables in communication pattern influenced dependent variable (operation effectiveness, aspect of operational achievement according to workload comparing to target) by 62.2%. The other 37.8% was influenced by variable outside this model.

Multiple Linear regression analysis by Enter method showed that these three factors (communication from supervisors to operators via digital media/application, communication from operators to supervisors via digital media/application, communication between operators to operators via digital media/application) could explain progression of operation effectiveness, aspect of operational achievement according to workload comparing to target at statistical significance level 0.01 and 0.05 respectively as shown in equation 2 model.

operational achievement according to workload comparing to target	= 2.511 + .108 (communication from supervisors to operators via digital media/application) +.161 (communication from operators to supervisors via digital media/application) + .142 (communication between operators to operators via digital media/application)……... (2)

Table 3: Result of Multiple Linear regression analysis between communication pattern and operation effectiveness showing the aspect of operational punctual accomplishment by Enter method.

Variables	B	Std. Error	Beta	t	p
Constant value	2.312	.172		13.418**	.000
Communication from supervisors to operators via digital media/application	.284	.049	.323	5.811*	.000
Communication from operators to supervisors via digital media/application	.018	.043	.026	.418**	.676
Communication between operators to operators via digital media/application	.168	.042	.229	3.999**	.000
R^2 = .745, F = 41.00, Sig. = .000					

** Statistical significance level 0.01

Table 3 shows that the communication pattern (communication from supervisors to operators via digital media/application, communication between operators to operators via digital media/application) influenced operation effectiveness in operational punctual accomplishment at statistical significance level of 0.01. R^2 = 0.745,2 independent variables in communication pattern influenced dependent variable (operation effectiveness, the aspect of operational punctual accomplishment) by 74.5%. The other 25.5% was influenced by a variable outside this model.

Multiple Linear regression analysis by Enter method shown communication from supervisors to operators via digital media/application factor and communication between operators to operators via digital media/application factor could explain progression of operation effectiveness, the aspect of operational punctual accomplishment was at statistical significance level 0.01 as shown in equation 3 model.

operational punctual accomplishment	= 2.312 + .284 (communication from supervisors to operators via digital media/application) +.168 (communication between operators to operators via digital media/application)……..	(3)

Table 4: Result of Multiple Linear regression analysis between communication pattern and operation effectiveness showing the aspect of operational early accomplishment before given deadline by Enter method.

Variables	B	Std. Error	Beta	t	p
Constant value	1.611	.162		9.952**	.000
The communication from supervisors to operators via digital media/application	.425	.046	.462	9.262**	.000
The communication from operators to supervisors via digital media/application	.089	.041	.121	2.185**	.000
The communication between operators to operators via digital media/application	.105	.039	.137	2.658**	.008
	R^2 =.592, F = 81.645, Sig. = .000				

** Statistical significance level 0.01

From Table 4 showed that communication pattern (communication from supervisors to operators via digital media/application, communication from operators to supervisors via digital media/application, communication between operators to operators via digital media/application) influenced operation effectiveness in operational early accomplishment before given deadline at statistical significance level 0.01. R^2 = 0.592 showed that three independent variables in communication pattern influenced dependent variable (operation effectiveness, aspect of operational early accomplishment before given deadline) by 59.2%. The other 40.8% was influenced by a variable outside this model.

Multiple Linear regression analysis by Enter method showed that these 3 factors (communication from supervisors to operators via digital media/application, communication from operators to supervisors via digital media/application, communication between operators to operators via digital media/application) could explain progression of operation effectiveness, aspect of operational early accomplishment before given deadline at statistical significance level of 0.01 as shown in equation 4 model.

operational early accomplishment before given deadline	= 1.611 + .425 (communication from supervisors to operators via digital media/application) +.089 (communication from operators to supervisors via digital media/application) + .105 (communication between operators to operators via digital media/application)……...	(4)

Table5: Result of Multiple Linear regression analysis between communication pattern and operation effectiveness showing the aspect of operational achievement with cost-effectiveness and sustainability by Enter method.

Variables	B	Std. Error	Beta	t	p
Constant value	2.199	.169		12.995**	.000
The communication from supervisors to operators via digital media/application	.158	.048	.173	3.293**	.001
The communication from operators to supervisors via digital media/application	.147	.043	.202	3.448**	.001
The communication between operators to operators via digital media/application	.228	.041	.300	5.538**	.000
	R^2 =.724, F = 60.836, Sig. = .000				

** Statistical significance level 0.01

Table 5 shows that communication pattern (communication from supervisors to operators via digital media/application, communication from operators to supervisors via digital media/application, communication between operators to operators via digital media/application) influenced the operation effectiveness in operational achievement with cost-effectiveness and sustainability at statistical significance level 0.01. R^2 = 0.724, 3 independent variables in communication pattern influenced dependent variable (operation effectiveness, aspect of operational achievement with cost-effectiveness and sustainability) by 72.4%. The other 27.6% was influenced by a variable outside this model.

Multiple Linear regression analysis by Enter method showed that these three factors (communication from supervisors to operators via digital media/application, communication from operators to supervisors via digital media/application, communication between operators to operators via digital media/application) could explain progression of operation effectiveness, aspect of operational achievement with cost-effectiveness and sustainability at statistical significance level of 0.01 as shown in equation 5 model.

operational achievement with cost-effectiveness and sustainability	= 2.199 + .158 (communication from supervisors to (5) operators via digital media/application) +.147 (communication from operators to supervisors via digital media/application) + .228 (communication between operators to operators via digital media/application)……..

Discussion

The digital age communication patterns in the government sectors in Ubon Ratchathani province influenced the operational effectiveness. The research showed that all three patterns of the digital age communication in the government agencies influenced the operational effectiveness of the personnel in the government agencies in Ubon Ratchathani province. These three patterns influenced more than 70% on operational effectiveness in work quality aspect (accuracy, completeness, and reliability), the operational punctual accomplishment aspect, operational achievement with cost-effectiveness and the sustainability aspect. The influence on in operational achievement according to workload comparing to target aspect and operational early accomplishment before given deadline aspect was more than 50%. According to Chantira Mungkornsaksit (2013: Abstract) who studied the opinions of employees towards organizational communication of Nonthavej Hospital. The study showed that employees considered direction of the most communication pattern they found was from top-down (supervisors to employees), followed by horizontal communication and cross-functional communication, the least communication pattern was found from bottom-up. Employees conceded that the quality of communication in Nonthavej Hospital was at high level. According to Ratthanan Nongyai (2015: Abstract) who investigated the internal communication factors in organization affecting employee's exposure to information: a case study of The Shine and Villa Hotel. The study revealed: (1) all communication patterns (top-down, bottom-up, horizontal, cross-functional) influenced employee's exposure to information (exposure selection, attention selection, recognition selection, memorizing selection), and (2) cross-functional communication pattern influenced employees' exposure to the information, followed by horizontal communication and bottom-up communication patterns respectively. The cross-functional communication pattern improved communication rapidity and reduced the processes in coordination between departments.

Suggestions

Suggestion for Research Utilization

1.On aspect of communication between supervisors to operators via digital media/application: at present, most organizations have a form of notification or issue orders in the highest commander ascending to operational level structure. Most of them are using official books or memorandums within their agency due to the government regulations. These agencies can analyze their work and separate information that can communicate via digital media/application. The increasing of communication channel or providing electronic document creates awareness among the personnel staffs by managing communication acknowledgement and understanding throughout their sectors.

2.On aspect of communication from operators to supervisors through digital media/application: the organization should encourage their personnel staffs' awareness and foster their behaviors of expressing opinions about working through digital media/applications to supervisors. Construct organizational atmosphere for subordinates to feel that communication through digital media/application is viable in modern days. Since some

organizations are still attached to old culture which is to respect for the elders; therefore, communication atmosphere should be developed through some tools and digital technologies to encourage and show them that this communication is not an inappropriate behavior.

3.On aspect of communication between operators to operators via digital media/application: the organization should raise an awareness on ethical manner in internal information communication and assure to create a safe internal communication. Therefore, some organizations are in state of distrust. For example, whether there are some consulting and exchanging opinions between colleagues then those advisory messages will be served as evidence to sue supervisors or leaked to other organization.

Suggestion for Next Research

1.In this study the sampling was based on government personnel staffs in Ubon Ratchathani municipality area only. Therefore, future study should cover the government personnel in other areas.

2.Obtain the new finding information aside from the link between communication pattern and operational effectiveness to enhance organizational ability.

3.In this study, the author applied a quantitative research to find the characteristics that appeared in the form of statistical data. Therefore, qualitative research can be utilized in next study to collect more in-depth information within the organization.

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